

**Adult and Family Literacy:
Current and Future Research
Directions—A Workshop Summary**

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Introduction

A panel of experts from various disciplines was convened to assess the current state of knowledge about effective approaches to improving the literacy skills of low-literate adults and about the role of family literacy services in providing parents with the knowledge and skills they need to support their children's literacy development as well as their own. The panelists were asked to advise the National Institute for Literacy, the National Institute of Child Health and Human Development, and the Offices of Educational Research and Improvement, Elementary and Secondary Education, and Adult and Vocational Education of the Department of Education, on the current state of knowledge and major gaps in reading research in these areas and to identify research priorities. To stimulate discussion, the panel was asked to address the following five general questions:

1. What do we know about instructional effectiveness? What do we need to know, and how might this be approached? (research design, methods, etc.)
2. What do we know about the timing and mode of delivery of reading instruction for programs in these two areas (intensity, duration, organizational structure)?
3. What special measurement and assessment issues must be addressed?
4. What are the professional development needs in the field and how might they be approached from a research vantage point?
5. What are the specific needs that must be met in order for rigorous, high quality research to be done in these fields? For example, establishment of research collaborations across fields and disciplines, coordination across multiple sites to increase number of research participants, development of common protocols across projects. What else do we need to consider to move these fields forward?

Overview

There was consensus in the panel that much additional research is needed on both adult and family literacy. Both the 1992 National Adult Literacy Survey conducted under the auspices of the National Center for Educational Statistics of the US Department of Education and the International Adult Literacy Survey provide interesting information about the demographics of adult literacy in the US, and clearly indicate the need for and importance of adult literacy instruction. However, there is little research that directly addresses instructional or program effectiveness in this area. While there is a large body of rigorous research on effective instructional methods for early reading by schoolchildren and on the theoretical underpinnings of reading difficulties in the school years, there has been far less scientific study of literacy interventions with adult learners and with preschool children who are at risk for difficulties in learning to read when they enter school. In both of these populations, far more needs to be learned about causal relationships between instructional methods or approaches and literacy outcomes within adult literacy and family literacy programs. To that end, the panel agreed that valuable information can be drawn from the research findings on reading processes and instructional approaches for children in kindergarten through grade 12. That is, it would be

productive to test the applicability of effective practices in K-12 to adult learners, adapted in age-appropriate ways with regard to both reading materials and instructional procedures and approaches. Similarly, with regard to the fostering of early literacy development in children served by family literacy programs, the conceptualization, design, and implementation of intervention efforts could build upon established theory and evidence from studies of reading acquisition that predict reading difficulties in young children. In all such research, moreover, the panel agreed that literacy should be viewed as including both reading and writing abilities, and that these skills require the mapping of print onto oral or signed language so that written material can be well understood and used effectively and efficiently as a source of information.

Specifically, the group called for a program of systematic, programmatic, multidisciplinary research to determine the most effective instructional methods and program organizational approaches for both adult and family literacy programs. There is a need to increase understanding of the specific cognitive, sociocultural and instructional factors, and the complex interactions among these factors, that promote or impede the acquisition of English reading and writing abilities within adult and family literacy programs and activities. There is also a clear need for these fields to increase the methodological rigor of research studies, building on existing information where that information can be substantiated and provides a solid, credible foundation. Research studies are needed that will contribute scientific data that bear directly on a number of public policy issues and instructional practices directly related to programs in adult literacy and family literacy.

For adult literacy, research should define the population (both in terms of demographic characteristics and status on the components of reading) that requires these services and the effective program approaches for meeting this population's needs. Research on assessment, particularly the development of better measures and effective uses of assessment data, is among the critical research needs in this field. Research that identifies effective program types and, more importantly, links program outcomes to learner characteristics to identify which programs are most effective for particular types of learners is also needed. The role of learner motivation, especially the factors that increase learner motivation, require further examination, particularly as they relate to attracting adults to and retaining them in programs. Research should also examine basic reading processes in adult learners, such as the degree of automaticity required to function as a reader and the nature of the interaction between reading rate and accuracy. Related research on the most effective instructional methods for increasing ability in component skill areas is encouraged, with attention to identifying the optimal amount of instructional time required to produce gains in particular component skills. Technology and its role in increasing access to and effectiveness of program services is another area in which more research is needed. Across all areas, there is a need to develop and test hypotheses and develop conceptual frameworks within which to examine specific issues of program effectiveness. The role of contextual factors was recognized as an important issue for further research.

In addition, while many adults who are not literate may simply not have learned or not been adequately taught to read and write, or may be literate in another language but in need of literacy instruction in English, there are also many adults who are not literate in any language due to learning difficulties. There is very little high quality, well-controlled research on the optimal methods of teaching and supporting the development of first or second language literacy in adults. An in-depth understanding of the factors and conditions that hinder this learning process

is also crucially important, and the development and testing of interventions to identify and remediate reading difficulties in adults is needed.

Within family literacy, there is a specific need to address the more fundamental issue of whether rigorous evidence can be obtained in support of the primary assumption, as yet untested, that underlies the family literacy approach - namely, that greater benefits to both adult and child learners will be attained by taking an integrated family literacy approach than by independently addressing adult and child needs through separate high quality adult literacy and child intervention programs. In other words, can it be demonstrated that there is "value added" (in literacy gains, in reduced costs, or in recruitment/retention levels) from bundling services to families in which both adults and children require intervention, and if so, why? The panel further agreed that this assumption, upon which the family literacy approach is predicated, is a testable one that would require a large-scale interdisciplinary effort in which adult literacy, family literacy, and early childhood education professionals would be involved.

In addition, research should be encouraged that will determine what are the optimal conditions under which family literacy programs can facilitate the development of literacy in adults and/or young children, what factors should be considered in selecting the language of first literacy in cases where the home language of a family is not English, and whether there are specific linguistic and cultural advantages that accrue with instructional approaches that develop oral language and literacy skills in two languages simultaneously (e.g., dual language-literacy approaches) for parents and/or children within family literacy programs.

Given that a large proportion of those served in adult and family literacy programs are English language learners, it is critical that studies of these programs and their participants document and take into account linguistic and cultural factors. Assessment tools must accommodate linguistic characteristics. Measures must be demonstrated to be culturally appropriate for the target population, and in some instances (e.g. initial assessment at program entry) it may be appropriate to develop parallel instruments in more than one language (e.g. Spanish and English). In addition, it is important to determine whether instructional methods need to be different for English language learners and native speakers of English.

Research priorities

The research priorities recommended by the panel are best expressed by the following broad questions:

1. **What are the most effective instructional methods and program organizations/ structures for which groups/subgroups of adults and under what conditions are these most efficiently implemented?** That is, what are the optimal instructional content, instructor qualifications and preparation, and timing, duration, and methods of delivery of instruction, for specific groups/subgroups of participants in adult literacy and family literacy programs in terms of specific literacy (reading and writing) outcomes, and which approaches, methods and types of programs are most cost-effective for which participants?

2. **What are the most effective methods for identifying and remediating adults with literacy (reading and writing) difficulties?** That is, what factors and measures are most useful in identifying adults with reading disabilities, and what instructional methods, types of instructors, and types of programs (in terms of structure, organization, and other characteristics) are most effective in achieving useful literacy outcomes for which participants? In addition, what factors and measures are most useful in assessing and planning intervention for adults whose first language is not English? To adequately address these questions, it will be important to indicate what are the most important literacy outcomes for specific participants, and how these might be measured.
3. **Are greater benefits to both adult and child learners attained by taking an integrated family literacy approach than by independently addressing adult and child needs through separate high quality adult literacy and child intervention programs?** That is, can it be demonstrated that there is "value added" (in literacy gains, in reduced costs, or in recruitment/retention levels) from bundling services to families in which both adults and children require intervention, and if so, why?
4. **To the extent that it is not already known, who are the adults/families in this country requiring literacy instruction, and how can they be best identified, recruited, and served?** That is, what specific groups or subgroups of adults/families (in terms of racial/ethnic, cultural, linguistic, socioeconomic and geographic characteristics, as well as age and educational attainment) in the US are currently found in the various programs providing literacy instruction? How can these populations be characterized to enable service providers to best identify them, to recruit and retain them, and to tailor the organization and structure of programs and specific instructional methods to optimally achieve defined literacy outcomes? Are there adults/families that can be identified who are not being served but would potentially benefit from such services?

Suggestions for research studies

The panel identified several issues that are common to both adult and family literacy research, as well as some examples of potential research studies that could contribute to addressing the research priorities above.

Methodological issues.

In all studies, there is a need to clearly describe the study sample. Such descriptive data would most likely include at least race/ethnicity, gender, marital status, family size and structure, linguistic characteristics, presence of a learning disability, socioeconomic status, and some indications of context (social support networks, neighborhood/ community support, availability of after-school and child care programs), educational status/attainment at first contact with program and at each subsequent contact if more than one, involvement with other community educational or support programs (e.g. parenting, public health, drug/alcohol, or job training programs). Such studies should also document the length of attendance of various types/groups of participants (individual and family), attrition rate, reasons for leaving/returning to same or different literacy programs, etc.

Similarly, in studies comparing program models, it will be important to clearly characterize the programs themselves, whether extant programs or novel programs that are being developed and

tested. Characterization of programs should include frequency of staff turnover, staff qualifications and training, organizational structure of the program (both in terms of financial and programmatic management and service delivery), hours of operation, recruitment and retention efforts, materials used, etc. Such a study would most likely require combined quantitative and qualitative methods. Methods should be carefully described with regard to ensuring trustworthiness and validity of data and methods of analysis and interpretation and to allow for replicability.

The panel recognized the need for rigorous research design. Research studies should be encouraged that provide empirical findings with which to address issues of causality. There is a critical need for intervention studies assessing program effectiveness; clearly intervention studies assessing effectiveness must rely on experimental or quasi-experimental design. The methodology presented in the Report of the National Reading Panel (<http://www.nationalreadingpanel.org>) is a model statement of the requirements for rigorous research that provides evidence of a causal link between intervention and outcome. However, the panel also acknowledged that these studies alone will not yield sufficient information to create a body of knowledge on which to base high quality instructional programs in adult and family literacy. There is also a need for studies that provide rich descriptions of how instructional programs are delivered and the role of context in adult learning. Ideally, these approaches would be combined within multidisciplinary, collaborative studies.

The following examples are meant to be illustrative; they are neither exhaustive nor exclusive, but are provided as a starting point for researchers seeking to explore the important topics of adult and family literacy.

Adult Literacy Studies. A strong research base is needed that will demonstrate not only that adult literacy programs work, but which programs work, why they work, and for whom. This must include studies that clearly define the target populations, studies that examine how adults learn to read, and studies to develop and document outcomes of innovative approaches and models that optimize adult literacy for specific low-(English)-literacy groups and subgroups of the US population.

- The field of adult literacy would benefit from investigation of the factors that affect how adults learn to read - including learning characteristics of adults who are learning to read for the first time (i.e. not literate in their native language, whether English or another language), learning characteristics of adults learning to read in English as a second language when literate in their native language, and the development, implementation and testing of instructional strategies and methods that will best accommodate those learning characteristics.
- Research is needed that would more clearly delineate the role of key components of reading and the effectiveness of instructional methods for adults, including assessment of application to adults populations of methods proven to be effective with children. Specific studies could address various aspects of literacy learning and instruction. For example:
 - What role do phonemic awareness, the alphabetic principle, and phonics play in literacy learning and adult instruction, and how does this role vary with different groups of learners?

- How is English reading fluency best developed in adult learners? How does this differ for first-literacy learners compared to those already literate in another language?
 - What are the optimal instructional methods to increase vocabulary in adult literacy learners, and how can these methods be optimally integrated with other components of reading?
 - Do vocabulary gains in specific areas (e.g., within a workforce literacy program or a jobs training program) improve general reading ability?
 - Does comprehension strategy instruction differ for adult vs. school-aged learners, and how can this information be used to develop optimal instructional methods for adults?
 - What is the impact of increased vocabulary on reading fluency and on reading comprehension?
 - What is the role of oral proficiency in English, native language oral proficiency (where the native language is not English) and native language in literacy learning and adult instruction?
- The development of innovative models of adult literacy, which can be used for the designing of novel programs which can be implemented and tested, is a critical need in the field. It may be that models and programs differ for specific populations, such as monolingual English low-literate adults, English language learning adults with literacy in one or more other languages, migrant families with low literacy overall but whose native language is other than English. Thus it will be important that models be developed to take into account cultural, linguistic, socioeconomic, employability and geographic characteristics of potential program participants and be tested on diverse samples.
 - Research is needed to determine the most effective venue for providing adult literacy instruction. That is, how do work-based and workplace education programs compare with general adult literacy instruction in terms of literacy (reading and writing) outcomes and do abilities developed in these programs generalize to content areas beyond the instructional setting?

Family literacy studies. The overarching, highest priority question is whether greater benefits to both adult and child learners are attained by taking an integrated family literacy approach than by independently addressing adult and child needs through separate high quality adult literacy and child intervention programs. As with adult literacy studies, study participants should be well characterized, and study design, measures, and analytic techniques should be clearly delineated. Use of multiple measures and other steps to ensure trustworthiness, reliability and validity of data should be described.

- There is a need for research that can answer this question by demonstrating that there is "value added" (in literacy gains, in reduced costs, or in recruitment/retention levels) by delivering services to families through programs in which both adults and children receive intervention in a coordinated fashion, and if this is the case, to demonstrate how and why. Such studies could include

delineation of the relative contribution of intergenerational transfer to literacy development, what specific interventions are most effective for parents with low literacy skills, and whether parent literacy gains are causally related to improved literacy outcomes in their children and if so, in what circumstances and under what conditions.

- It will be important to determine which specific program organizational structures are effective for which groups or subgroups of participants and for which specific literacy (reading and writing) outcomes. In this context, it will be important to know whether the participants in various types of programs vary systematically, or overlap significantly. Thus recruitment and retention of study participants must be carefully documented and examined.
- There is a clear need for the development of new, innovative models of family literacy that would make uniquely effective contributions to the literacy of the parents and children in terms of specific literacy (reading and writing) outcomes. Again, a major goal of such studies is to confirm or deny the assumption underlying family literacy programs that there is specific, unique value to the provision of services using an integrative family literacy approach. Studies will need to include measurement of effectiveness with careful documentation of the study sample, controlled comparisons, and documentation of instructional practices.

Measurement issues. There is clearly a need for research that will examine key measurement issues in both adult and family literacy.

- What are the targeted outcomes that should be measured for adult literacy programs - for program participants, and for programs?
- For family literacy, what adult outcomes and what child outcomes should be measured, and how might parent-child interaction be measured?
- What should be used as the key indicators of program success for adult and for family literacy programs and how can these be measured?
- Are there definable categories or groups of adult learners for whom specific instructional methods or approaches can be designed? What specific factors most accurately and efficiently characterize these groups and how should these factors be measured?
- How can student and teacher motivation be measured, and how can factors that affect motivation over time be tracked in order to develop interventions or intervention components that might enhance motivation in these groups? To what extent does motivation affect literacy and how does motivation interact with instruction and content to affect literacy? How does culture alter both how motivation is defined and how it might be measured? What is the relative role of motivation in various groups of adult learners?
- How can parent-child interaction be measured? Are there existing measures that can be adapted or augmented to specifically measure parent-child interactions related to both parent and child literacy outcomes? Because this interaction is assumed to be a key variable in addressing the issue of the value added in integrated family literacy programs, such measurement issues must be addressed in studies of family literacy.

Instrument development. There is a need for screening and assessment instruments to document ability levels, measure specific components of literacy and related outcomes, identify those in need of remediation, and guide the development of specific interventions.

- The development of instruments to be used in studies of instructional and/or program effectiveness for adult/family literacy, for use in research which seeks to develop optimal instructional approaches and optimal program organizations/ structures for adult literacy programs is needed. Clear plans for development, testing, and the establishment of appropriate psychometric properties will be important in these studies. Linguistic properties of the target population for any instrument will also be important - instruments should be developed taking into account the language, dialect, and culture of the group(s) on whom they will be normed. It may be that adaptations or parallel versions of such instruments will need to be developed for specific groups (e.g. speakers of languages other than English). For example, there is a need for various measures, which could not only document current levels of ability but could also be used to guide instruction. Such measures should include but are not limited to the following:
 - Additional measures of adult reading comprehension, including diagnostic measures of comprehension abilities, inferential skills, and strategies for obtaining meaning from text
 - Measures of phonological abilities in adults
 - Appropriate measures of adult reading fluency
 - Measures of adult vocabulary, possibly keyed to specific content areas, and instruments to measure generalizability to other areas of literacy
 - Measures of student motivation
 - Instruments to measure teacher knowledge of literacy, communicative ability, and motivation
 - Measures of parent-child interaction as it relates to the development of literacy

- There is a pressing need for the development of both screening and diagnostic assessment tools for the identification of adults with reading or other learning disabilities that might hinder the development of reading and writing. As noted above for research measures, any instrument to be developed should take into account the language, dialect, and culture of the group(s) on whom they will be normed. It may be that adaptations or parallel versions of such instruments will need to be developed for specific groups (e.g. speakers of languages other than English).

Instruction and program effectiveness. Instructional methods have not been a major focus of research attention in adult and family literacy programs. The timing, duration, explicitness, content of instruction, and circumstances of delivery (e.g. individually, small group) should be documented as to effectiveness in terms of specific literacy (reading and writing) outcomes.

- Studies are needed to investigate specific, well-defined instructional approaches for adult learners and their short and long-term effectiveness in terms of specific literacy (reading and writing) outcomes. For which learners are these methods most effective, and under what specific conditions? Such studies should clearly define the research participants, the

structure of the program, and the literacy outcomes to be measured. Instructor training, validity and reliability of measures, and documentation of fidelity of instruction will be key in such studies as will careful characterization of participants and instructors.

- Studies are needed that compare the effectiveness of programs in achieving specific literacy (reading and writing) outcomes for adult participants in family literacy programs with those same outcomes for participants in adult literacy programs that offer advice to parents regarding the enhancement of their children's literacy skills at home, as well as with child outcomes for both types of programs. Such studies should be well controlled and would most likely employ an experimental or quasi-experimental design. There is a need for studies that compare both child and adult outcomes for participants in family literacy programs to those same outcomes for children participating in preschool programs which incorporate a focus on literacy activities and which include parental involvement. Such studies should be well controlled, with a clear and detailed characterization of the study sample, and would most likely employ an experimental or quasi-experimental design.
- Studies are needed on the effects of important organizational features of programs and how these features affect literacy (reading and writing) outcomes for adults. Important features include the intensity of instruction as represented by the structure of the instructional group (tutoring, small group, or classroom instruction), the duration of instruction, and the level of staff training and experience. Measures of effects should include, in addition to reading and writing outcomes, measures of persistence (retention of adults in programs). Measures of persistence will need to be well defined and issues that may affect a measure's validity (such as adults who drop out of programs and may be difficult to contact for follow-up) will need to be addressed.
- There is a critical need for studies of the effectiveness of different instructional methods (alone or in combination) and of different program models to guide program implementation. Effectiveness should be measured in terms of specific literacy outcomes and in terms of participant retention until the accomplishment of specific outcomes.

Technology issues. The form, content, cognitive operations and genres of print and reading literacy are part of the technologies we use in daily life. In preparing people to read in the twenty-first century, we are not only preparing them to read books, newspapers and magazines, or to write essays longhand. Many adult learners and parents recognize technologies as integral to their economic and family prosperity and goals, and may even prioritize access to technology education higher than reading; technology is in many cases a key part of motivation. Indeed, research itself is now highly dependent on effective deployment of relevant technologies in designing, implementing, monitoring and delivering instruction or intervention. Therefore, it will be important for studies to consider the use of technology. Assistive technologies, intelligent tutors, educational software, and the world wide web as well as emerging educational applications for K-12 are rich sources which might be incorporated in studies. In addition, technology should be considered as a component (possibly an enabling solution) in considering scaling up effective instruction or in monitoring instructional effectiveness or student progress.

Conclusions

In conclusion, the panel strongly recommended the development of a rigorous program of research in adult and family literacy, building on what is known, demonstrating causal relationships where possible between program structures or instructional methods and specific literacy outcomes. Studies should be replicable and should include a careful description of the study samples, research design and analytic methods. Further, research should foster the application of diverse research methodologies across varied contexts to develop models of adult literacy programs and instructional methods and to delineate the influences, and pathways of influence, on literacy development in both adults and their children at the individual level, the home/family level, and the classroom level. Literacy outcomes must be carefully defined and measured, and this will engender a need for the development of specific measures. Care must be taken to ensure that instrument development takes into account the linguistic and cultural characteristics of the target populations; this may require the development of parallel instruments in more than one language in some cases. The panel felt strongly that the fields of adult and family literacy would benefit from cross-discipline collaborative research efforts that bring to bear the best scientific methods, that are informed by practitioners aware of the challenges to such research, and that use innovative approaches to develop models and instructional methods that can be tested for effectiveness. Only through a collection of such studies can we obtain convergent evidence on the best instructional methods, approaches, and program organizational structures to ensure that adults and families are given the optimal opportunities to become fully and functionally literate.

ⁱ <http://nces.ed.gov/naal/design/about92.asp>

ⁱⁱ Tuijnman, Albert. 2001. International Adult Literacy Survey, Benchmarking Adult Literacy in North America: An International Comparative Study. Statistics Canada: Ottawa, Ontario.