This article reviews recent ground-breaking research studies that can provide guidance for policymakers and practitioners interested in improving literacy in the United States. Each section provides a brief analysis of major research findings, followed by a series of recommendations. These issues are identified: the close relationship between literacy and education and a nation's economic development; identification of effective instructional practices for different subject areas and different types of learners; role of learners in setting of learning goals; degree of specificity of instruction; workforce literacy and competitiveness; need for services in English as a Second Language; family literacy; professionalization and standards; and inadequate use of new electronic technologies in adult literacy programs. The article concludes with a synthesis of the recent past and a prognosis for what is believed to be the next generation of literacy work in the United States. It suggests that more funding would help, but that resources need to be targeted better to improving the quality of education offered—in terms of effectiveness, efficiency, professionalization, and innovation. The article proposes that the adult literacy field along with policymakers and legislators must pull together for the next generation of adult literacy work to be an improvement over the previous one. (YLB)
In 1993 the first report from the federally funded National Adult Literacy Survey (NALS) was released. The good news was that nearly 95% of adult Americans could read at a fourth-grade level or better, showing that illiteracy in its most basic form was relatively low: but the bad news was that nearly half of all adult Americans scored in the lowest two levels of literacy, levels that the National Educational Goals Panel has stated are well below what American workers need to be competitive in an increasingly global economy.

Although these findings shocked the public, research showed that it was likely that America would continue to fail to achieve a fully literate society. For example, the NALS indicated that nearly 25% of America's adults with an average of 10 years of formal schooling had only fourth-grade literacy skills (or lower). Among urban minority groups, fewer than 50% of the children complete 10 of the compulsory 12 grades of schooling. Low achievement and early dropout from schools, along with the increased flow of poorly educated immigrants, fill the metaphorical bathtub with adults in need of further skills at least as fast as adult education programs try to empty it through remediation and retraining. In other words, low literate adults may now be seen as a chronic feature of the American educational landscape...

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This article is drawn from an NCAL white paper entitled "Adult Literacy: The Next Generation," which was first presented at a Literacy Policy Forum at the Library of Congress on March 17, 1995 in Washington, DC. NCAL project directors contributed to the writing of the white paper. The full text of the white paper, complete with footnotes and references, will soon be available as an NCAL report.

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Literacy and Economic Well-Being

Data from around the world provide clear evidence that literacy and education are closely related to a nation's economic development. The best data set that bears on the question of adult literacy and income in the United States is the NALS. This survey found that the income of American adults went up substantially for each level of literacy attained. Those at level one earned about $240 weekly, while those at level five earned about $680 weekly. Subsequent analyses have shown that when education and other background factors are held constant, adult literacy is strongly associated with a range of important economic and social outcomes (e.g., employment, incomes, poverty, informed citizenship). Furthermore, recent re-analyses of the NALS data show that income differences between ethnicity and race tend to disappear when literacy and education factors are statistically controlled.

Recommendations. The combined effects of education and literacy powerfully affect an individual's life chances for employment and income. The evidence suggests that effective training can be a highly cost-effective strategy for addressing a range of our economic and social goals.

Literacy Instruction and Measurement

A central issue in adult literacy instruction is the identification of effective instructional practices for different subject areas and different types of learners. To achieve this, we need first to define the core subjects for adult literacy and the ranges of proficiency desired. Learners then need to be classified according to instructionally relevant variables such as (a) English as a second language (ESL) but literate in native language, (b) ESL but not literate in any language, (c) competent writing but poor math skills, (d) learning disabled, and so forth. By contrast, most literacy programs today classify learners according to their grade levels (as measured by standardized tests), even though the meaning of "grade level" for adults has been shown to be of dubious value.

A second instructional issue is the question of what role learners should play in the setting of learning goals. Much of adult literacy instruction today is by philosophy and design, oriented toward the stated needs and interests of program participants, particularly at the adult basic education (ABE) level. Students enter and exit as they choose, and generally select their own goals and content interests. Whether this approach is effective for either the adult participants or the overall outcomes of adult literacy programs needs serious inquiry.

A third related issue concerns the degree of specificity of instruction. Current instruction emphasizes general basic skills instruction in reading, writing, and math, with the assumption that these skills will transfer to other contexts. Yet, research shows that relatively little transfer occurs, and that a better balance is needed between functional context learning and basic skills practice.

The central issues in literacy skill measurement are related to the identification of outcomes for adult literacy instruction and the design of valid and reliable testing instruments. At present, adult literacy testing is limited by a paucity of appropriate instruments, particularly for writing and mathematical knowledge, and a near total lack of normative data for the age ranges encountered in most programs. Especially problematic is the assessment of adults at the low end of the performance scales.

Recommendations. Diagnostic and remediation models for adult literacy instruction need to be explored, with a shift of resources to incorporate more extensive diagnostic testing for individuals in most if not all literacy and basic skills programs. Change in performance also needs to be measured by both standardized basic skills tests that have been normed on adults and by applied tasks that are representative of everyday literacy challenges. Finally, program evaluation should be redesigned to give separate measures for learners with special needs, those for whom diagnostic tests predict normal progress, and those who are not working toward academic certification.

Workforce Literacy and Competitiveness

According to the Organisation for Economic Co-operation and Development (OECD), workplace skills and worker training are now among the major preoccupations of all industrialized nations. Although business, union, and taxpayer resources for workplace literacy education have grown, service is still available to only a fraction of individuals who need it. Most service is provided through large employers and unions with taxpayers providing a lesser degree of support. Workers in small businesses, unemployed, between jobs, or having special difficulties (e.g., ESL or learning disabilities) often have no access to literacy training at all.
Moral and ethical issues as well as educational ones need to be clarified in order to maximize returns on workplace literacy for individuals and for the economy in general. Should, for example, persons with exceedingly low literacy abilities be placed in GED and workplace skills training programs when we have data suggesting that the likelihood of them making substantial gains is limited? Naturally, it would be best to have sufficient funds to retrain everyone for well-paying jobs, but such funding is not likely to be available from either public or private sources.

Motivational issues also play a role in the workplace. When there are strong incentives (e.g., increased compensation) for developing literacy skills, not only do workers readily participate in literacy education programs, but they also increase their literacy skills and their earnings, and the company improves its overall productivity. Research on clients in welfare-to-work programs who participate in literacy education activities shows that with appropriately designed programs, literacy education can result in increased proficiency and reduced long-term welfare dependency rates.

The issue of incentives is also relevant at the policy level. Studies suggest that the availability of adult literacy and basic education programs is directly affected by the incentive structures (often built into tax rebates for the private sector) of different nations. A cross-national comparison has recently demonstrated that countries (e.g., France and Sweden) that have progressive and incentive-linked tax structures to expand job training are quite successful in getting workers to participate in programs of basic education and retraining.

Recommendations. Policy recommendations for workforce literacy education are of four types. First, the amount of service needs to be increased, with reallocation of resources to foster and reward consortia of businesses, unions, educators, and private groups that develop new cooperative ways to provide service to underserved populations. Second, there needs to be increased diversity in delivery systems, so that small to medium-sized businesses have as much relative opportunity to engage in worker education as do large corporations. Third, training programs need to link literacy program goals and outcomes to quality assurance guidelines, which are now standard in businesses competing in the global economy. Finally, effective program designs should provide incentives for literacy development that are readily perceived by the learners as well as by the providers (whether in the public or private sector). This could be achieved by allocating a percentage of employment benefits for basic skills and other training or by providing tax incentives to employers.

English as a Second Language

To date, there are no reliable figures on the number of adults in the United States who are in need of ESL services. Data from the 1990 census and the NALS suggest that approximately 12-14 million adults have limited proficiency in the English language. Each year federal, state, and local agencies serve approximately 1.8 million ESL adults and the demand for ESL services far exceeds the supply. The adults who are enrolling in ESL classes across the nation are by no means a homogeneous group, and their reasons for attending ESL literacy programs are varied (e.g., to seek or maintain employment, to obtain the GED diploma, to assist children with school work, to gain entry into institutions of higher education, or to become licensed in the professions they practiced prior to immigrating to the United States). Other important factors can potentially affect the manner in which adults learn and develop English literacy such as experiences with formal schooling, previous exposure to English, and level of native language literacy.

The quality and efficiency of ESL literacy programs have been especially difficult to determine, as empirical research has only recently begun on how adults acquire literacy in a second language. One of the classic debates in this domain is the degree to which ESL adult learners benefit from higher levels of literacy in their native language before learning to read in English. Recent research suggests that adult learners from quite contrasting backgrounds do benefit from their native language literacy skills.

Recommendations. About half the total participation in adult literacy education in the United States is in ESL programs. Determining accurate information concerning the need for adult ESL services should be a high priority. Adult education cannot and should not be equated with the K-12 bilingual education policy of this country. Research and development into the literacy learning processes of adult ESL learners, appropriate curricula, and the use of instructional technology are especially important in this domain. ESL will continue to be one of the major areas of literacy work in American adult education.

Family Literacy

The number of programs that involve intergenerational literacy activities for families has been steadily increasing during the past 30 years. Key elements of popular family literacy services include (a) beginning to provide help to families during the children's infancy; (b) encouraging language development and interactive play as precursors to emergent literacy; (c) providing books, print materials, and lessons that are appropriate for the literacy levels of family members; (d) providing medical, social, and educational services; (e) working with schools; (f) building community coalitions; and (g) offering community-based services. These programs have been shown to increase the literacy of children, improve family functioning, and increase family income.

Recommendations. Policy recommendations for family literacy programs include (a) increasing the availability of funding for family literacy programs; (b) increasing the scope and reach of family literacy programs; (c) increasing the capacity of family literacy programs; (d) increasing the quality of family literacy programs; and (e) increasing the effectiveness of family literacy programs.

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educational services that go beyond
literacy learning activities; and (e) building feelings of self-confidence in
children and parents through success in
literacy and collaboration with others.
Many family literacy programs synthe-
size these elements with their own
philosophical orientations and historical
practices, thus creating a variety of
eclectic programs.

The rate of GED comple-
tion for family literacy
participants was about
twice as high as in regular
adult education programs.

In spite of the growing popularity of
and legislative funding increases for
family literacy programs, the knowledge
base in this area remains limited. In the
only major evaluation study to date, high
marks were given to Even Start-funded
family literacy programs. The study
showed that (a) family literacy programs
may be more attractive than standard
ABE programs to many low-income
families (partly because they provide
more services, such as child care). (b) the
rate of GED completion for family
literacy participants was about twice as
high as in regular adult education
programs, and (c) parents’ expectations
for their children’s learning increased
significantly after participation in family
literacy programs.

Recommendations. If the future of
adult literacy depends significantly on
the motivation of individuals to learn,
then the growth and promise of family
literacy is considerable. Family literacy
programs can offer a fuller range of
incentives than most other adult educa-
tion programs simply because they
intersect with more aspects of individu-
als’ lives, especially in the crucial area of
child care and welfare. Family literacy
programs are already an important
component in the range of adult educa-
tion offerings in the United States and
their numbers are growing rapidly. Of
particular importance will be the devel-
opment of specialized training for family
literacy instructors, who will be involved
with teaching both young children and
adults and with the interactional activi-
ties that are important for parent-child
learning. Also, there needs to be an
emphasis on the cultural aspects of
family literacy programs, which provide
an important service in the African
American community. Finally, at the
level of policy, family literacy programs
need better coordination within the
broader network of family support
services.

Professionalization and
Standards

The committed involvement of
professional adult educators is required
for any system-wide change, as well as
for the development of standards. One
major limitation for change in adult
literacy is that the large majority of the
instructional staff (87% in 1993) is part-
time (often volunteers with high turn-
over). Furthermore, there have been only
limited resources and strategies for
involving full-time literacy professionals
in meaningful learning opportunities.
Professional development for adult
literacy educators has been narrowly
focused on training related to using
specific materials or tests, and has often
consisted of one-shot workshops on a
range of disparate topics. These activities
have rarely addressed the larger ques-
tions—pedagogical, political, social, and
cultural—that structure and inform daily
practice in the field. In the training-
oriented approaches that have dominated
the field, staff development has been
constructed as remedial, designed in
response to perceived gaps in teachers’ or
tutors’ knowledge.

New approaches to professional
development need to be responsive to
such factors as the variability of local
contexts, communities and settings for
literacy education, and the importance of
practitioners’ roles in determining
appropriate content, processes, and
outcomes for staff and professional
development. The most promising forms
of professional development engage
practitioners in questions and problems
over time in ways that alter their own
perspectives and practice.

Goals 2000 and other recent federal
legislation have called for a variety of
standards setting efforts in numerous
fields, including that of adult literacy.
However, it is far from clear what sorts
of standards are needed, and for which
areas of literacy work. To date, work on
adult literacy content standards has been
rather narrowly focused on definitions of
workplace competencies, such as
SCANS.

Recommendations. Administrators,
teachers, and tutors need to make
professional staff training and develop-
ment an ongoing process within pro-
grams. Teachers and administrators
should have ample opportunities to
investigate their own concerns and to
arrive at local solutions. Increasing the
proportion of full-time literacy educators is an
essential element of this enhanced
professional development.

Interagency cluster relationships can
strengthen the design and implementation
of staff development activities that bring
together a range of service providers.

The most promising forms
of professional development
engage practitioners in
questions and problems
over time in ways that alter
their own perspectives and
practice.

Overall, there is a need to support
regional, state, and national networks that
enable literacy educators from diverse
settings and types of programs to form
communities for generating and dissemi-
nating knowledge in the field.

With respect to standards setting,
there is little doubt that this will be a
high-stakes enterprise in adult literacy.
Our early sense is that the adult literacy
content standards should not focus on
developing curricular frameworks, but
rather should attempt to establish a more coherent vision of desirable skills and knowledge across a diversity of contexts.

**Technology**

Adult literacy programs lag far behind in using newer electronic technologies—computers, wireless communications, videotapes, and the like—for instruction. According to a recent OTA report. Furthermore, the 1993 OTA study found that there existed a significant amount of technology in business, homes, school, colleges, and libraries that might be tapped for literacy and learning but was rarely shared or used in partnership with literacy programs. Demonstration projects at NCAL, including an Internet server, a collaborative training network, and a series of videoconferences, have shown that important gains are possible even from a limited set of these technologies.

One recent dramatic change is the growing number of adult literacy providers who are using on-line communications. Access to on-line resources and to the Internet has become increasingly easy and relatively low cost. A number of bulletin boards and information servers have sprung up, some of which are especially designed to fill the information needs in adult literacy. These technologies hold enormous promise for the future because they can reduce the isolation that many adult literacy providers and students experience, facilitate communication between staff and students within and between programs, increase access to high quality materials and emerging research, streamline administrative and reporting processes, and help to provide the delivery vehicle for innovative instructional and staff development approaches. However, across these new technologies, there is inadequate staff training and lack of information on effective implementation and specialized uses. NCAL is pioneering a training model (the Adult Literacy Technology Innovation Network or ALTIN) designed to help overcome this problem.

Both the OTA study and the NCAL survey found that economic constraints were a major impediment to technology implementation in adult literacy programs. But economics goes even further, by inhibiting the development of the market for adult literacy software. Few practitioners purchase adult literacy software because most offerings are of low quality or are inappropriate for use with adults, while software developers are reluctant to invest in product development because the market demand is so small.

**Recommendations.** Technology is clearly one of the most promising areas in adult literacy. At the policy level, federal and state funding should be targeted specifically for technology purchase and accompanying staff development.

At the policy level, federal and state funding should be targeted specifically for technology purchase and accompanying staff development. Administrative data collection through electronic media should gradually replace manual methods, with all practitioners being provided electronic access. Government can also facilitate partnerships and provide incentives to help access and leverage additional funds from the private sector, particularly for software development.

However, without ongoing staff development and without technology training built into the staff development planning process, adult literacy programs will never utilize technology to its full potential. Additional research is needed to develop models of adult literacy learning and instruction within the context of a “wired” society, where on-line communications and on-demand, interactive instructional coursework are available in the learner’s home, workplace, and literacy classroom.

**Conclusions**

However one chooses to interpret recent survey findings such as the NALS, and whatever size one selects for the population in need of further literacy training, America faces a serious literacy problem that is already affecting our economic capacity and social well-being. The pressure on America, and on individual Americans, to achieve a higher level of skills is present today and growing with each passing year.

In this discussion, we have reviewed findings from recent studies that point to useful ways to improve the effectiveness and efficiency of adult literacy programs in this country. We have noted that to be literate in America today is to possess higher levels of skills than in the past. Furthermore, the match between the contents of literacy instruction, the expertise of professional staff, and the diversity of learner backgrounds is a challenge of major proportions. New methods for adapting instruction to individual skill profiles and motivations, for measurement and instruction in ESL, and for innovation in technology are not far away—indeed some of these innovative methods are ready today. New approaches to professional training and development have been tested successfully in the field. Family and intergenerational literacy programs have stimulated practitioners and policymakers to rethink the dynamics of how literacy education can be delivered and linked synergistically to other social programs. All of these areas, and more, are much closer to our grasp than many people realize.

Yet, policymakers are increasingly faced with difficult choices on how to spend “social dollars.” They need to know how tax dollars can make a real difference. Awareness of adult literacy as a social issue has undoubtedly increased since 1980 and enrollment in programs has increased as well, but efforts to improve adult literacy have not brought the dramatic gains that have been hoped for by policymakers, the literacy community, or the public.

America’s literacy problems and needs are growing, not declining. Furthermore, while government investments in adult education have gone up (continued on next page)
in the last decade, they are still trivial with respect to investments in formal schooling and with respect to the growing needs in this area.

How can we make progress? The efforts mentioned here, and others currently underway, suggest that more funding would help, of course. But more funding is not the only answer. Resources need to be better targeted to improving the quality of education offered—in terms of effectiveness, efficiency, professionalization, and innovation. Briefly put, effectiveness means far better customer service, programs tailored to address diverse needs, and user-friendly coursework.

Efficiency means improved and better funded organization of services, not programs that live hand-to-mouth on donations and intermittent government resources. Professionalization means that adult literacy workers need to be part of and be accepted by the professional education community, and that colleges and universities need to think more seriously about training and course offerings in adult literacy. Innovation means that the sometimes stodgy old field of adult literacy needs to open up to the same marketplace of new ideas that is buffeting the formal school system, especially concerning the use of new technologies. This short list is, of course, only the beginning of the path toward real progress.

We believe that the prognosis for making major gains toward a fully literate America is a good one. The next decade or two ought to provide evidence of this success, assuming the resources are available, and that the focus is maintained on self-renovation. Our experience over the past five years has demonstrated that the professional staff in adult literacy—the key to any of the innovations mentioned in this report—are ready, even eager, to rise to the challenges. But this, too, is not enough. The field as a whole, along with policymakers and legislators, must pull together in the same direction for the next generation of adult literacy work to be an improvement over the one we have just left behind.
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