







ADVANCING ADULT EDUCATION RESEARCH

Meeting Summary
April 26, 2012

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The following meeting summary was edited by IES staff for clarity and consistency. Panel participants were allowed to review and comment on it, and their corrections were incorporated and clarifications were included as needed.

Advancing Adult Education Research Meeting Summary

April 26, 2012 8:30 a.m. – 4:30 p.m.

Goal of the Meeting: The goal of this meeting is to discuss the challenges of adult education and mechanisms to better understand and address those challenges through research. The meeting was structured around three panel discussions representing the perspectives of State directors of adult education programs, adult education researchers, and education research methodologists and statisticians.

Welcome and Introductions: Elizabeth Albro, Ph.D., and Meredith Larson, Ph.D., National Center for Education Research (NCER)

Dr. Albro called the meeting to order at 8:37 a.m. She welcomed the participants, who brought their expertise about adult learners, and hoped they would advise NCER on issues around conducting high-quality, rigorous research among adult learners outside the university setting. The National Research Council recently published Improving Adult Literacy Instruction: Options for Practice and Research, which describes the state of adult education and lays out the challenges. NCER now has a research portfolio on the topic of postsecondary adult education that will provide more funding opportunities for adult education research.

Dr. Larson pointed out that 90 million Americans are at or below the threshold for basic reading skills, and about 3 million people are involved in some kind of adult education each year. She hoped the meeting would identify some issues that NCER can help to address with existing tools and resources as well as pinpoint some challenges for which new research methods or tools are needed.

State Perspectives

Anne Serino, Administrator, Office of Adult and Community Learning Services, Massachusetts Department of Elementary and Secondary Education

Ms. Serino noted that State program directors are constantly asked to make the case for why adult education is important—even more often than they are asked to describe program outcomes. The question can be answered on multiple levels that describe the impact of adult education on individuals, communities, States, employers, and others. The "why" of adult education is central, said Ms. Serino, and she hopes researchers will keep the question in mind as they pursue their work. She provided some examples of research efforts that helped advance adult education in Massachusetts.

Ms. Serino said the National Center for the Study of Adult Learning and Literacy (NCSALL) published their reading research along with a study guide that helped practitioners think about and use the research findings. Adult education staff are not necessarily well versed in research and evaluation, so such tools are helpful. The NCSALL findings also convinced Massachusetts to join the Office of Vocational and Adult Education's (OVAE's) Student Achievement in Reading (STAR) initiative. Thus, one U.S. Department of Education (ED) effort provided research findings, a guide to using the findings, and a clear action that States could take to contribute to the evidence base and broaden their own efforts.

To give another example of how State directors use research, Ms. Serino talked about Massachusetts' Even Start Family Literacy Program. This program began in 1989 and showed

some impact on children but never the "wow" factor that its supporters hoped for, said Ms. Serino. Although Even Start is no longer funded, the State looked closely at the most successful component of the program—the family action plan, which connected families with adult learning opportunities specific to their own goals. Analysis revealed that deliberate, purposeful planning with the adult learner yielded good outcomes. Beginning in 2012, advisors in adult community learning centers in Massachusetts must help participants develop individualized education and career plans that map to learners' goals. Ms. Serino emphasized that despite Even Start's failure to demonstrate the impact its creators hoped it would have, the State used it to identify what did work and tried to replicate that success in other programs.

Ms. Serino also noted that the family literacy initiative prompted case studies that yielded some remarkable results. Parents articulated the transformative nature of the process. For example, one young mother sought to improve her literacy so that she could take part in an office training program, and she found she was finally able to help her daughter with homework. Stories like this resonate among funders and legislators and raise morale among educators.

Ms. Serino noted that when adult education research is not available, K–12 research can be illuminating. Although there is no research on ideal class size for adult basic education (ABE), a great deal of K–12 research indicates that class size matters in settings where there are low-income students and teachers who are not well prepared. Both of these factors are common in adult education settings, so Ms. Serino used the K–12 data to push back against efforts to increase ABE class sizes in Massachusetts.

Summarizing, Ms. Serino said research should continue to answer the question of why adult education is important and provide the field with findings that can inform policy decisions. She also noted that the best way to win over practitioners is for researchers to explain how their findings help students.

Michael Westover, Director, Bureau of Postsecondary and Adult Education Pennsylvania Department of Education

Mr. Westover said that because he oversees a wide range of activities, he needs research findings that are digestible and portable both for policymakers and adult education providers. Adult education staff are a part-time, itinerant workforce and they need research they can understand and implement immediately. Recognizing that adult education staff are usually not well prepared for teaching, the State invested millions in professional development through one institution. The program appeared to succeed and grew to a budget of \$25 million. Looking more closely at the program, it became clear that the money could be better spent by shifting from workshop-based offerings to a classroom-based approach—fostering a community of peers open to discussion and taking an intensive, long-term approach. The new approach provides adult education staff advice from subject-matter experts, opportunities to talk with peers who have succeeded in teaching the same topic, classroom observations, and consultants who help with follow-up.

Mr. Westover emphasized that he has a lot of leeway to change and implement policy quickly, which he uses to respond to urgent needs.

Discussion

Fundina

Ms. Serino said providers compete for funding every 5 years and that the open competition process is the best mechanism for making changes. Mr. Westover said that last year, Pennsylvania required all of its programs to compete. As a result, the State consolidated 200

programs down to 59. Despite a 40 percent reduction in funding, the competition sought programs that would provide more case-management, more in-house professional development, and more spending per student. The State hoped that part of the outcome of these changes would be to attract higher skilled teachers who can better meet the needs of the high percentage of adult learners with learning disabilities. State funding competitions often use the criteria described in the Workforce Reinvestment Act. Ms. Serino said Massachusetts relies heavily on the demonstration of past effectiveness (over the past 5 years, using State data).

Mr. Westover added that Pennsylvania and Massachusetts both have a lot of federal funding to support research and development (e.g., \$4 million in Pennsylvania). Other smaller States have much less money with which to work. Ms. Serino noted that Massachusetts provides State funds equal to three times the federal allocation.

Professional Development

Mr. Westover elaborated on the State's new professional development model. Following classroom observation, teachers are encouraged to evaluate their own success, consider what tools could be helpful, identify areas for improvement, and determine what tools or education to pursue. The approach takes a lot more time than workshop-based development, he said, and the State relies on consultants, peers, and administrators to observe, share, and implement what works. Teachers resented leaving their classes for workshops. Now, educational opportunities are offered online and in the evenings, with consultants coming to the classroom, and teachers feel their time is better used.

Mr. Westover pointed out that adult education teachers' wages are very low. He would like to address the disparity between teachers' and administrators' compensation, but local programs complain that changing the policy would leave less money for students.

Data and Research Models

Individual programs are funded on the basis of the data they collect and report to the <u>National Reporting System for Adult Education</u> (NRS). Mr. Westover said that his office is responsible for monitoring the accuracy of those data in Pennsylvania; therefore, he would like to have a source of unbiased data for comparison. Programs collect individual student-level information, but Mr. Westover questioned the accuracy and completeness of the data. Dr. Wrigley added that in the national studies she has been involved in, the organization conducting the studies always collected their own data instead of relying on program data which was not always reliable. Ms. Serino said Massachusetts has a database of 110,000 student records matched with a national student clearinghouse going back to 2002. She hoped such data could be mined by skilled researchers. Identifying denominators is an ongoing problem, said Ms. Serino.

Ms. Keenan, director of Division of Adult Education and Literacy, OVAE, clarified that States collect individual student data and that those data must meet certain standards. She said that State unique identifiers ensure that individuals are counted only once in the data sets. The National Reporting System (NRS) for adult education collects aggregate State data that include program outcomes such as educational gain which is measured through standardized pre- and post-testing. Ms. Keenan clarified that the assessments used by local programs must meet specific psychometric criteria and be approved by ED for use in the NRS.

Mr. Westover noted that in Pennsylvania, staff at Pennsylvania State University review their program data and correct them as needed before sending them to the NRS. Furthermore, each student has a unique Pennsylvania identification number that helps minimize duplication and allows for matching from pre-K through community college or State institution.

Pennsylvania student data can be mapped to a teacher's education level and years of experience. Mr. Westover hopes to link teachers' professional development efforts with student records to find correlations between student outcomes and teacher preparedness. Ms. Serino noted that Massachusetts collects a lot of data on program design and structure. She believes that her State's programs are more similar than different.

Dr. Wrigley pointed out that large-scale studies are hindered by the fact that adults do not stay in programs long enough to benefit from participation. New models that combine self-access and self-directed learning with face-to-face education are needed. In particular, English as a second language (ESL) students may benefit from more learning-how-to-learn strategies that take advantage of other (non-classroom based) learning opportunities, including online options. Clearly, adults need alternatives to programs that require multiple, face-to-face sessions. Dr. Gregg agreed on the need to consider how to use new technology to reach students and enhance professional development. Mobile phones as well as computer applications should be considered.

Other

Mr. Westover explained that waiting lists for adult classes are common. However, once a potential student is placed on a waiting list, that individual usually does not come back.

Research Perspectives

Heide Spruck Wrigley, Ph.D., Literacywork International

Dr. Wrigley explained that her organization focuses on the education and training of vulnerable youth and adults with a particular emphasis on non-native speakers of English. As part of that work, the organization addresses immigrant education policies. She noted that policies such as the new requirement that students have a GED (general education diploma/general equivalency diploma) in order to obtain a Pell grant may be especially harmful to immigrant populations with low levels of education and may lead to the loss of social capital. Dr. Wrigley noted that her early research on literacy in ESL programs involved case studies that were translated into a handbook (Bringing Literacy to Life: Issues and Options in Adult ESL Literacy) to make the research more accessible to teachers and administrators in the field. More recently, Dr. Wrigley and colleagues conducted a large study (funded by IES) on the impact of a reading intervention for low-literacy ESL students and found the intervention had no effect. She felt the disappointing results could be attributed to several factors, all of which can inform future research efforts:

- The definition for students included in the study was very narrow, and programs struggled
 to recruit enough students to meet the large numbers of appropriate subjects needed for an
 experimental study (students with low levels of education in the home country who
 functioned at beginning levels of ESL)¹
- The study did not take into account the wide variations of levels in native-language literacy among students, which strongly affect the ability to learn a second language. The stronger the literacy skills in the native language, the easier it is to acquire English literacy.² A

¹ Dr. Wrigley later noted that "[a] number of case studies with smaller numbers may have been more appropriate for this population whose numbers in ABE programs are relatively small, but whose issues (lack of progress) deserve attention)."

attention)."

² Dr. Wrigley later noted that "[t]his is true even if the students in question have literacy in a language that uses the non-Roman alphabet. The study included students from non-Roman alphabet languages and did not assess for literacy in the native language. In the end, it turned out that a large number of students with fairly high levels of literacy in the mother tongue were included, possibly skewing the results."

suggestion to assess levels of native language literacy was rejected. The intervention did not include enough teacher training or classroom observations, and fidelity of implementation was not strongly monitored. The intervention was not sufficiently distinct from what teachers normally do. Anecdotal evidence suggested that several of the teachers blended the intervention into their normal practices.³

- The advisory panel did not include enough respected representatives from the adult ESL field. The advisors (researchers in reading and one researcher in second language acquisition did not have a great deal of experience transferring knowledge from the K-3 reading research into a study design appropriate for low level adult immigrant students learning another language and developing literacy in a second language. Efforts to design the study to match real-life conditions were overridden by an advisory group of high-level researchers with no experience in adult ESL programs.
- Advisory panel members disagreed about what mattered in adult ESL literacy with some suggesting a phonics intervention while others supported a contextualized approach focused on English for work. There was no process for bringing together disparate points of view since it was not clear what needs and goals of the students in the programs would be.

John Sabatini, Ph.D., Educational Testing Service

Dr. Sabatini said he has been involved in national and international adult literacy John Sabatini, Ph.D., Educational Testing Service Dr. Sabatini said he has been involved in national and international adult literacy surveys as well as technology-driven programs to understand the components of literacy and foster professional development. He described the challenges of one large research effort funded by the Eunice Kennedy Shriver National Institute for Child Health and Human Development (NICHD), which sought to improve adult learners reading skills with research-based interventions. The interventions were informed based on findings from research demonstrating success among K-12 students. Dr. Sabatini and colleagues adapted the K-12 programs for use with adult learners in literacy programs. However, adult education involves much less class time and attrition rates are very high relative to K-12 education. In addition, as more literature was published, it became clear that the K-12 evidence-based practices may result in more modest gains than originally expected. Nonetheless, Dr. Sabatini and colleagues had to continue with the programs as designed, to uphold the rigor of the study design. The published findings illustrate the barriers faced and some of the methodological approaches researchers took to accommodate the fact that nearly half of the adult students dropped out of the study.

Noel Gregg, Ph.D., University of Georgia

Dr. Gregg-presented research on the longitudinal analysis of select influences on adolescents' with learning disabilities (LD) and emotional/behavioral disabilities (EBD) occupational aspirations. To inform the development of career theories and interventions to respond to this population, she and several researchers at The University of Georgia are undertaking research activities focused on adolescents with selected high incidence disabilities, which includes individuals in one of several disability groups commonly encountered in the classroom including learning disability (LD) and emotional and behavioral disorder (EBD). The proposed research is addressing the paucity of research on adolescents with selected high incidence disabilities (LD and EBD) by conducting three related strands of inquiry that, when completed, will provide (1) theoretical, (2) outcome-oriented, and (3) intervention/ applied perspectives of the transition

³ Dr. Wrigley later noted that "[s]imilarly, since literacy development is part of any beginning ESL class, the control teachers were also likely to integrates phonics into their curriculum (there was no standard curriculum for students in the control group)."

from school to adult life for this student population. A brief summary of proposed research activities is offered next. Dr. Gregg is investigating (a) the purpose of investigating the association between educational outcomes and malleable factors (e.g., student attitudes, school location), and (b) examining the factors and conditions that may mediate or moderate the relations between malleable factors and education outcomes (e.g., gender, race, disability). Interestingly, Dr. Gregg said the models for evaluating risk and resilience among students with disabilities did not hold up during analysis of large databases, such as the Education Longitudinal Study of 2002 (ELS). Risk and resilience models operate very differently in work settings compared with academic settings. Dr. Gregg was skeptical they would hold up in adult education populations. She is currently comparing the effects of inclusion versus career-technical models on career aspirations among students with disabilities using the NELS, ELS, and the National Longitudinal Transition Study-2.

Dr. Gregg discussed the Georgia and National Science Foundation-funded STEM (science, technology, engineering, and math) Accessibility Alliance (www.Georgiabreakthru.org) to provide support to students with disabilities in STEM degrees and careers. The project involves virtual learning environments and social media tools effective for the secondary and postsecondary population with disabilities interested in STEM careers. Dr. Gregg suggested that researchers will need to provide greater attention to the type of research methodologies (e.g., social networking) that best allow for observation of learning across virtual and social networking tools.—She also discussed the importance of better understanding the factors influencing electronic mentoring with these populations.

Finally, Dr. Gregg reported her evaluation activities on the *EngageME – P.L.E.A.S.E.* Innovation Fund (i3) grant awarded by the Department of Education: 2010-2015)which is developing a virtual personalized learning environment for middle and high school students. She discussed the importance of developing adult education personalized learning environments, particularly as a means to deal with the populations problems with time and space constraints.

Daryl Mellard, Ph.D., University of Kansas

Dr. Mellard said his research looks at similarities and differences between adults and children on reading and literacy acquisition. This is informative but has not yet translated to research instruments. Findings indicate that because of cognitive differences between adults and children, adults do not just need more drills and practice. Dr. Mellard added that motivation is extremely important. Motivation to *enroll* in a program must be distinguished from motivation to *persist*.

Most adult education is provided through community-based organizations and community colleges, but the U.S. Department of Labor includes ABE and adult literacy programs in its 125 Job Corps centers around the country. Dr. Mellard and colleagues aim to develop interventions to improve teaching at Job Corps centers, but the research faces several barriers. The number of programs and the sample of students from which to draw are much smaller than that of general adult education, and researchers must reach out across several States. The Job Corps centers offer GEDs, high school diplomas, and simultaneous training toward trade certifications (e.g., construction, health care). Many of the centers are privately operated and do not share information. The private operators compete for contracts every 5 years, so researchers focus on recent awardees that are likely to be in business for the duration of the study.

The Job Corps centers allow open enrollment and new students with varying levels of preparedness are integrated into classes every week. Students range from those with very low literacy to those ready to complete their GEDs. On any given day, students spend part of their

time in academic classes and part in trade-based training. Finally, completion of the GED requirements can be used as a standard outcome measure across States, but every State has its own standards and requirements for trade certifications, making it difficult to compare outcomes on the basis of certification.

Steve Reder, Ph.D., Portland State University

Dr. Reder described what he learned from a 9-year study of 1,000 adults who represent the target population for ABE (but are not necessarily enrolled in classes). The study had 90 percent retention over 9 years, but some subjects dropped out because of competing priorities—busy lives, migration, etc. Dr. Reder emphasized that we need to disentangle study subject attrition from program attrition. The former is a methodological factor, while the latter is a programmatic factor. Understanding attrition is particularly important for education that is not compulsory.

In terms of research, the "dosage" of adult education cannot be controlled by the researcher, so it is difficult for a researcher to determine whether comparisons are accurate. Another thing that complicated his longitudinal study was that some measures used for short-term testing were not always stable over time because the study lasted so long. Scales that work well for psychometrics often are not stable over time, said Dr. Reder.

Dr. Reder said the field is not using an appropriate logic model to evaluate the impact of programs. In trying to compare adult education participants with nonparticipants the impact depends on the measures used and the time scale. Programs do have short-term, direct impacts on some measures, such as literacy and numeracy practices, but proficiency measures usually require a longer time to demonstrate an effect.

Moreover, a learner-centered lens would reveal different aspects than one that is program-centered, said Dr. Reder. By looking more broadly at participation (and including, for example, self-learning and expanding the measures to follow individuals over time regardless of continued program participation), we would get a better picture of how adult education programs work. Dr. Reder called on methodological experts to help improve the logic model that underlies how we look at programs.

Daphne Greenberg, Ph.D., Georgia State University

Dr. Greenberg identified some of the challenges she and her colleagues faced as they tested several reading interventions among adults reading at the third to fifth grade levels. First, the use of grade levels designed for children to assess the skills of adults is problematic. For example, adults may demonstrate different strengths and weaknesses than children reading at the same grade level. The significant attrition rates in adult programs brings into question how many hours of instruction a given student actually receive. Dr. Greenberg's study found that despite teachers' high rates of fidelity to the various interventions and enthusiasm among teachers and students for their perceived gains, none of the interventions yielded very strong effects—as demonstrated by reading- related assessments.

Measuring the impact of instruction is complicated by the lack of psychometric research in the reliability and validity of commonly used reading-related assessments for adults who struggle with very basic reading skills. Also, dosage varies—students may receive the same number of hours of instruction, but one may attend sporadically over several months, while another may attend regularly for several weeks. Thus, the hours of instruction can have different characteristics. Dr. Greenberg wondered how to capture that variation in analysis. Dr. Wrigley pointed out that in adult ESL classes, those students who attended class for a concentrated

time made more progress than those who attended for the same number of hours over a longer time.

Discussion: Program- and System-Level Characteristics That Affect Research Dr. Sabatini pointed out that children get 12 years of immersion education through daily learning that includes reading, writing, and homework in all subjects. When they go on to college, they spend another 4 years reading and writing, and the outcomes are not measured until they complete those 4 years. By contrast, adult education involves 50–100 hours of instruction outside of other commitments. Furthermore, Dr. Sabatini said, we evaluate all the adult education participants together as a group, without distinguishing those who do very well right away from those who do not move forward (and whose failure to progress probably could have been predicted with testing).

Dr. Sabatini asked how we could follow individuals over time to demonstrate the impact of programs. He suggested that it is as important to invest in understanding real-world impact-such as jobs-then in evaluating learning gains.

He also noted that in some cases, more money is spent on evaluation than on the programs themselves. Dr. Wrigley agreed, saying that disproportionate spending (millions on research vs. perceived limited funds for local program improvement) leads to resentment among many teachers and some coordinators, teachers report being tired of putting in time to meet the needs of researchers, and many feel they should at least get something in return, such as materials they can use in the classroom or other tools that would make their teaching lives easier, rather than more burdensome, Teachers often feel that the final reports of studies don't speak to them.

To better measure impact, Dr. Sabatini suggested understanding individual goals for enrolling in programs and aligning outcome measures with those goals. Dr. Reder agreed, noting that impact develops over time, noting that individuals don't complete a program and then immediately get a better job or higher income. Literacy grows over time as well, said Dr. Sabatini, as students read on their own more and more. Thus, it may make sense to test a participant's reading skills some time after the end of the program.

Dr. Gregg pointed out that participants' aspirations are influenced by a lot of things well before they ever attend a literacy class, including family literacy and the family's aspirations for the child. Dr. Hedges agreed with Dr. Reder's contention that the underlying logic of program assessment is flawed. Looking at an individual over a lifetime shows that outcomes are the result of several interventions and experiences, not the impact of a single program. Dr. Greenberg also agreed, noting that participants drop in and out of programs over time.

Ms. Serino said that Massachusetts developed its own assessment, the Massachusetts Adult Proficiency (MAP) test, which is grounded in the State's own framework for adult education. The test provides feedback to teachers about student performance. Ms. Serino said assessment tests should be closely aligned with program content. Dr. Hedges pointed out that most adult assessments are adapted from tests designed for younger people and that the tests are possibly targeted at the wrong level to be informative or the test items do not relate to adults in the same way they do for children.

Dr. Sabatini said assessments can be developed and refined to be more sensitive to outcomes in adults at different levels. However, even good assessments do not demonstrate significantly better outcomes. Accumulation of learning over time does yield good outcomes. The question is whether adult education efforts trigger learning mechanisms that help participants improve their literacy over time—and we do not measure that, said Dr. Sabatini.

Dr. Reder suggested considering how the system should change to allow for a broader range of programs and new models that use multiple learning modalities and evaluations over longer time spans. The system should stimulate and support innovation, he said. Dr. Sabatini agreed that we should encourage innovation and avoid punishing programs for taking risks. Dr. Reder and Ms. Serino agreed that program directors are very wary of taking risks that might affect their funding.

Discussion: Teacher Characteristics That Affect Research

Dr. Finnigan pointed out that K–12 teachers receive a lot of instruction and support, while adult education teachers often have no training. Understanding variability in teachers' background, educational experiences, and supports as adult educators may be useful. Dr. Gregg said it may be time to reframe teachers into mentors. Technology can now deliver information, taking on the role that teachers used to play.

Dr. Wrigley noted that working conditions for adult education teachers are very poor—they often have short-term contracts with few benefits. Teacher turnover is high (the average is 3 years), which hinders the ability to build program capacity with sound teaching. Teachers often have a college degree—but not in the field they teach—and they may have teaching experience—but often no or little experience teaching adults or low-level learners immigrant learners

Currently, professional development usually involves going to workshops. New teachers may spend 10–20 hours a year on development, while experienced teachers spend even less. Sustained professional models that include face-to-face training plus virtual follow-up, interaction, self-reflection, and self-determined interventions seem to build greater awareness than workshops, said Dr. Wrigley. Dr. Gregg added that social networking can help us understand the connections among teachers, learners, administrators, policymakers, and others.

Discussion: Student Characteristics That Affect Research

Dr. Mellard noted that some surveys ask students to identify their goals for attending adult education. Students usually state a primary goal (e.g., job, citizenship), but 40 percent mark "other" as their goal. In evaluating program impact, Dr. Mellard said, it is important to capture the secondary goal(s) too, because it may affect a student's motivation and persistence.

Dr. Greenberg said her research found a number of factors related to persistence, such as the type of program, age of the student, the student's socioeconomic status (SES), and interest in or avoidance of reading. Although these factors seem logical, it's not clear why these aspects rose in relevance above others. Dr. Greenberg suggested looking beyond a participant's reading level to the demographic and other factors, then customizing programs to the students.

Dr. Wrigley pointed out that the characteristics of ESL students are much different from those of other adult learners. The range of backgrounds is much broader. For example, some ESL students earned college degrees in their native countries, but others (29 percent of all immigrants and 68 percent of Mexican immigrants) do not have a high school education. Dr. Wrigley added that without literacy in one's native language, it is a difficult and lengthy process to become literate in English. She suggested that established programs partner with other

⁴ Dr. Wrigley later noted that "[r]esearch suggests that on short workshops do not result in changes in practice."

organizations that provide literacy education in the student's first language. She stated that we need to stop thinking about ESL as ABE with an accent.⁵

Dr. Gregg said SES is not always holding up as a predictor of success. In evaluating risk and resilience, however, SES is an indicator of aspirations. Dr. Dowd pointed out that teachers have their own cultural biases and that it may be helpful to make teachers more aware of racial/ethnic or cultural considerations that affect how they teach. African Americans are overrepresented in adult education, said Dr. Dowd, and we should not assume that teaching practices are always neutral or positive when they could in fact have negative effects. She suggested studying teacher practices as well as student goals. Dr. Dowd also hoped some data could focus on measuring how participants take what they learn and use it in their own communities, not just in academic discourse.

Dr. Wrigley concurred with Dr. Dowd's observations about bias. Bilingual classes often have wide disparities in SES, even among people from the same country. Dr. Wrigley said that in some cases, the more affluent or better educated may correct the Spanish of the less affluent/educated, effectively silencing them. Teachers must work to build collaboration, she said. Furthermore, more affluent and better educated students can easily hijack the class and sway the teacher's attention toward their needs. In both cases, low educated immigrants – those with the greatest need for support – lose out.

Recap: Potential Areas for Exploration

Following lunch, Dr. Larson and Dr. O'Donnell summarized some of the areas of exploration discussed throughout the morning. (Appendix A represents a final summary of topics and questions for exploration.) The following comments were made:

- Knowledge gained from research on college students may be a resource for understanding adult experiences in education.
- Assessments should be specific to the aspect of literacy measured (e.g., language, literacy, decoding, comprehension).
- Assessments should follow students over time. Instead of measuring literacy, long-term assessments should evaluate quality of life, aspirations, and self-image, for example.
- Expectations for the program impact and individual performance should align with the research question and the methods used.
- Frame the research around individuals, not programs, and tailor the methods accordingly.
- Assess for increases in learning, aspiration, interest, etc., beyond the program.
- Consider the potential of technology-based learning and its ideal applications.

Methodology Perspectives

Elizabeth Stuart, Ph.D., Johns Hopkins University

Dr. Stuart pointed out that researchers in other fields face similar challenges and thus may have solutions. For example, persistence is analogous to the issue of maintaining a patient on antipsychotic medications over time, and length of time on the drug is an important outcome. The need to ensure that program outcomes are relevant to the participant is similar to the new focus in medical research on patient-centered outcomes, such as function and quality of life

⁵ Dr. Wrigley later noted that "[p]rocesses involved in Second language acquisition and second language literacy development are quite different from the processes by which native speakers of a language develop their literacy skills."

over test results. Prevention science focuses on the long-term impact of an intervention that may not show significant short-term gains. Finally, Head Start programs may be a laboratory for research on professional development.

Dr. Stuart asked whether State and national data could be combined to answer broad questions. She also explained that propensity scores are useful for comparing two groups when random assignment is not feasible, such as adults who self-selected into different programs. Propensity scoring may be able to distinguish the characteristics of people who drop out compared to people who persist in programs. To work well, however, researchers need good predictors and good covariates.

Dr. Wong noted that pre-tests are useful for matching populations and multiple pre-tests are even more effective. Dr. Sabatini noted that with multiple tests, adults may start to apply strategies for answering questions rather than demonstrating knowledge. Dr. Wrigley agreed that adults are not motivated to engage with and do well on tests but rather just focus on finishing them. Dr. Stuart said the possibility of linking K–12 test data with findings on the same students as they become adults is exciting.

Kara Finnigan, Ph.D., University of Rochester

Dr. Finnigan described her efforts to evaluate relationships and connectedness through social network analysis. For example, such research may look at mentors of adult learners and the influence of resources that flow between the mentor and student, e.g., advice. Social network analysis can identify which connections (e.g., among learners and teachers) have the most impact. Studies using social network analysis in public health, for example, have identified the "brokers" of information. This is important because these brokers can then serve as a point of access to the other people in the network. It can also demonstrate where there are opportunities to provide support (e.g., if people are isolated from certain resources, such as academic or emotional support). This approach may be useful in adult education research.

Dr. Finnigan cautioned that adult learners are harder to analyze than their teachers, especially when literacy challenges are involved, because you have to ask questions in a way that focuses on complex connections. Student attrition rates, as well as rapid teacher turnover, can make it difficult to use social network analysis to evaluate changes in connectedness over time between adult learners and their teachers. Currently, a lot of existing research from social network analysis evaluates the importance of relationships in terms of both individual and organizational performance. This type of examination of the underlying relationships of adult learners may be useful in looking at persistence and attrition. Dr. Finnigan suggested that examination of the K-12 literature on dropouts may also inform research on the persistence and attrition of adult learners.

Dr. Greenberg pointed out that some anecdotal reports indicate that attendance improves when class participants are responsible for each other's' attendance (e.g., finding out why a student did not attend and encouraging that student to return). Dr. Mellard noted that groups that have common interests are more likely to stay together and that classrooms can build a social network. Dr. Finnigan pointed out that social network analysis is ideal for modeling isolation and connectedness. Researchers can use it to find points where students connect with each other or teachers and the strength and quality of these relationships. Dr. Wrigley said that there are early warning signals (i.e., red flags to be paid attention to). For example, a lack of participation and engagement in the classroom indicates that a student is at high-risk of dropping out. She added that in ESL classes, participants tend to go to the same programs as their friends, regardless of

whether it is the best program for them, and this illustrates how important peer support is to engagement.

Vivian Wong, Ph.D., Northwestern University

Dr. Wong said methodologists have done a good job over the past 10 years developing methodologies to address causal questions but have not done as well integrating these causal questions into a more general framework for program evaluation, so more work needs to be done on that frontier. She noted that selection bias is still a frequent concern among adult education researchers. In the past, researchers have addressed concerns about selection bias through random assignment, but the sample size in these studies were small and did not generalize well to other populations of interest. In addition, the studies suffered from significant attrition problems. Dr. Wong suggested that randomized control trails in the job training literature from the 1980s and 1990s might be models for how adult education researchers can evaluate their own programs in field settings. She noted that much of what we know now about what goes wrong in field research (e.g. treatment noncompliance) and how to address these problems come from job training studies. In addition, researchers should consider including design options that directly address potential challenges for field evaluations. For example, researchers could imbed randomized experiments in contexts where there are long waiting lists to participate in a program or receive a service. If attrition is a problem, then researchers could consider randomizing incentives for participation in an adult education program, such as providing free child care, stipends, or transportation to the program.

A regression discontinuity design can be used when participants are assigned into a program on the basis of their score on some continuous assignment measure and a cutoff threshold. Individuals with scores above the cutoff may be assigned into the treatment condition while those with scores below the cutoff do not receive treatment. Treatment effects are measured by the size of the discontinuity in the regression line that occurs exactly at the cutoff. One possible application of the RD design in adult education settings is when grants are awarded to recipients on the basis of their application score and a cutoff threshold. The advantage of the RD design is that it allows program officials to assign participants or organizations whom they feel are deemed most "in need" or "worthy" of receiving treatment. The interrupted time series is another approach to consider. For example, if longitudinal records of student performance are available, researchers could compare student test results before and after the introduction of an adult education program to evaluate outcomes of interest.

Dr. Wong said she and her colleagues believe that comparing non-equivalent education sites and participants (matching) works better when the units come from similar populations—for example, within a State rather than across States. Attrition is probably a useful outcome in understanding the covariates and factors that predict selection and persistence, Dr. Wong noted. Randomly assigning students to a usual-procedures groups or one that receives a lot of incentives may be useful in looking at the effect of persistence itself. Finally, researchers should consider a design option where individuals or units are randomly assigned into either a "random assignment" arm or an "observational study" arm. In the random assignment arm, units are randomly assigned to receive the treatment or not. In the observational arm, units are allowed to select into the treatment condition. Using rich covariate information from the observational arm, researchers can then apply matching methods to estimate their quasi-experimental treatment effects, and compare these effect estimates to the gold standard randomized experiment results. If the quasi-experimental methods are able to replicate the experimental benchmark results, then the researcher has some reassurance that they have gathered the appropriate covariates for modeling the selection process or outcome in the quasi-experiment to yield unbiased effects.

Dr. Stuart noted that one option for evaluating attrition is to invest in the follow-up of a small, randomized sample. Participants briefly debated whether providing incentives, particularly money, is effective. Dr. Stuart noted that incentives can be used to learn whether persistence matters.

Alicia C. Dowd, Ph.D., University of Southern California

Dr. Dowd explained that her approach, "symposium research," involves combining traditional methods of quantitative and qualitative research with action research—the practice of developing tools for practice that are based on the experience of practitioners. In the same way that Pennsylvania's professional development asks that teachers reflect on their classroom experiences, Dr. Dowd and colleagues ask that educators review data on themselves. Teachers' experiences and their input on what works are combined with other research findings, and, consequently, the research focus shifts to the activity setting of teaching and learning rather than to being solely on learners' outcomes. Dr. Dowd said the activity settings of teaching and learning should be a unit of analysis, and data should be collected on teachers as well as students. She emphasized that research should not consist solely of outside entities looking in but, rather, should involve collaboration among researchers and practitioners to understand how the practitioners produce knowledge.

As mentioned earlier, teachers may be more like mentors or coaches now and learning may not necessarily happen in the classroom. The activity setting goes beyond the immediate delivery of information. As an example, Dr. Dowd briefly described efforts to use symposium research to overhaul the education of first-year science students at a polytechnic university to take into account concepts such as the intent of programs, the structures involved, the materials used, the effects of teacher practices on learners with different backgrounds, and the integration of research into the activity setting. The curriculum involves service learning, community engagement, peer groups, and other activities that go well outside the boundaries of school. Dr. Dowd pointed out that symposium research is a mechanism for robust research in a highly dynamic, real-world setting.

Dr. Wrigley said that much attention is focused on evaluating interventions but little is given to understanding how to build an intervention that makes a significant difference, such as how to get buy-in and enthusiasm from teachers and students so that classroom dynamics are improved and students are likely to stay longer, resulting in greater gains. Dr. Dowd added that the educator's perception of efficacy and control of the teaching environment also plays a role. Researchers also have an ethical obligation to identify interventions that have not worked or are not likely to work given past results⁶ and discourage spending on such efforts, said Dr. Wrigley. Ultimately, said Dr. Dowd, the symposium approach is not very different from current approaches but focuses as much on cognitive and behavioral changes among learners and teachers as on outcomes. Dr. Dowd later said that it also requires greater collaboration among researchers using different data sources and analytical techniques. This entails a willingness (and patience/openness) to integrate across different research paradigms to produce knowledge.

Larry Hedges, Ph.D., Northwestern University

Dr. Hedges observed that the discussion seemed to be raising two different strategies for moving forward: conventional research on existing programs on one hand and a radical

⁶ Dr. Wrigley later noted that "[m]ost of the recent experimental studies in ABE amd Adult ESL have not shown significant effects."

restructuring of both programs and research approaches on the other. Taking the conventional route, we can improve the results by paying attention to the proportionality between cause and effect—placing realistic expectations on outcomes in proportion to the resources invested. Small investments in financial products usually result in small gains. Only in social services and education do we think, "We can invest nothing and get enormous results," said Dr. Hedges. Along the same lines, he noted that we must consider that 100 hours of education is equivalent to 1 month of education at the elementary school level and measure effects accordingly.

Conventional research approaches could be used to encourage persistence, Dr. Hedges noted, and to identify the predictors of enrollment and persistence. For example, if persistence is thought to be crucial to obtaining impact on other variables, research on factors to improve persistence in programs is very worthwhile. Understanding how to model persistence as a function of other factors that can be measured would be valuable in mitigating the expected attrition and missing data.

Alternatively, researchers could pursue the person-centric model suggested by Dr. Reder and evaluate the effects of programs over time as an individual pursues his or her goals. In addition, researchers could reconsider whether the outcome measures used to date are relevant. A person-centric model would focus on the goals and outcomes identified by individuals and would be measured by that individual's perception of whether those goals were achieved. Whether we pursue conventional or alternative research approaches, said Dr. Hedges, we should seriously question whether we are serving ourselves or our clients.

Discussion

Dr. Stuart pointed out that research is usually funded for 5 years at the most, so investigators often do not have the opportunity to identify long-term effects. Given the discussion at the meeting Dr. Stuart believes that an important area for further research and development is on measures and how to measure adult literacy and the relevant outcomes. Dr. Hedges agreed, saying research indicates we know less about measuring adult literacy than we thought we did. The current assessment tools are a hybrid of measures for children and adults, said Dr. Sabatini.

Dr. Wong said that if researchers believe an intervention's effects only manifest in the long-term, they should build a strong case to support that belief based on observed patterns (rather than fishing for findings 5 years later). Dr. Hedges said a person-centric research approach could include some reasonable theories on long-term effects.

Dr. Wrigley pointed out that motivation evolves over time. She gave the example of an ESL digital literacy class. Several people who were only seeking an ESL class found they were very motivated by the digital component and their goals changed as a result.

Also, people want to learn more than the basics of reading and writing and researchers should consider the participants' other goals. Dr. Dowd said the book Stuck in the Shallow End:

Education, Race, and Computing makes a good argument for the need to understand how goals are shaped, how malleable they are, and how educators play a role in shaping them. Dr. Dowd later noted that overall the discussion at the meeting was "deracinated;" seldom addressing the racial or ethnic characteristics of the learners or teachers, or the social status of either in their different communities. She noted that there were a few exceptions during which panelists commented on race and ethnicity as important elements to the discussion, such as Dr. Wrigley's

points about ESL students.⁷ She contended that researchers won't be able to fully characterize the problems of adult literacy and ABE, or conduct research to address them, in the absence of an explicit focus on issues of race and racial discrimination in U.S. society.

Key Issues for State Programs

Dr. Larson invited participants to describe the most pressing issues. Ms. Serino said State programs would benefit from paying more attention to the following:

- Effectiveness of new professional development models, such as intensive cohort- or classroom-based models
- Rationale for investment in adult education
- Effective [instructional] strategies for adult learners
- Relative effectiveness of community colleges compared with other organizations that provide ABE
- Mechanisms to support independent innovation
- Using technology to support adult learners in developing literacy skills

Mr. Westover said he struggles with where to begin addressing the needs of poor Latino immigrants in Pennsylvania who lack education and literacy in both their native language and English. Manufacturers in the State have jobs for this population, but the immigrants need better communication skills. Community colleges in Pennsylvania have expressed interest in collaborating to address the issue. Dr. Dowd suggested exploring teaching methods that tap into an individual's fund of knowledge (a.k.a. "asset-based" instruction) to reach immigrants with poor education and communication skills. Such an approach focuses on individual skills for success (e.g., critical thinking and survival skills). Dr. Dowd added later that other researchers are giving attention to the concepts of funds of knowledge in marginalized communities (e.g. Luis Moll, Robert Rueda, Ebony McGee) and to culturally responsive pedagogy or critical pedagogy (e.g. Geneva Gay, Gloria Ladson Billings, Kris Gutierrez). It would be important in future meetings to incorporate their research. A more racially and ethnically diverse participant group might also expand the range of perspectives available for problem framing and research design.

Also, Mr. Westover said Pennsylvania adult education data could be combined with data from the State departments of labor and welfare to track participant outcomes over time. More work should be done to identify strategies helping people with learning disabilities.

Areas for Exploration

Dr. Larson asked participants to delve more deeply into questions to be addressed and the tools needed to address them. The complete list of topics and questions for exploration appears in Appendix A. Participants offered the following suggestions:

- Build capacity and increase investment so that results are proportional to investment.
- Prioritize research questions.
- Evaluate innovative programs and the keys to successful implementation (e.g., Washington's Integrated Basic Education and Skills Training [I-BEST] program, which uses

⁷ Dr. Dowd later also noted Mr. Westover's comments on poor Latino immigrants' needs as another example of the importance of incorporating social factors into the conversation.

a team-teaching approach and Texas' program for providing contextualized ESL and GED education).

- Study the impact of dropping in and out of programs over time.
- Determine whether an individual's progression to higher education levels (according to the NRS) links to measurable social and economic benefits.
- Develop methodology to support secondary analysis of data on the relationship between hours of attendance and educational gains.
- Determine what State and national data are available for in-depth analysis.
- Take advantage of natural experiments, such as the upcoming transition to new GED testing.
- Evaluate the impact of the Spanish GED with and without English language skills training.

Participants noted that a new logic model would require a better understanding of the current logic model underpinning adult education research, common terminology (e.g., definition of persistence), and identification of appropriate performance expectations. Dr. Wrigley said it would be helpful to have a summary describing gaps in the current system of adult education – what services seem important but are not being provided, at least not on a large scale (e.g., programs that integrate job training with English for specific purposes). Dr. Dowd said a new logic model would allow researchers to get at the "why"—the value of adult education—by enabling them to determine impacts on such outcomes as healthy communities, civic participation, and family involvement in children's lives.

IES Support: Allen Ruby, Ph.D., Associate Commissioner, Policy and Systems Division, NCER

Dr. Ruby described IES funding opportunities that investigators could pursue. He encouraged researchers to call him with ideas so that he could direct them to the right program officer.

Research and Career Development Funding Opportunities

Participants discussed the value of partnering across institutions to design multidisciplinary research protocols and Dr. Ruby encouraged participants to consider applying for a Researcher-Practitioner Partnerships in Education Research grant to support such an effort. He also encouraged participants to propose research on the new GED test and to seek funding for training postdoctoral students in adult education research.

Dr. Albro pointed out that the Early Career Development and Mentoring Program in the National Center for Special Education Research (NCSER) can also support adult education researchers. Ms. McLaughlin, Deputy Commissioner of NCSER, added that NCSER funds a research program on Transition Outcomes for Secondary Students with Disabilities.

Participants suggested that NCER include more experts in the field of adult education on grant review panels and educate other reviewers about the unique challenges adult education faces. Dr. Stuart recommended that applicants better articulate the challenges in their applications.

Conclusion and Adjournment

Dr. Larson thanked the participants for their hard work. She plans to provide participants with a summary of the meeting results and ask for input on prioritizing the next steps. Dr. Larson adjourned the meeting at approximately 4:30 p.m.

Appendix A: Topics and Questions for Exploration

Evaluation and Effectiveness

Research Questions

What are the most effective strategies for supporting adult learners?

What innovations show promise?

What are the factors in building a successful intervention that makes a difference (such as teacher and student buy-in)?

What is the relative effectiveness of community colleges compared with other organizations that provide adult basic education?

Do learners benefit from multimodal, multidimensional programs?

Related Topics: Assessment/Measurement Tools

- Appropriateness for adult learners
- Need for strong measurement techniques or theoretical basis for adaptation to adult learners
- Measurement of the right construct
- Specificity to the outcome of interest (e.g., language, literacy, decoding, comprehension)
- Measurement over time/long-term effects of education on individual quality of life, aspirations, and self-image, as well as concrete measures such as getting a job or a raise or improved literacy
- Accounting for actual class time and high attrition rates among adult learners
- Accounting for variability in the background, experiences, and supports of teachers of adult learners
- Measurement of self-determination
- Distinction between motivation to enroll and motivation to persist
- Alignment of outcome measures with individual student goals (primary and secondary)
- Demographic and other factors beyond reading level
- Measurement of evolution of motivation over time
- Realistic expectations of outcomes in proportion to the resources invested

Related Topics: Data and Databases

- Availability and quantity of data
- Quality and accuracy of available data
- Comparability across data systems
- Identification of covariates
- Determination of outcomes of interest

Student-Centered Issues

Research Questions

What strategies are effective for helping adult learners with learning disabilities? What critical thinking skills do adult learners bring that will help them succeed in adult education?

What factors are associated with persistence?

What is the relationship between dose (hours of attendance) and measured gain? What is the relationship between measured gains in literacy and social and economic advancement?

What are the social impacts and implications of failing to pass literacy tests? Can adult education improve performance on individual measures of learning? How can programs address the needs of English as a second language (ESL) students with very low native literacy skills and poor communication skills?

Related Topics: Research Challenges

- Application of K-12 research to adult learning
- Identifying the right population for comparison/extrapolation (college undergraduates, high school students)
- Translation of research into digestible, portable, accessible materials
- Usefulness of research for planning and decision-making
- Development of models for adults
- Challenges of using social network analysis with adult learners given literacy and second language issues

Related Topics: Setting

- Setting characteristics
- Asset-based instruction/acknowledgment of participants' life skills
- Setting-specific program components versus broadly applicable components

Related Topics: Dosage

- Defining and controlling dosage
- Distinction between subject attrition and program attrition (methodological versus programmatic factors)
- Feasibility of interventions/programs (student time, teacher skills, innovative versus conventional)

Long-Term Impact/Person-Centered Model

Research Question

What are the long-term effects of program participation?

Related Topics: New Logic Model

- Realistic expectations for impact (familial, societal)
- Long-term measures to capture learning experiences before, during, and after the program
- Measurement of advances in aspirations and self-determination

- Ideal models: busy intersection (learner is not in the program for long, but it is important where they go next) versus parking lot (the longer the student stays, the better)
- Defining and conceptualizing a program
- Incorporation of multidimensional, multimodal components
- Student characteristics that interact with the learning process (e.g., age, socioeconomic status, language, previous education experience, race, ethnicity, culture, persistence, motivation)
- Interaction of student, teacher, and program characteristics
- Need for common terminology
- Definition of growth/evaluation of long-term trajectory
- Individual versus program focus (person-centered approach)

Innovation

Research Questions

What impact do innovative programs have on the success of adult learners? What are the keys to successfully implementing innovative programs?

Related Topics: Support

- Funding for research (sustainability, long-term funding, political support)
- Research resources
- Discrepancies in research funding across States
- Rationale for investment in adult education
- Mechanisms to support independent innovation

Professional Development and Instructor-Related Issues

Research Question

How effective are new professional development models, such as intensive cohort- or classroom-based models, on the quality of instruction?

Related Topics: Instructor Factors

- Implementation/fidelity
- Characteristics and skills of the instructor (including cultural biases)
- Compensation tied to the quality of instruction

Technology

Research Question

What technology can be used to support adult learners and increase literacy?

Related Topics: Technology

- Ideal combination of virtual and face-to-face learning
- Ideal characteristics of a web-based program
- Methodology to understand how students use virtual models and social media

Potential Research Tools and Designs

- Propensity score matching
- Random assignment and randomized controlled trials (RCTs)
- Action research—collaboratively developing and validating tools for practice that are based on the real-world experience of practitioners
- Regression discontinuity
- Interrupted time series
- Social network analysis
- Survival analysis
- Follow-up on a small, randomized sample of participants
- Incentives to persist in programs
- Combining longitudinal education data with data on labor and welfare/human services
- Natural experiments, such as those provided by the impending GED (general education diploma/general equivalency diploma) test changes (e.g., exploring the major variation among the States) and by the Pell Grant policy changes
- Impact of the Spanish GED with and without English language skills training

Steps Toward Advancing Adult Education Through Research

- Develop multidisciplinary teams.
- Include adult learner experts on grant review panels.
- Build the capacity of the field to conduct research in this area.
- Facilitate connections among States that have the capacity for collaboration. Identify States with compatible State unique identifiers, jobs data, linked teacher and student data, etc.
- Generate a new logic model.
- Allow for other opportunities to expand research beyond the causal model.