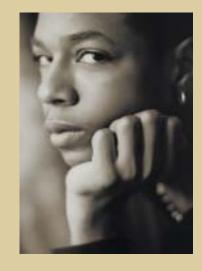
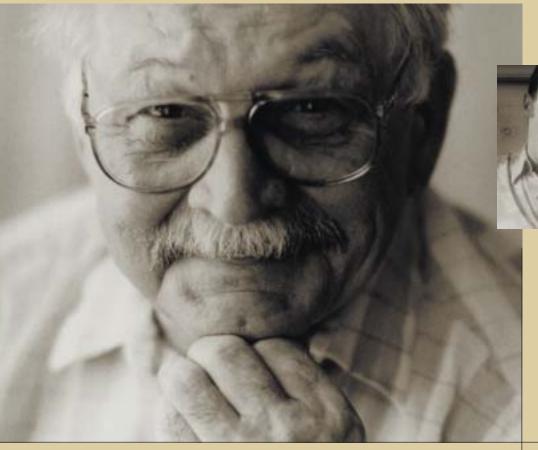


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Sheila M. Sherow, Editor Graphics&Design, Report Design State College, PA

Adult Basic and Literacy Education Interagency Coordinating Council

The Adult Basic and Literacy Education Interagency Coordinating Council (ABLE ICC) was created in 1997 under the State Adult Basic and Literacy Education Act 42 of 1996. The ABLE ICC was established to develop recommendations to (1) improve the delivery and outcomes of adult basic and literacy education services and (2) develop communication strategies to increase awareness of adult literacy problems and the benefits of basic skills services.

Governor-appointed members represent adult literacy providers; business, industry, and labor; the media; adult education coalitions and associations; adult learners; and other adult literacy stakeholders. ABLE ICC membership also includes representatives from the First Lady's Office and the Departments of Education, Labor and Industry, Public Welfare, Community and Economic Development, Health, and Aging.

In 1999, the ABLE ICC published its first report, Blueprint for Change: Adult Basic and Literacy Education Services in Pennsylvania, which sets forth eight recommendations. This document reports the accomplishments made toward the attainment of that first set of recommendations and also includes new recommendations. In 2002, the ABLE ICC also produced A First Report on Health Literacy, which is a special-topic report intended to accompany the Blueprint for Change reports.

LETTER FROM GOVERNOR MARK SCHWEIKER

November 2002

Greetings:



The 21st century has brought about fundamental changes in the way we relate to one another. Instead of writing letters, we send messages with the click of a mouse. Instead of encountering crowds at the mall, we shop online. Instead of staining our hands with newspaper ink, we surf the Internet in search of news.

We never could have imagined these advances in technology a generation ago. Yet literacy remains fundamental to a successful society, just as it did for our parents and their parents. We may be able to use the newest, fastest computer, but we still need the skills to write e-mails and read the replies – not to mention perusing websites, reading the directions to set up our computers, filling out a job application or ordering from a menu at a restaurant.

Literacy today means more than the ability to read. With the rapid pace of change, adults can be left behind if they do not have the skills to make important decisions for their employers and their families. It has never been more vital for adults to refine their abilities and adapt to new situations.

The simple fact remains that more than four million Pennsylvanians lack these kinds of basic skills. The impact on their workplace, their families and their communities is significant – but it can change. Awareness and support can create a commitment to lifetime learning.

Thanks to the Adult Basic and Literacy Education Interagency Coordinating Council, we are reaching out to Pennsylvanians who need help. Building upon the proposals set forth in its first report, the ABLE ICC is making six new recommendations – recommendations that will help ensure a life of literacy and learning for every resident of the Commonwealth.

Sincerely,

Mark Schweiker

Mark Schwich

Literacy today means more than the ability to read. With the rapid pace of change, adults can be left behind if they do not have the skills to make important decisions for their employers and their families. It has never been more vital for adults to refine their abilities and adapt to new situations.



November 2002

Dear Pennsylvanians:



On behalf of the Adult Basic and Literacy Education Interagency Coordinating Council (ABLE ICC), I am proud to provide you with the *Blueprint for Change 2002* report, which documents the accomplishments made since our first report was published in 1999. It continues our strong commitment to improve the basic skills and serve the multiple needs of our citizens, allowing them to reach their potential as productive workers, responsible family members, and contributing citizens.

I want to thank the ICC committee members for their active participation and commitment. Their work has resulted in significant progress in improving literacy levels of adults in the Commonwealth. I also want to thank them for the interagency collaborations and teamwork that were essential to developing and publishing this report.

Be assured, the Council remains dedicated to all adult Pennsylvanians who need effective literacy services as a stepping-stone to the future. We encourage and welcome your input.

For the ABLE ICC members,

Larry Sparta, ICC Chairman

November 2002

Dear Pennsylvanians:

I am pleased to support the work of the Adult Basic and Literacy Education Interagency Coordinating Council (ABLE ICC) and to share with you the value of this Council in aligning literacy with the workforce development system in Pennsylvania. In addition to my role as an Engineering Manager with Procter & Gamble, I have served as a member of the ABLE ICC since 1997, a member of the Team Pennsylvania Workforce Investment Board since 1998, and chairperson of the Statewide Youth Council, which is a standing committee of the Workforce Board.



During the past five years, I have witnessed the dedication and mutual respect of top leaders from various Pennsylvania state departments, private business, labor, adult education, and others from the workforce development system who come together to improve literacy by aligning goals, services, and resources. Such necessary alignment is possible only through information sharing, common understanding of issues, and commitment to successfully addressing the issues.

The ABLE ICC provides a valuable forum for members to openly discuss literacy needs in our communities, and to coordinate and strengthen the wide range of services available to adults in need of improving their basic skills to obtain or maintain gainful employment, or to advance in their current job. Collectively, ABLE ICC members contribute to the development of joint literacy and workforce development initiatives such as the Workbased Foundation Skills Project, as well as to the successful integration of literacy services into education and training programs offered through Pennsylvania's one-stop system known as the Team PA CareerLink.

My thanks for the opportunity to highlight the value of the ABLE ICC and to express my appreciation for the fine work already accomplished – there is more to come!

Sincerely,

Peter R. Butler

Procter & Gamble

ABLE ICC REPORT - EXECUTIVE SUMMARY

To be self-sufficient and productive in today's society, adults need much more than basic reading, writing, language, and computation skills; they must be able to access and apply information, express ideas, solve problems, and make educated decisions. Moreover, increasingly higher levels of basic skills continually redefine the levels of literacy and knowledge adults need to successfully perform their roles as family members, workers, and citizens. In addition, new technologies are changing the workplace and creating new types of jobs that often require new kinds of skills. As such, individuals must be committed to a lifetime of learning, and must be equipped with the basic skills necessary to successfully participate in adult education and training.

The Adult Basic and Literacy Education Interagency Coordinating Council (ABLE ICC) is charged with two tasks: (1) to advise in coordinating a statewide system of adult basic and literacy education services and (2) to develop communication strategies to promote public awareness of literacy challenges and solutions. In answer to its charge, the ABLE ICC developed eight recommendations that were presented in 1999 in its first report, Blueprint for Change: Adult Literacy Services in Pennsylvania. This report, Blueprint for Change 2002, sets forth six new recommendations and presents accomplishments related to the ABLE ICC's 1999 set of recommendations.

The State of Adult Literacy

Nationwide, 90 million adults cannot achieve their goals because of inadequate levels of basic skills proficiency. In Pennsylvania, more than four million adults lack the basic skills needed to function successfully as family members, workers, and community members. Of equal concern is the fact that less than five percent of the Commonwealth's adults in need of basic skills actually participate in adult education progams.

Across the globe, the negative impact of adult illiteracy is very much the same; there is a strong association between literacy and the well-being of societies and their economies, and between literacy and the well-being of families and future generations. Even in relatively literate societies, there are alarmingly high numbers of adults with basic skills deficiencies.

Adult Literacy: A Vital Force in Pennsylvania's Future

Adult literacy has profound implications for public policy, especially in terms of (1) families and their ability

to create and maintain intergenerational cycles of literacy and self-sufficiency; (2) the economy as it relates to the productivity and profitability of business, labor, and industry; (3) social issues such as welfare reform, health care, and aging; and (4) remaining viable and competitive as individuals and communities in a rapidly changing world.

In families:

- Literacy transfers from parents to children. Children's literacy levels are strongly linked to the educational levels of their parents, especially their mothers. As the educational level of a parent improves, so does the child's probability of success in school.
- Children of parents who are unemployed and have not completed high school are five times more likely to drop out of school than children of employed parents (National Institute for Literacy, 1998).

In the workplace:

- Pennsylvania's workers must be equipped with a strong foundation of basic skills in order to acquire the higher-level skills and knowledge needed to become members of a world-class workforce that is prepared to excel in a highly competitive and rapidly changing marketplace.
- Approximately four out of 10 workers in the Commonwealth have basic skills deficiencies; these adults, on average, work fewer hours and earn significantly less than those with higher-level skills (Kirsch et al., 1994).

In combating poverty:

- In Pennsylvania, three out of four adults living in poverty lack the basic skills needed to obtain sustainable employment and attain self-sufficiency; consequently, they remain dependent on public assistance longer than those with higher levels of basic skills.
- As the basic skills of welfare recipients improve, their average weekly wages increase, the number of weeks worked increases, and annual income increases.

In relation to other social issues:

• There are strong connections between basic skills and health status. Low-literate adults lack the skills to access and understand health-related information and, as a result, often fail to engage in preventive health and early detection practices. Moreover, low-level skills can result in poor prenatal care and low birth weight, which in turn, increase a child's risk of developing health, learning, and behavioral problems.

- Older adults often have the lowest levels of basic skills. Aging and literacy is a complex issue that can affect the quality of life as it often impacts employment, retirement, and health care.
- Increasing numbers of Pennsylvanians are in need of training in English as a Second Language to become self-sufficient and contributing members of the community.

Accomplishments

Since the writing of its first report, *Blueprint for Change*, the ABLE ICC has expanded its membership to include representation from the Departments of Health and Aging. Its membership has also increased with the addition of committee members who are contributing valuable insights into current issues.

In conjunction with ICC recommendations, several projects have been developed to promote and establish the integration of basic skills into the workforce development system. ABLE Works is one such initiative and includes five programs that address the issue of basic skills within the workforce development continuum. These projects have developed common definitions of skills and knowledge that workers need for employment, provide training and mini-grants for customized basic skills services for incumbent workers, offer technology-based basic skills services, and include the establishment of adult education coalitions for the purpose of coordinating basic skills services within Workforce Investment Board regions.

In 1999, the ICC recommended a multi-faceted public relations campaign to increase awareness of the need for and benefits of adult basic and literacy education. A statewide public relations campaign is currently under way. Its purpose is to increase awareness of adult basic and literacy education services in an effort to enroll more adults and engage more volunteer tutors.

Also related to one the ICC's recommendations, the PA Family Literacy Program has experienced tremendous growth since 1999. There are now 70 family literacy programs in Pennsylvania, offering families in all 67 counties an opportunity to participate in family literacy services. In addition, the 2000-01 State Budget included the first-ever line item to provide specific funding for the PA Family Literacy Program.

The ABLE ICC sponsored a health literacy forum in July 2001. The forum was well attended by both health

care professionals and adult educators. Several health literacy issues were identified, and the general consensus was that the forum was an excellent beginning for a comprehensive health literacy initiative. In July 2002, the ABLE ICC released a follow-up document entitled, *A Health Literacy Report*.

Overview of the ABLE ICC's New Recommendations

Recommendation One -Workforce Development: The ABLE ICC recommends that strategies be developed to increase employers' awareness of the connection between basic skills and increased productivity and profitability in the workplace.

Recommendation Two - Skill Standards: The ABLE ICC recommends that industry skill standards be used to develop a framework for basic skills that can, in turn, strengthen the link between adult basic and literacy education and workforce development training.

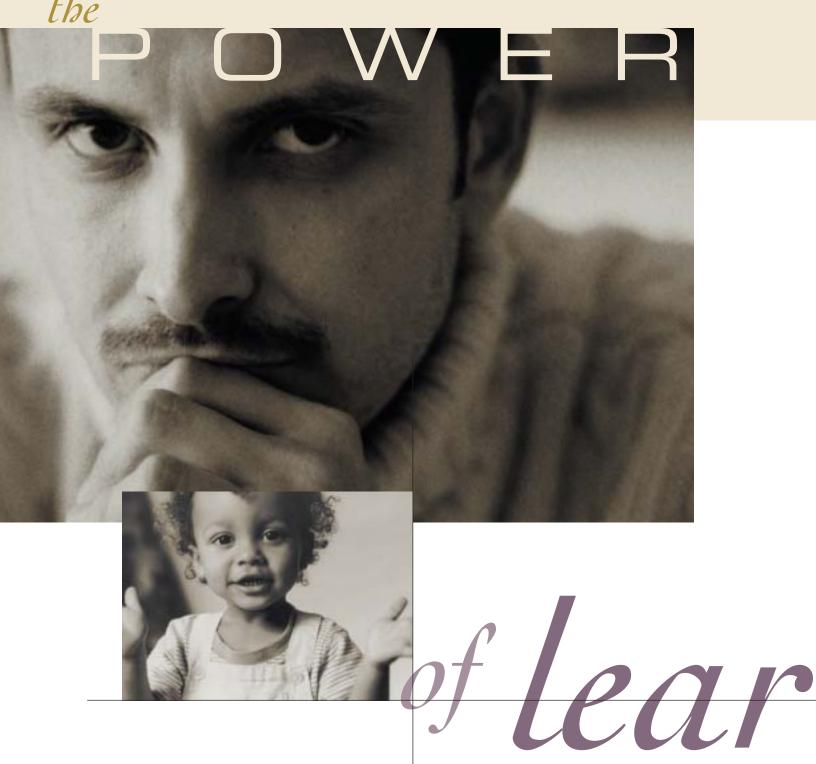
Recommendation Three - English as a Second Language: The ABLE ICC recommends that English as a Second Language (ESL) be addressed as a separate issue, as well as an integral part of other adult basic and literacy education issues, and that a framework be developed to determine best practices for the delivery of different types of ESL services.

Recommendation Four - Welfare Reform: The ABLE ICC recommends that work activities be expanded to include education and training, that education and training become part of clients' plans, and that literacy be considered critical in equipping adults with the skills needed to retain and advance in jobs.

Recommendation Five - Literacy and Technology: The ABLE ICC recommends that the application of technology to the administration, delivery, and assessment of adult basic and literacy education services be expanded.

Recommendation Six - Health Literacy: The ABLE ICC recommends (1) developing a comprehensive definition of health literacy, (2) increasing awareness of the need for promoting and providing health literacy services, and (3) identifying best practices and networks for the dissemination of health-care information, including information about local health literacy training opportunities.

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DEFINITION OF LITERACY AND BASIC SKILLS

The Adult Education and Family Literacy Act (Title II of the Workforce Investment Act) defines literacy as "an individual's ability to read, write, and speak in English, compute, and solve problems, at levels of proficiency necessary to function on the job, in the family of the individual, and in society."

MUNU



PARTICIPATION IN ADULT BASIC AND LITERACY EDUCATION SERVICES

National adult education enrollments totaled 2.9 million in 2000, down from 3.6 million in 1999. English as a Second Language (ESL) participants maintained a narrow lead, accounting for 38 percent of adult education participants, of which 36 percent were Hispanic. ESL was followed closely by adult basic education (ABE) enrollments at 37 percent and adult secondary education (ASE) enrollments at 25 percent (U.S. Department of Education, Office of Vocational and Adult Education).

Through Pennsylvania's Bureau of Adult Basic and Literacy Education (ABLE), 60,811 adult learners were served during the 2000-01 program year. Forty-two percent were enrolled as ABE students and 26 percent enrolled to prepare for the GED examination, and an additional 32 percent received ESL instruction (ABLE Annual Report 2000-01).

Participation in ABLE Programs During 2000-01

The ABLE Annual Report: 2000-01 indicates that a little more than half of the adults enrolled in ABLE programs during 2000-01 were female (53 percent). More than half were also between the ages of 25 and 44; 12.6 percent were between 16 and 18; 24 percent were between 19 and 24; 12.8 percent were between 45 and 59; and 4.6 percent were 60 or older. The majority lived in urban areas of the Commonwealth (63 percent).

The top reason for enrollment was to obtain a GED or high school diploma. Forty-one percent of learners were employed and 33 percent were unemployed but available for work. To retain and to enter employment were the second and third top reasons for enrollment.

The educational attainment levels of adult learners at enrollment were as follows:

- 2 percent had a fifth grade or lower education.
- 8 percent had between a sixth and eighth grade education.
- 24 percent had a ninth or tenth grade education.
- 24 percent had an eleventh or twelfth grade education.
- 3 percent were special education students.
- 6 percent had foreign diplomas.
- The remaining thirty-three percent had a GED or high school diploma, some form of post-secondary education, or there was no available information on their educational attainment level.

The Participation Trends and Patterns in Adult Education: 1991 to 1999 Report

The Participation Trends and Patterns in Adult Education: 1991 to 1999 report (U.S. Department of Education, National Center for Education Statistics) provides an overview of adult participation in formal learning activities during the 1990s. The data for this report come from the 1991, 1995, and 1999 Adult Education Surveys conducted as part of the National Center for Education Statistics' National Household Education Surveys Program. In these surveys, adults were defined as all civilian, noninstitutionalized individuals, age 16 or older, who were not in elementary or secondary education at the time of the survey. Adult education activities included adult basic education and ESL courses, apprenticeship programs, some programs leading to a formal (typically college) credential, courses taken for work-related reasons, and courses taken for reasons other than work (nonwork-related courses).

The following conclusions were drawn from the findings:

- Almost every group of adults examined increased their participation in adult education between 1991 and 1999, often in ways that reduced disparities in participation that had existed in 1991. However, data also reveal that some groups are being left behind; in particular, those with lower levels of education, those with lower status jobs, and those who are employed part time.
- Participation increases with education level.
- Adults with lower levels of education are less likely than those with higher levels of education to participate in nonworkrelated courses.
- All groups have relatively low rates of participation in work-related courses, an adult education activity that is likely to have economic payoffs.
- Adults with higher levels of education and those with continuing education requirements participate in both work-related and nonwork-related courses at a higher rate than do (respectively) those with lower education levels and those who do not have continuing education requirements.
- Participation in work-related courses is highest among those in professional and managerial occupations, even after accounting for education level and other factors; this may reflect a tendency by employers to provide more training to workers in these positions.
- Occupational differences in participation in nonwork-related courses are related to education level; after accounting for education level, those in professional and managerial jobs participate in nonwork-related courses at the same rate as other employed adults (Creighton & Hudson, 2002).

DEFINITIONS

Adult Basic and Literacy Education Programs

Adult Basic Education (ABE) programs typically provide services for adults who have not attained functional competency at the eighth grade level.

Adult Secondary Education (ASE) programs help adults complete high school.

General Educational Development (GED) programs prepare adults for the GED battery of tests required to demonstrate a competency level equivalent to that of a high school diploma.

Adult high school diploma programs are an alternative to the GED and offer adults an opportunity to earn a high school diploma.

English as a Second Language (ESL) programs serve adults with limited English proficiency who were not born in the Unites States or whose native language is a language other than English or who come from an environment where other than the English language is dominant.

Family Literacy programs typically include four components:
(1) adult literacy services for parents, (2) training in parenting skills emphasizing the role of parents as teachers of their children, (3) early childhood services, including school readiness skills, and (4) parent-child literacy activities.

Workforce Education programs include ABE, GED, and ESL services designed to demonstrate a strong relationship between basic skills and the literacy requirements of a changing workplace. Programs improve the basic academic and employability skills of adults entering the workforce and dislocated workers as they prepare for job training and employment or new occupations.

Workplace Education programs are typically planned and delivered through business-labor-education partnerships and provide basic skills instruction to those already employed and in need of more advanced skills to maintain or advance in their jobs.

Corrections Education includes a wide range of adult education services, typically ABE, GED, and ESL programs. Adult literacy services are provided in county prison education programs that serve inmates who receive sentences of 24 months or less and in minimum- and maximum-security state correctional institution education programs.

THE NEED FOR ADULT BASIC AND LITERACY EDUCATION IN PENNSYLVANIA

The 2000 Pennsylvania Census reports the following data regarding the educational attainment level of Pennsylvanians. These Census data reveal that more than 18 percent of the total population, 25 years of age and older, have less than a high school education.

Of the PA total population 25 years of age and older	8,266,284 adults
Less than a ninth grade education	452,069 (5.5%)
9th-12th grade education (no diploma)	1,044,036 (12.6%)
High school diploma or equivalency	3,150,013 (38%)
Some college, no degree	1,284,731 (15.5%)
Associate degree	487,804 (5.9%)

Note: The remaining 22.5 percent have higher educational attainment levels.

ADULT LITERACY SURVEYS OF THE 1990S

Three adult literacy surveys were conducted between 1992 and 1998 to determine the extent of adult literacy worldwide (International Adult Literacy Survey), nationally (National Adult Literacy Survey), and in several states (State Adult Literacy Survey), including Pennsylvania. The surveys assessed literacy proficiency on a five-level scale in three literacy skill domains: (1) prose literacy, the knowledge and skills needed to understand and use information from text; (2) document literacy, the knowledge and

skills needed to locate and use information contained in forms, schedules, tables, maps, and graphs; and (3) quantitative literacy, the knowledge and skills needed to perform arithmetic operations. The five levels of literacy range from Level 1, the lowest level of proficiency, through Level 5, which includes adults with the highest levels of literacy. Level 3 is considered the minimum level of skill proficiency for adequate functioning as family members, workers, and community members.

Range of Scores for Each Level of Proficiency on Prose Scale					
	Level 1 Lowest level of proficiency	Level 2	Level 3 Minimum level of proficiency	Level 4	Level 5 Highest level of proficiency
Scores	225 or lower	226 - 275	276 - 325	326 - 375	376 or higher

Percentage Scoring at Each Level by Educational Attainment					
	Level 1	Level 2	Level 3	Level 4	Level 5
No high school	75%	20%	5%	-	-
Some high school	42%	38%	18%	2%	-
High school diploma or GED	16%	36%	37%	10%	1%
Some college	8%	22%	45%	22%	3%

NALS, 1992. U.S. Department of Education, Education Statistics Quarterly (2001).

Nationwide

More than 26,000 adults were administered the National Adult Literacy Survey (NALS). Between 21 and 23 percent demonstrated skills consistent with Level 1, the lowest level of literacy proficiency.

- Adults at Level 1 could only perform simple, routine tasks involving brief and uncomplicated documents. They could not calculate the total cost of a purchase, determine the difference in price of two items, locate an intersection on a map, or enter simple information on a form.

 Between 25 and 28 percent scored at Level 2:
- Adults at Level 2 could locate information in text, make low-level inferences using print materials, and perform math tasks that involved a single operation where numbers were stated or easily found. They could not write a brief letter, use a sign-out sheet, or calculate miles per gallon using information on a chart.

In total, approximately 50 percent of surveyed adults performed in the two lowest literacy levels. This percentage translates into 90 million Americans who lack the minimum skill proficiency to function adequately as family members, workers, or citizens.

In Pennsylvania

In Pennsylvania, the State Adult Literacy Survey (SALS) was administered to approximately 1,600 individuals who were randomly selected to represent the 9.25 million adults living in the Commonwealth.

- Between 18 and 22 percent scored in Level 1.
- Between 25 and 28 percent scored in Level 2.
- Overall, approximately 46 percent scored in Levels 1 and 2.

These percentages translate into more than four million adults in Pennsylvania who are in need of adult basic and literacy education to equip them with the knowledge and skills necessary for gainful employment and self-sufficiency.

Of great concern is the fact that less than five percent of Pennsylvania's adults in need are participating in adult basic and literacy education services. The tremendous disparity between the number of adults in need and those actually being served in adult education programs negatively effects the social and economic well-being of the Commonwealth. The state of adult literacy has profound implications for public policy, especially in terms of employment and self-sufficiency, business productivity and profitability, welfare reform, health care and other social issues—all having a direct impact on the economic development of the Commonwealth.

Education Level	Prose Scale	Document Scale	Quantitative Scale
O to 8th Grade	177	170	169
9th to 12th Grade	231	227	227
GED	268	264	268
High school diploma	270	264	270
Some college	294	290	295
2-year degree	308	299	307
4-year degree	322	314	322

NALS, 1992. U.S. Department of Education, Education Statistics Quarterly (2001).

The National Literacy Summit 2000

The National Literacy Summit 2000 began as a private-public venture to develop strategies for improving adult literacy. The Summit document, From the Margins to the Mainstream: An Action Agenda for Literacy, is a synthesis of the resulting recommendations.

The Action Agenda was built around three key priorities:

- A system of quality services for adult learners.
- Ease of access to these services.
- Sufficient resources to support quality and access.

Many stakeholders are involved in the Action Agenda: adult education, language, and literacy providers; federal, state, and local human service agencies; federal, state, and local government elected officials; businesses; unions; correctional institutions; institutions of higher education; elementary and secondary school systems; libraries; community-based organizations; volunteer organizations; faith-based organizations; and business and professional organizations.

The International Adult Literacy Survey

The International Adult Literacy Survey (IALS) was a 22-country initiative conducted between 1994 and 1998. The results confirmed that low literacy is an important issue in many countries.

- Overall, the average score of American adults between the ages of 26 and 65 was significantly above the average score for most countries and was at the same level of literacy proficiency as the populations of Australia, Denmark, Germany, New Zealand, Canada, and the Netherlands.
- In the United States and Canada, there are large numbers of people at both the lowest and the highest levels of literacy.

RECENT RESEARCH ON THE LITERACY NEEDS OF THE WORKFORCE

More than 90 percent of all American workers are between the ages of 18 and 64. From research conducted by John Comings, Stephen Reder, and Andrew Sum (2001) and based on the NALS data, it is estimated that out of 64,002,696 working-age American adults:

- 4.7 percent are reported as speaking English "not well" or "not at all." Some adults in this category are working; others are not.
- 17 percent do not have a language challenge, but lack a high school diploma or equivalent. Some adults in this category are working; others are not.
- 20.1 percent are working and do not fall into the previous two categories, but still have literacy skill levels that are considered to be inadequate in today's home, workplace, and community.

The same research reveals the following data that are specific to Pennsylvania's 2,692,673 working-age adults:

• 1.3 percent are reported as speaking English "not well" or "not at all." Some

- adults in this category are working; others are not.
- 14.1 percent do not have a language challenge, but lack a high school diploma or equivalent. Some adults in this category are working; others are not.
- 21.2 percent are working and do not fall into the previous two categories, but still have literacy skill levels that are considered to be inadequate in today's home, workplace, and community.

Implications for Pennsylvania's Workplaces and Economy:

- The more than 83,000 Pennsylvanians who are in need of English language skills are a resource as potential members of the Commonwealth's workforce.
- The more than 883,500 Pennsylvanians who lack a high school credential are an untapped resource for the Commonwealth. Once they have earned a high school diploma or GED, they can enter post-secondary education or job training and become competitive members of the state's workforce.
- With improved basic skills, the more than 1,725,900 working Pennsylvanians who need to upgrade their basic skills are a powerful resource as they can increase the productivity and competitive edge of their workplaces and contribute to the economic well-being of the Commonwealth.

LITERACY AND BASIC SKILLS

Definitions of literacy have changed in response to the higher levels of skill proficiency now necessary to function adequately as family members, workers, and citizens. The basic skills required for most entry-level jobs, and often needed to maintain or advance in employment, are at much higher levels than in the past and often include greater emphasis on commu-

nication and critical thinking skills. The basic skills needed to ensure an intergenerational transfer of literacy, in particular the skills needed to help children reach their potential and keep families healthy and self-sufficient, are also at higher levels and include a much wider range of skills than in the past. Moreover, the same is true for the skills necessary to be a responsible citizen, consumer, and voter.

In the Workplace

According to Murnane and Levy (1996), in terms of a middle-class job requiring minimum skills, most employers look for employees who demonstrate the following abilities:

- 1. Ability to read and do math at the ninth grade level or higher.
- Ability to solve semi-structured problems where hypotheses must be formed and tested.
- 3. Ability to work in diverse groups.
- 4. Ability to communicate effectively, orally and in writing.
- 5. Ability to use technology.

The ninth grade level is thought to be the equivalent of the NALS Level 3, which is considered to be the minimum level of skill proficiency for adequate functioning as family members, workers, and community members.

It is predicted that the list of basic skills will continue to grow longer and that the level of each basic skill indicating proficiency will continue to rise. Jobs are changing to require more diverse skills at higher levels of complexity, accuracy, and speed (Comings, Reder, & Sum, 2001).

In the Family

Parents are their children's first and most powerful teachers.

- Children's literacy levels are strongly linked to the educational level of their parents, especially their mothers. As the educational level of parents improves, so does their children's performance in school. As such, a parent's educational attainment level is a strong predictor of a child's academic success.
- Reading to a child is one of the most valuable things a parent can do to help a child succeed in school.
- Parents' involvement in their children's education and parents' attitudes about school, education, and work have a powerful and long-lasting influence on their children.
- Children of parents who are unemployed and have not completed high school are five times more likely to drop out of school than children of employed parents.
- Family influence is an important factor in preparing youth for work.

In the Community

Adults need basic skills to be informed and involved citizens. Without adequate basic skills, adults lack the ability to access and understand information about community resources, school issues, neighborhood laws and codes, and political perspectives to local and national issues. Adults with low levels of skills are also ill-equipped to understand public health, safety, and environmental issues.

Characteristics Common among Adult Learners U.S. Department of Education statistical performance report tables (NCSALL.

report tables (NCSALL, 2000) reveal the following, based on 1997 data:

- Most adult learners are under the age of 45.
- 37 percent are between the ages of 16 and 24.
- Slightly more than half (54 percent) are female.
- About 11 percent live at or below the poverty level.
- Approximately 50 percent are employed in some capacity.
- One percent are in correctional facilities.
- At least one million adults are on waiting lists for services. The average wait is between four months to one year.

Follow-up data from 1998 further reveal that:

- 35 percent of adult learners receive a high school diploma or GED.
- 35 percent obtain or advance in a job.
- 4 percent enter other educational training programs (Elliott, 1998).

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ESTABLISHING A FOUNDATION OF BASIC SKILLS IN THE WORKFORCE DEVELOPMENT SYSTEM

The Workforce Investment Act (WIA) requires participation of adult education agencies in the workforce development continuum of services, including participation in the Commonwealth's TEAM PA CareerLink System. As such, the Bureau of ABLE requires that adult literacy agencies provide services in at least one comprehensive, chartered CareerLink site in each of the state's 22 Workforce Investment Board (WIB) areas.

The Bureau of ABLE has issued policy guidance to adult basic and literacy education providers across the Commonwealth that pertains to the establishment of adult education coalitions within WIB regions, participation in the CareerLink System, and the formulation of a Memorandum of Understanding/Combined Business Plan (MOU/CBP) with regional WIBs.

The Bureau of ABLE conducted a Career-Link Survey to ascertain the level of involvement of ABLE-funded adult education within the WIA and Career-Link Systems. That information is being used to strengthen partnerships at the state and local levels, while the Bureau continues to monitor participation in workforce development activities by the ABLE service provider network.

The Bureau of ABLE has also funded several workforce development projects, known collectively as ABLE Works. These projects are research-based and have produced workforce development

curriculum materials, methods, and practices that are now being replicated throughout the Commonwealth.

ABLE Works

ABLE Works is a workforce training and technical assistance initiative. It includes a marketing and training strategy designed to reach all of the organizations and entities that must be informed, assisted, and trained with regard to adult education's place in Pennsylvania's workforce development system. The target audience includes regional WIBs and their education-related committees, CareerLink operators/consortia, CareerLink site managers, and adult education agencies and coalitions. ABLE Works projects include:

- Work-Based Foundation Skills Framework
- Equipped for the Future
- Workplace Essential Skills
- Pennsylvania Workforce Improvement Network
- Planning for Change
- Workforce 101

The Work-Based Foundation Skills Framework

The Work-Based Foundation Skills Framework Project is an interagency project to adopt a common definition and develop a conceptual model of the basic skills, knowledge, and abilities adults need to obtain or maintain employment and advance to higher paying jobs. Twenty-one essential foundation skills and knowledge areas workers need to function effectively and safely in any workplace were defined in 1997, in collaboration with the State Workforce Investment Board and its Foundation Skills Subcommittee.



These work-based foundation skills are organized into four areas:

- Basic Workplace Skills traditional, applied basic skills (reading, writing, speaking, math) as well as new workplace basic skills (using technology and resources).
- Basic Workplace Knowledge basic knowledge about the nature of work in the modern, high-performance workplace, such as quality consciousness and an understanding of the workplace culture.
- Basic Employability Skills cognitive skills (solving problems and making decisions) and social skills (working in teams) needed to manage one's work environment and interact effectively within the workplace.
- Lifelong Learning Skills learning skills and strategies that enable one to continually pursue employment and learning opportunities.

Each foundation skill and knowledge area has been further defined in terms of the specific competencies, or sub-skills, that must be mastered to achieve competence in that skill. Competency lists have been developed to provide (1) the level of detail needed to set realistic education or employment goals and (2) a meaningful structure for measuring and recording foundation skill achievement and growth.

The foundation skills framework was designed as a flexible tool to develop high-quality, work-related foundation skills programs and to facilitate communication among workforce development system partners. It can be used for various kinds of customer interaction — career and education planning, customized foundation skill curriculum development, program and staff development, and community planning. It has been successfully used by a variety of stakeholders for a variety of purposes, both within and outside the ABLE system, and can be used in various workplaces for various types of clients.

Moreover, the use of the foundation skills models to identify work-related foundation skills and talk about them in the same way across training programs and agencies is extremely helpful.

Equipped for the Future (EFF)

The National Institute for Literacy's Equipped for the Future Project (EFF) is a standards-based system reform initiative aimed at improving the quality and outcomes of the adult literacy and lifelong learning delivery system. Since 1993, EFF has worked to develop consensus among adult learners and adult educators as to what constitutes high-quality adult education programs. Both adult learners and adult educators agree that adult education programs must help adult learners apply basic academic skills to real-life situations, build problem-solving and thinking skills, and develop strong interpersonal skills. EFF Standards have been developed to embody these aspects of literacy and provide a vehicle for adult educators and programs to align teaching and assessment with preparing adults to carry out their roles as family members, workers, and citizens. The EFF Standards and related resources provide ABLE programs with another tool to develop and provide relevant and meaningful education opportunities.

Workplace Essential Skills (WES) See Accomplishments: Technology-Based Basic Skills Services (Page 19).

The Pennsylvania Workforce Improvement Network (PA WIN)

The Pennsylvania Workforce Improvement Network (PA WIN) is a centralized support system for workplace basic skills services. PA WIN provides ABLE literacy providers with the necessary professional development to ensure the provision of high-quality workplace foundation skills programs to private-sector enterprises.

PA WIN is designed to encourage and support the expansion of adult basic education organizations' abilities to provide customized foundation skills training for employees in their workplace. More than 40 adult basic literacy providers in the Commonwealth have been selected as PA WIN affiliates. Each affiliate has a designated PA WIN program developer who works with local WIBs and CareerLink Centers and assists employers in identifying workers' basic skill needs and developing high-quality foundation skills training programs. Services can include basic skills needs analysis, customized curriculum development, instruction, assessment and evaluation, and/or materials related to foundation skills training. PA WIN affiliates are eligible to apply for grant assistance to offset the cost of workplace basic skills services.

Planning for Change (PfC)

All ABLE providers are required to participate in adult education coalitions formed within each of the 22 WIB regions. The purposes of these coalitions are to (1) coordinate ABLE services regionally, (2) develop a collective regional ABLE presence, (3) initiate regular communication with the regional WIB, and (4) provide a comprehensive system of basic skills services within each WIB region and in partnership with CareerLink Centers. Each ABLE coalition is developing a regional Workforce Development Plan that involves all ABLE agencies in the delivery of a comprehensive system of basic skills services that meets the workforce development needs in their WIB region. The PfC project provides technical assistance consultants to every coalition; they have assisted ABLE providers in establishing coalitions and are working with coalitions to integrate adult basic and literacy education services within the workforce development continuum.

Workforce 101

Workforce 101 provides a professional development opportunity for ABLE providers. It explains the role of ABLE programs as productive partners in the WIA System.

TECHNOLOGY-BASED BASIC SKILLS SERVICES

Workplace Essential Skills (WES) The PA Department of Education (PDE) established a statewide distance education initiative in partnership with the PA Department of Labor and Industry, the PA Public Television Network and eight affiliated public television stations, the PA Cable Network, and Verizon, Inc. Through this partnership, the PBS distance learning series, Workplace Essential Skills (WES), is offered to increase access to services to those adults not participating in basic skills services. WES is a flexible, learner-centered, multimedia curriculum that integrates print, video, and the Internet while delivering work-based basic skills instruction in a workplace context. The target audiences include TEAM PA CareerLink customers and unserved or under-served adults who (1) lack the basic skills proficiency needed for workplace success, (2) need improved work skills for job advancement, or (3) need flexible time and locations for instruction.

Family Literacy Distance Learning Series

In addition to Workplace Essential Skills, the Bureau of ABLE entered into a partner-ship agreement with seven other states and the U.S. Department of Education to produce a distance education series for family literacy, providing the Commonwealth with a statewide license to use the Madison Heights/Lifelines series throughout the state.

The Literacy Information and Communication System (LINCS)

Literacy Information and Communication System (LINCS) is a cooperative electronic network originating at the National Institute for Literacy and involving four regional LINCS partners, representative organizations from the states and territories, and several major national organizations. The LINCS Network provides a single focal point for adult literacy resources, knowledge, and expertise from across the nation and the world. The coordinated efforts of the LINCS partners make LINCS a nationally recognized, one-stop site for literacy information retrieval and communication among literacy stakeholders (National Institute for Literacy).



GED Connection and TV411

Two other distance education programs are being piloted within ABLE programs for use with adult learners. GED Connection is a new series from PBS LiteracyLink using videos created by KET/The Kentucky Network to help learners obtain the skills and knowledge they need to prepare for and pass the new GED exam. TV411 is a multimedia project that combines television, video, print, and the Internet with community support for learners. It features a participatory approach to learning that builds the reading, writing, math, and critical thinking skills of adults, using the topics of parenting, money, and health as instructional content.

ENGAGING THE COMMUNITY THROUGH A PUBLIC RELATIONS CAMPAIGN

A statewide public relations campaign has been developed to increase awareness of adult basic and literacy education. The campaign includes television, radio, and print promotions. Television and radio spots were aired during September 2002; radio spots continued to be broadcast through October. The promotions target people who want to improve their basic literacy skills, as well as those who would like to become volunteer tutors in literacy programs.

The public awareness campaign was coordinated with America's Literacy Directory at the National Institute for Literacy (NIFL) and Verizon, Inc. to provide residents of the Commonwealth with a toll-free 1-800 telephone line. From 9 a.m. to 9 p.m., callers can receive general information about adult basic skills services or more specific ABLE agency information. A follow-up system is being implemented to track referrals to agencies to ensure that potential learners requesting services can be placed immediately.

THE PA FAMILY LITERACY PROGRAM

Family literacy is a comprehensive approach to education in which parent and child learn and grow together. Educational opportunities for parents and children, and learning outcomes, are often improved by integrating early childhood and adult education into a unified program.

Parents' basic skills and educational attainment levels, along with their attitudes about learning and formal education, have an enormous impact on children's academic achievement and eventually influence their career development.

Research consistently indicates an intergenerational transfer of literacy from parents to their children, and this transfer persists into adulthood (Sticht, 1992).

Family literacy programs address the basic skills needs of the family. Adult education services help parents improve their reading, math, writing, language, and critical thinking skills and, in so doing, assist parents in improving their educational attainment levels, employment status, and economic well-being. Parenting education guides and supports parents in providing a healthy home environment that supports learning and promotes academic success. Early childhood education services assist parents in understanding the developmental needs of their children and the role they play in helping their children become successful learners.

Impact of Family Literacy Services
The National Adult Literacy Survey
(NALS) reported that most adults who
demonstrated low levels of literacy were
living in poverty. Several studies have
found that children living in poverty-level
homes with low-literate parents are least
likely to enter school ready to learn and
most likely to drop out of school. Family

literacy programs are designed to improve parent educational attainment levels and, in so doing, can equip parents with the skills needed to obtain gainful employment and increase their income. In turn, parents with higher skill levels and higher socioeconomic status are more likely to talk with their children, read to them, buy them educational games, and, in general, provide them with more literate environments than parents with lower levels of basic skills and fewer resources.

In general, family literacy programs produce several very positive outcomes, including:

- Increased participation in adult literacy programs—adults tend to remain active learners in family literacy programs longer than in most adult-only programs and, as such, make significant gains in language and math skills and self-confidence levels.
- Improved parent employment status, resulting in increased income and improved living conditions for the family.
- Improved attitudes about education and lifelong learning, and increased literacy activity in the home.
- Improvements in parenting abilities and effectiveness, including increased parent involvement in children's education.
- Greater potential for children to succeed in school.

Research findings on the impact of family literacy programs report that:

- More than 50 percent of involved parents earn their GED or equivalent.
- Approximately 40 percent of parents become employed.
- More than 10 percent of parents enroll in higher education or training programs, and 23 percent become self-sufficient.
- Children who participate in family literacy programs tend to make gains at least three times greater than would have been expected based on their pre-enrollment rate of development.

The PA Family Literacy Program

The Pennsylvania Department of Education Bureau of Adult Basic and Literacy Education (ABLE) administers two family literacy programs – one is supported with federal funds through the Even Start Family Literacy Program, and the second is the Family Literacy Program initiated by Governor Tom Ridge, supported with state funds through Pennsylvania's Adult Literacy Act 143.

Governor Tom Ridge recommended, and the General Assembly concurred with, the strengthening of the PA Family Literacy Program with nearly \$8.3 million in State Act 143 grants for Fiscal Year 2000-01. The budget contained the first-ever line item to provide specific funding for the PA Family Literacy Program. State Act 143 grants (combined with a \$5.6 million federal Even Start grant) funded the establishment of 24 new family literacy programs, creating a total of 70 family literacy programs serving all 67 counties, 182 school districts, and three charter schools.

During 2000-01, 2,517 families, made up of 2,675 adults and 3,834 children, were served. Of these, 1,346 families were enrolled in Even Start, and 1,171 families were enrolled in Act 143 family literacy programs.

The PA Family Literacy Consortium

The PA Family Literacy Consortium was formed to include a variety of agencies throughout the Commonwealth that share an interest in interagency collaboration for the purpose of supporting family literacy programs and initiatives. The consortium meets quarterly to discuss issues pertinent to the improvement of family literacy through collaboration and development of quality indicators and performance standards.

The PA Family Literacy Consortium Members

Center for Intergenerational Learning, Temple University

Commonwealth Libraries

Demonstration Program (Title I, Part E, Section 1502); Reading Excellence Act

Generations Together, University of Pittsburgh PA Campus Compact (Higher Education Association)

PA Department of Education, Bureau of Adult Basic and Literacy Education

PA Department of Education, Bureau of Curriculum & Academic Services/Division of Arts & Sciences/Communication & Mathematics, PLAS Project

PA Department of Education, Division of Early Intervention (IDEA)

PA Department of Education, Division of Migrant Education

PA Department of Public Welfare, Bureau of Employment & Training Programs (TANF), Units of Family Support and Fiscal Contracts

PA Department of Public Welfare, Office of Children, Youth, & Families, including Family Service System Reform, Family Centers, Head Start State Collaboration Project

PA Head Start Association

The Value of Basic Skills
Goal 1: To promote a uniform
understanding of the value of basic
skills in securing the economic and
social well-being of the Commonwealth and the quality of life of its
citizens.

Rationale: A statewide public relations initiative has been developed to increase the awareness of public and private sectors—in particular, to dispel the image of adult basic education as a remedial system, to update the definition of basic skills, and to promote the benefits of adult basic and literacy education services.

Objectives:

- To increase awareness of the need for adult basic and literacy education through the implementation of key public relations and marketing strategies.
- To increase and leverage resources by promoting public and private investments in adult basic and literacy education.
- To increase participation in adult basic and literacy education services.

Workplace Education Partnerships

Goal 2: To expand workforce development partnerships among employers, employees, and adult educators.

Rationale: The successful planning, development, and implementation of workplace education programs require collaboration among business, labor, and education partners. To maximize outcomes, all stakeholders must be involved in the identification of specific workplace basic skills needs and the definition and application of standards, measures, and competencies.

Objectives:

- To develop and identify models based on industry-based standards.
- To promote incumbent worker participation in workplace basic skills programs.
- To define skill standards.

Basic Skills in the Workforce Development Continuum Goal 3: To further integrate basic skills into the workforce development continuum.

Rationale: The high number of Pennsylvanians performing at literacy levels considered to be below minimum competency requirements indicates a critical need for adult basic and literacy education as a prerequisite to successful job training, employment, and lifelong retraining.

Objectives:

- To develop and identify promising models of how basic skills can be incorporated in the workforce development system.
- To promote the use of foundation skills across workforce development sectors.
- To promote and support replication of promising models through CareerLinks and business, labor, and education partnerships.
- To continue work to specify the role of basic skills in the workforce development continuum and gain alignment with the Team PA Workforce Investment Board and Team PA CareerLink.

A Seamless System of Services Goal 4: To streamline and organize state and local adult basic skills services.

Rationale: A comprehensive, seamless system of adult basic education services is needed to provide customers with easy access to and transition among the wide range of services necessary to serve the multiple and changing needs of adults.

Objectives:

- To influence interagency policy development for the WIA System to ensure consistency among all components.
- To improve client access to and transition among services.
- To develop and maintain comprehensive inventories of basic skills services and funding sources.
- To improve basic skills services to welfare recipients.
- To foster the continuous improvement of basic skills programs across state agencies.
- To develop comprehensive, regional plans for the provision of basic skills services within the workforce development system through adult education coalitions.
- To integrate literacy into community-based collaboration and planning initiatives, including CareerLinks, and local business, labor, and education partnerships.

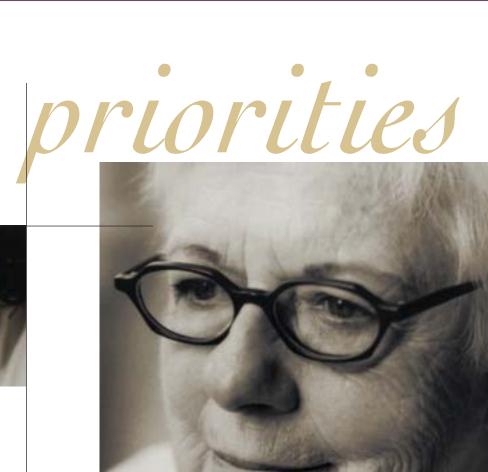
Expanded Services

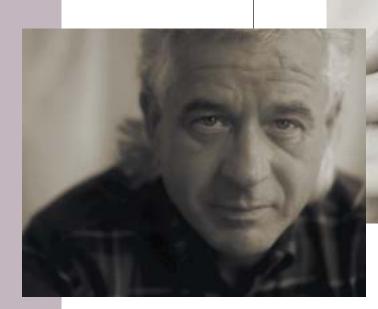
Goal 5: To improve the types and range of basic skills services available to adult learners.

Rationale: In order to increase participation, the range of basic skills services must be expanded to engage those hardest to reach. A menu of options must be available and include a variety of program sites, times, and delivery systems and instructional formats including classroom, small group, and tutoring services of varied intensity and contexts.

Objectives:

- To identify and showcase exemplary models of basic skills services.
- To support the expansion of family literacy initiatives and to develop new models of family literacy in support of workforce development.
- To develop and identify models that address the specific literacy and lifelong learning needs of older adults in their roles as family members, caretakers, citizens, and workers.
- To develop and identify models that address the life skills and employment needs of limited-English speaking adults.
- To develop interagency collaborations to address the literacy issues associated with healthy living and health care.
- To serve more adult learners through the use of distance learning and other nontraditional instructional methods.





THE ULTIMATE GOAL: LIFELONG LEARNING

A new approach to education and training, based on the concept of lifelong learning, is needed to meet the changing skill needs resulting from the evolution of an information-based and knowledge-driven economy, ongoing social change resulting from increasing reliance on technology, and the demographic pressures of an aging and increasingly more diverse population.

Very simply, lifelong learning is a commitment to an ongoing updating of all kinds of basic skills and knowledge throughout life, with the aim of continually improving one's competence as a family member, worker, and citizen.

BASIC SKILLS AND WORK-FORCE DEVELOPMENT

While the future of the workplace has unlimited potential with opportunities to compete successfully in a global market, the Bureau of Labor Statistics projects that the demand for workers will continue to increase more rapidly than the growth in the labor force - projections indicate that annual employment growth will average 1.5 percent through 2005, while labor force growth will average only 1.3 percent per year. Moreover, the growing demand will be for skilled workers - workers who have a strong foundation of basic skills; are prepared for job training and, often, retraining; and who can adapt to changing workplace conditions.

However, many members of the current and emerging workforce are not prepared to compete for jobs or advancement within the workplace. Two issues are critical to the success of the workplace and well-being of the economy. First is the need for a highly skilled, emerging workforce to meet the needs of employers who are looking for skilled workers, while ensuring that

adults can obtain gainful employment. Second is the need to upgrade the skills of incumbent workers to ensure that workplaces can remain competitive, while providing workers with job security and opportunities for advancement.

As such, the future for the workforce is bright for high-skilled workers, but risky for lower-skilled workers who will find it difficult to compete for better jobs and higher wages. New strategies are needed to assist adults in getting the education and training necessary to obtain jobs that promise opportunities for advancement and family-sustaining wages and benefits.

A European Lifelong Learning Model

In October 2000, the European Commission wrote a memorandum on lifelong learning as the subject of a six-month process to identify coherent strategies and practical ways to foster lifelong learning for all Europeans. The memo includes six key issues.

- New basic skills the gaining and renewing of skills for sustained participation in the knowledge society, which demands a guarantee of universal and continuous access to learning. Particularly important are work-based skills, foreign languages, technological culture, entrepreneurship, and social skills.
- Raising levels of investment in human resources.
- Innovation in teaching and learning effective teaching and learning methods and contexts for the continuum of lifelong and 'lifewide' learning.
- Valuing learning the need for understanding and appreciation of participation and outcomes, especially in non-formal and informal learning.
- Guidance and information provision of easy access to good quality information and advice about learning opportunities for all ages.
- Bringing learning closer to home providing lifelong learning opportunities as close to learners as possible.

These six issues emphasize the need to identify obstacles to lifelong learning and provide examples of good practice, in order to make lifelong learning a practical possibility for everyone. The Lifelong Learning Model process ended in early July 2001, and the Commission intends to use the considerable feedback to prepare an Action Plan that will specify policy objectives, concrete initiatives, and benchmarks for implementation.

The National Association of Manufacturers (NAM) survey of its member firms found that approximately 90 percent had difficulty finding qualified candidates in at least one job function (NAM, 2000).

Traditionally, most businesses have invested their training dollars in mid to upper level workers. New strategies are needed to assist employers and educators in preparing lower-skilled workers to take on new responsibilities that contribute to the productivity of the workplace, the employability of the worker, and, ultimately, the economy. New workforce development strategies show promise, including providing foundation skills in industry-driven training, using skill standards connected to literacy, and developing career ladders to provide intensive and continuous training.

The Need for Workforce Development

The National Governors Association and other national and state organizations have identified Level 3 proficiency on the NALS as a minimum standard for success in today's labor market. The IALS found that only half of the U.S. adult population between 16 and 65 years of age reached Level 3 proficiency (NIFL Facts).

The 2001 American Management Association Survey on Workplace Testing reported that:

- 34.1 percent of applicants tested by respondent firms lacked the basic skills necessary to perform the jobs they sought in 2000.
- 84.6 percent of the respondent firms did not hire skill-deficient applicants.
- 3.5 percent hired skill-deficient applicants and assigned them to obligatory remedial training.
- 3 percent hired skill-deficient applicants and offered voluntary remedial training.
- 8.2 percent took other action.

The National Center on Educational Quality of the Workplace found that a 10 percent increase in the average education (equivalent to slightly more than one additional year of schooling) of all workers is associated with an increase of 8.6 percent in productivity (NIFL Facts).

Engaging Employers as Partners in Workforce Development

Despite the fact that in 2000, 82 percent of the largest chambers of commerce reported that workforce and education issues were their members' top priorities, one of the challenges has been getting employers to recognize the potential benefits of publicly funded workforce development programs (Jobs for the Future, 2001). Finding and keeping qualified workers have been two of the most pressing problems facing small and mid-sized firms in industries such as manufacturing, health, financial services, and information technology. Over the next 15 years, this situation will continue or worsen as some 40 million workers retire or become eligible for retirement (U.S. Chamber of Commerce, 2000).

Employers expect more varied and higher level skills from their employees, including entry-level workers. They are looking for employees who can learn new tasks and adapt to changing job requirements. Making the situation worse, a tight labor market makes the cost of poor job matches higher than when replacements are readily available. Employers have had to absorb the cost of skill remediation, retraining, and long and repeated searches for qualified workers (Jobs for the Future, 2001).

From the worker perspective, it is becoming more difficult to advance into middle-class jobs with only entry-level skills. Gone is on-the-job training that was once common in the workplace that enabled low-skilled workers to advance within the company. The earning power of a high school diploma or less has decreased, as has the number of low-skilled jobs (Employment Policy Foundation, 2000).

The Workforce Investment Act of 1998 has emphasized the need for employers to be involved in the workforce development system—employers must be central players within publicly funded workforce systems if low-income individuals are to advance into family-sustaining jobs and careers.

Skill Standards

Skill standards identify what workers need to know and must be able to do to successfully perform work-related functions within a specific industry. They ensure a well-trained workforce and high-performance workplace.

Skill standards are beneficial to both employees and employers. For example:

- Industry can use standards to inform training providers and prospective employees of skills required for employment.
- Employers can use standards to reduce the costs and legal risks associated with the assessment of job candidates and make more objective employment decisions.
- Not only can standards guide employers in assessing prospective employees, but they can also help employers assess the readiness of current employees to advance to higher positions and develop job training programs.
- Unions can increase their members' employment security through access to competency-based training and certification.
- Standards help workers understand what they must know and be able to do to advance in the workplace.
- Workers can protect against dislocation, pursue career advancement, and enhance their ability to re-enter the workforce by having an employment portfolio based on training to industry standards.
- Standards help trainers and educators

- determine appropriate training services as they can serve as benchmarks and performance criteria to meet current and emerging labor market needs.
- Government agencies can protect the integrity of public expenditures by requiring that employment-related training meet industry standards.
- The emerging workforce can also benefit from skill standards. Standards help adult learners understand what they must know and be able to do to enter a particular

industry and help them prepare for skilled occupations with career opportunities.

Considerable work has been done at the national, state, and regional levels to develop skill standards. The research indicates that, to be effective, skill standards must be:

- Responsive to rapidly changing workplaces, technologies, and markets.
- Broadly defined occupational categories within industries.
- Benchmarked to a world-class level of industry performance.
- Free from any form of bias and applicable to a wide variety of education and training providers.
- Based on a relatively simple structure to make the system user-friendly.
- Connected to measurable, competencybased outcomes that can be readily assessed.
- Developed in collaboration with all stakeholders, nationally based, and comparable across industries, similar occupations, and geographic regions and states.
- Useful for qualifying new hires and upgrading the skills of incumbent workers.
- Inclusive of basic reading, writing, math, and critical thinking skills.



Career Ladders

The concept of career ladders is an old one. The literature reveals many applications of the career ladder concept, from vocational education to college career development programs. The career ladder

approach calls for a comprehensive system of education that allows programs to be linked into a series of sequential education and training activities that allow individuals to progress from relatively low skill levels to higher levels of skills, progressing from relatively unskilled and poorly paid positions to better-paid and more stable occupations. To meet the needs of individuals, career ladders should:

- Target high-wage, highgrowth sectors of the economy in areas of the greatest employment need.
- Provide a full spectrum of education and training from basic skills through advanced skill sets.
- Provide a variety of learning and training opportunities that include academic and career skills and knowledge.
- Integrate work and learning by providing educational opportunities for individuals while they are pursuing work and a career.
- Provide lifelong education and training opportunities allowing for continued learning and skill development at any stage.

Although most jobs require some on-thejob training, there is often no overall connection between job assignments and skill development. The challenge is in how to establish an integrated and fair system of career ladders that objectively assigns workers, measures and rewards workers' skills, and provides management with information on the skill levels of workers. Those companies that already provide modest career ladders could profitably expand their career ladders so that semiskilled jobs are linked to skilled jobs and the progression up the career ladder is available to a larger proportion of workers (Brown & Reich, 1996).

During the 1960s and '70s, career ladders were often a model to help families transition from poverty to self-sufficiency. Pearl and Reissman, in their 1965 book New Careers for the Poor, were looking for a way to provide a sufficient number of jobs for all people without work. They wanted jobs to be defined and distributed so that unskilled and under-educated adults could find jobs that would be permanent and would provide an opportunity for a lifelong career. However, in today's world, there is much less clarity or predictability in the notion of career paths within companies or even industries. The fast pace of change in company size, direction, and technology puts much more of the onus on the individual worker to understand. develop, and assess their skill sets as they apply to evolving career opportunities.

There remains a need to provide education and training designed towards long-term skills development for low-income individuals who have been trained to join the workforce in entry-level positions and lack the skills necessary to allow them to advance in the workforce. In recent years, there have been programs that utilize career ladders to help welfare recipients, providing a means to connect worker needs with employment opportunities.

In 1998, the Sales and Service Voluntary Partnership (S&SVP) was established and funded by the National Skill Standards Board (NSSB) to develop voluntary, national skill standards and certification for the retail, wholesale, personal services. and real estate industries. Industry standards in Sales and Customer Service have been developed and approved. They address the technical, academic and employability skills needed of qualified frontline workers and supervisors in sales and service related industries. Skill standards increase career options for workers by demonstrating transferable job skills within and across industries. They also provide employers with benchmarks to measure their own work processes. National Certification in Professional Customer Service will be available during fall 2002. The S&SVP is only one of 15 industry-proposed cluster partnerships across the entire U.S. economy that will comprise a national skills standards and certification system. Such a system promotes portability of skill sets and credentials across industry sectors.

Recent labor shortages have also created renewed interest in the concept of career ladders. While labor has been at the table negotiating career ladders for many years, employers and training providers are now developing career mobility opportunities within the workplace. These ladders are designed to entice new employees to enter the company and to retain current employees already employed (Chernow, 2000).

Labor recognizes that career ladders can be inappropriately used as a substitute for paying a living wage and providing good benefits. As such, labor negotiates for career ladders with increased pay and additional training that are based on seniority— conditions that are not a given with non-union employers (Chernow, 2000).

Some industries have "natural" career ladders, making for a simpler career ladder process, while others have limited internal mobility options, creating the need to partner with different types of employers. Recently, the Massachusetts AFL-CIO worked to secure a \$250,000, three-year career ladder grant from BankBoston Charitable Trust to develop career ladders between health care institutions. Building on the strength of existing contracts, this project will attempt to forge new ground by establishing common sets of skill standards and expectations between employers (Chernow, 2000).

More research is needed on the effectiveness of career ladders with low-skilled workers. The Workforce Investment Act places more responsibility for training on the education system, which signifies an important link in developing opportunities for growth and employment mobility among low-skilled and literate populations. A continuum of training, job placement, and ongoing education opportunities, aligned with industry skill standards and certification, may provide a means to greater corporate and individual investment in skill and career development opportunities.

Existing studies indicate that on-the-job training increases employee productivity, but it is not clear to what extent employees learn on the job solely as a function of experience, or in the absence of ongoing formal training, mentoring, or pay policies that encourage learning and skill acquisition. Employers often assume that more experienced employees have accumulated more on-the-job training and, therefore, are more productive. When this is the case, pay policies and career ladders aim to retain more experienced employees, particularly in jobs where skill requirements are high and continuous learning is important. However, some research findings do not find a correlation between workforce experience levels and pay policies, and suggest that employers adapt their pay and training policies in response to environmental forces and different labor market conditions (Valvano, 1996).



The goal should be to identify the common interests and negotiate the unshared goals.

Workforce Education from a Worker Perspective

By Dr. James T. Ryan, District 1199C Training and Upgrading Fund and ICC Member

The goals of workers and employers are often different. In response, we have a history of labor legislation, a National Labor Relations Board, and the whole field of industrial relations to moderate and mediate the differences. As workplace education emerges as a national issue, it should not be surprising that there are differences in approach between management and labor.

The fundamental first step is to acknowledge these differences in goals between the employer and employees, and we should expect that this will also be the case in workplace education. The goal should be to identify the common interests and negotiate the unshared goals. For example, one of the employer goals of an educational initiative might be productivity. Although employees are not opposed to increased productivity, this would not be a strong motive to become involved in training. More likely, on-the-job advancement would be an employee goal. For some employers, this might be a problem. The employer may want to see the employee do the current job better, not advance and create the need to train a new employee.

In addition to agreeing on the goals of a specific program, there are additional issues that workers need to have addressed. The most serious concern for workers is confidentiality. Particularly for lower-skilled workers, there is a serious reluctance to reveal their skill levels, and especially their educational deficiencies, to the employer. Their fear, sometimes accurate, is that they are providing a layoff list with themselves at the top. Any training recruitment effort will have the most difficulty in recruiting the workers who are most in need.

Access to training programs is another issue. Training which the employer sponsors and pays for is employer-controlled. However, if public money is involved, there should be worker access to the training without going through the employer.

These differences in goals and concerns have produced a climate in which worker-controlled training and education have become an option. Almost always, this is in a unionized workplace, and the union is the sponsor. The best known example is the apprenticeship programs of the building trades, some of which are almost 100 years old. Actually, these programs are not, strictly speaking, union, but are union-management entities. The two parties have equal say in program content, standards, evaluation, and funding. These have been the most successful skills training programs in America and are frequently copied.

One of the logical outcomes of the apprenticeship concept is portability. A journeyman steamfitter in Philadelphia has the same skills as one in Portland. This standardization has obvious benefits for the worker. But for the industry and for groups of enlightened employers, apprenticeship stabilizes industry standards and skills assessment.

A current initiative in worker education is to develop curriculum with a workplace context. The theory is that training will be more effective if the on-the-job applications are obvious and taught in the context of the workers' current knowledge. Joint training efforts have a natural advantage. Other programs will succeed or fail depending on the involvement of workers, as well as management, in program development. The best programs will address worker involvement as a major issue from the outset of program planning.

In summary, there are two distinct approaches to workforce education. One is a top-down effort that presumes the learners are basically sponges who are to absorb what is presented. Worker-focused education views the students as active participants in a program they help develop and sell to fellow workers and the public.

Developing Skills and Pay Through Career Ladders: Lessons From Japanese and U.S. Companies

By Clair Brown and Michael Reich, National Center for the Workplace, The Institute of Industrial Relations, University of California, Berkeley, 1996.

Brown and Reich examined Japanese training systems that primarily take the form of structured, on-the-job training (OJT), with training embedded in long career ladders that simultaneously increase skills and pay for Japanese workers over their careers. They found that a 45-year-old Japanese worker earns more than twice what a similarly educated 25-year-old worker earns. In contrast, the U.S. system is characterized by unstructured OJT and sporadic formal training, and is embedded in short job ladders that allow mobility between and within firms. The results include flat age-earnings profiles for high school graduates, who earn only 40 percent more when they are 45 than when they were 25; for college graduates, the ratio is 2.0. Brown and Reich concluded that the Japanese system operates more efficiently, especially for the non-exempt workforce, and that U.S. firms could improve the efficiency of their training for non-exempt employees by providing structured OJT. This reform, which requires constraining employee mobility within a firm, would create a career ladder that improves skills and pay over the employees' tenure.

In the model they propose, the emphasis on management flexibility and worker input that is valued in the U.S. system is retained, although it takes a new form. Workers and supervisors jointly determine job assignment and, as workers move along the planned career path and productivity and skills increase, pay also increases.

Creating career ladders for non-exempt workers should improve the earnings potential for workers and improve the company's returns to training because career ladders interconnect training paths and reduce turnover. Brown and Reich's model contains similarities to two widespread programs and could make these programs more effective for workers and employers.

- In traditional upgrade programs, workers' targeted job classifications are often unrelated to their current or past jobs. If promotion from within for vacancies is extended to form rational career ladders that upgrade workers' skills, job ladders would be longer and more interconnected.
- In traditional employee development programs, employers pay tuition for a variety of classes, including degree-granting programs, job-related skills, personal interest, and new careers. In most cases, these programs are not related to the employees' career development at the company, and the employees choose their own courses and level of participation. In Brown and Reich's model, continuing education is related to skill development (including basic education where needed) and job paths. The manager and worker jointly decide what courses are useful to take and how they relate to the worker's overall career development, including preparing for a job outside the company.

Brown and Reich's model facilitates flexibility and does not depend upon lifelong jobs. Since skill development is recognized, recorded and rewarded, the model is compatible with management needs to adjust the workforce and with worker needs to change jobs for personal reasons or better job opportunities. Firms would be able to plan, fully utilize, and reward the skill development of their workforce, while workers would take more responsibility in their career planning and better understand their skill development and its relationship to pay.

The results include flat age-earnings profiles for high school graduates, who earn only 40 percent more when they are 45 than when they were 25; for college graduates, the ratio is 2.0.

BASIC SKILLS SERVICES AND ADULT WELFARE RECIPIENTS

In Pennsylvania, more than 18 percent of adult learners were receiving public assistance when they enrolled in ABLE services during 2000.

The 2000 PA Census reveals the following about the income levels of families in the Commonwealth.

PA family income per year during 1999	Out of a total of 3,25,707 families
With less than \$10,000	167,090 (5.2%)
\$10,000 - \$14,999	124,473 (3.9%)
\$15,000 - \$24,999	352,867 (10.9%)
\$25,000 - \$34,999	410,489 (12.7%)
Per capita income	\$20,880
Families at poverty status in 1999	250,296 (7.8%)
Families receiving:	
public assistance income/non-cash ber	nefits 732,156 (22.7%)
cash public assistance income	128,159 (4%)
food stamps in past 12 months	302,315 (9.4%)
free or reduced school meal benefit past	12 months 277,333 (8.6%)

National Adult Literacy Survey (NALS) Data and Welfare

Skill Levels

- 31 percent of women on welfare demonstrated minimal skills similar to high school dropouts (NALS Level 1), compared to 13 percent of women not on welfare.
- 37 percent of women on welfare had basic skills levels similar to below average high school graduates (NALS Level 2), compared to 25 percent of women not on welfare (Carnevale & Desrochers, 1999).

Education and Training

- It is projected that it would take 900 hours of education and training for Level 1 skilled women on welfare to move up to Level 2.
- It is projected that it would take 200 hours of education and training for Level 2 skilled women on welfare to move up to Level 3 (Carnevale & Desrochers, 1999).

The U.S. Bureau of Census, 2000 Census Supplementary Survey found that nationwide:

- 9.57 percent of households had incomes below \$10,000
- 6.68 percent had incomes between \$10,000 \$14,999
- 13.36 percent had incomes between \$15,000 \$24,999
- 12.88 percent had incomes between \$25,000 \$34,999

Welfare Reform and the Five-Year Limit

On March 3, 2002, the first Pennsylvania welfare recipients completed their fifth year on Temporary Assistance for Needy Families (TANF).

Characteristics typical of five-year recipients:

- Less than 30 percent are exempt from work requirements.
- Of those required to be working, nearly 60 percent are not.
- It is a predominantly female population.
- On average, they are 35 years old or younger.
- Most are single parents, caring for three or fewer children.
- Most have some high school or have completed high school.
- Some have a mental illness or physical limitations.
- Some are experiencing a family crisis.
- Some are caring for an individual with a disability.
- Some are domestic violence victims.
- Some need extra time and help to become self-sufficient.

TANF is limited to five years by federal law, but allows states to extend TANF benefits for up to 20 percent of their caseload. While all adults who reach their five-year limit are eligible, approval for extended benefits is conditional depending upon the current status of the family.

- Persons with exemptions from work requirements must enroll in the Maximizing Participation Project (MPP) that assesses functional limitations and develops individualized plans to reach selfsufficiency.
- Persons required to work must enroll in the Work Plus program that provides a vocational assessment to determine appropriate skills training and a combi-

nation of work, community service, and related activities to provide 30 hours of activity per week; some may be eligible for up to six months of paid work experience while they participate.

 Domestic violence victims need to develop a plan for their safety that includes steps that need to be taken to become self-sufficient.

People approaching 60 months in Pennsylvania still receive Department of Welfare (DPW) outreach services that include advising and counseling. Five-year recipients are told about job retention, advancement, and re-employment services, and are encouraged to take advantage of the entire range of options and opportunities that are available to them.

The 1997 National Survey of America's Families found that:

- 43 percent of welfare leavers were in service occupations.
- 17 percent were in administration/clerical occupations.
- 13 percent were managers/professionals/technicians.
- 11 percent were in sales occupations.
- 9 percent were operatives laborers.
- 7 percent were in craft/repair occupations.

(The Urban Institute, 2002)



In general, ESL programs help adults improve their English reading, writing, speaking, and listening skills in order to equip them with the skills necessary to obtain jobs or better jobs, gain access to educational opportunities, provide for the well-being of their families, help their children succeed in school, and perform daily tasks in Englishspeaking communities.

ENGLISH AS A SECOND LANGUAGE

A general definition of English as a Second Language (ESL) is the teaching/learning of English for use in a setting where English is the primary language. English for Speakers of Other Languages (ESOL) is another term that is commonly used for English instruction for non-native speakers. Typically, ESL classes include limited English-speaking learners who speak many different languages, and the teacher uses the "English only" approach to instruction. Learners may also be matched with a tutor, who also uses the "English only" approach to tutoring activities. ESL learners include both adults who are literate in their native language and those who are not.

Although programs vary in scope and content, adult ESL instruction targets language and literacy proficiency. In general, ESL programs help adults improve their English reading, writing, speaking, and listening skills in order to equip them with the skills necessary to obtain jobs or better jobs, gain access to educational opportunities, provide for the well-being of their families, help their children succeed in school, and perform daily tasks in Englishspeaking communities. Some programs are designed for refugees and focus on survival skills and listening and speaking abilities. Others target special areas, such as family literacy, vocational or workforce development, citizenship and civics education, or GED preparation. Without English language skills, daily life can be very

difficult for adults who may need to access and use public services that range from calling 911 for emergency care to understanding leases.

The time it takes to learn English varies enormously from learner to learner, based on their educational backgrounds, age, opportunities to interact with native English speakers, and other factors. Generally speaking, research indicates that it takes between five and seven years to advance from not understanding any English to being able to communicate effectively (Collier, 1989).

The 2000 PA Census reports that approximately 8.4 percent of Pennsylvania's population over five years of age speak a language other than English. The data also reveal the following about the Commonwealth's population:

In Pennsylvania:

11,620,495
508,291
257,339
250,952
209,257

Of the population 5 years of age and older:

Speak language other than English	972,484
Of those, the number that speak	
English less than "very well"	368,257

Participation in ESL Services

In 2000, a total of 1,102,261 adults enrolled in federally funded ESL services. Seventy percent of all adult education programs offer some ESL instruction, and 21 percent are predominantly ESL programs (U.S. Department of Education, Office of Vocational and Adult Education).

In Pennsylvania, the numbers of ABE and GED students have fluctuated over the past few years, but the number of ESL students has increased each program year since 1996-97. ESL students made up 23 percent of adult learners (12,488) enrolled in ABLE programs during 1996-97. Since then, ESL learners have represented:

- 25 percent of adult learners (13,548) during 1997-98.
- 27 percent of adult learners (13,696) during 1998-99.
- 29 percent of adult learners (16,087) during 1999-2000.

Need for ESL and Civics Education

English literacy instruction and civics education were offered to immigrants by settlement houses and unions at the beginning of the 20th century, when European immigrants dominated the U.S. population. Later in the century, community groups, public schools and churches also began offering English language and civics education.

Today there is an increasing demand for civics education and citizenship classes to help limited-English-speaking adults enhance their personal lives and their families' well-being and improve their ability to function productively in their communities. This is often driven by citizenship requirements that include the ability to demonstrate knowledge of U.S. history and civics, as well as the ability to read and write in English.

An even greater demand for English literacy and civics education has been created with the passage of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996. PRWORA restricts eligibility for health and social services, such as Social Security Income (SSI) and food stamps, which were previously available to all immigrants. As a result, there has been an increase in the number of immigrants applying for citizenship through passage of this Act.

ESL Learners

ESL learners are typical adult learners in that they differ in their educational backgrounds, life and work experiences, goals, current life circumstances, and learning preferences and needs. Within the population of ESL learners, there are:

- Learners who are not literate and have had little or no prior schooling in their native language.
- Learners who may not be familiar with the Roman alphabet.
- Learners who are literate in their native language, but who may want to participate in a slower-paced class or may want a tutor because of age, family situation, or another reason.
- Learners who are literate in their native language and want to learn English as quickly as possible.

The 1995 National Household Education Survey (NHES) found that 12 million U.S. adults spoke a language other than English as their primary language at home.

- Approximately one out of 10 limited-English-speaking adults (approximately 1.3 million) participated in ESL classes during 1994-95.
- 25 percent were interested in taking ESL classes, but had not done so in the previous 12 months.
- Their reasons for not participating included lack of awareness of ESL services, conflicting work schedules, inconvenient class locations, and lack of time, money, child care, and transportation.
- However, the primary barrier to participation was a lack of appropriate ESL services.
- Those who did participate tended to be younger, newer in the country, and had a higher educational attainment level in their own country.

The CIS believes this increase in poverty is due to lower education levels among immigrants. In addition, the CIS study found that immigrants were 30 to 50 percent more likely to be on welfare than native-born

Americans and made up 60 percent of the uninsured population.

An analysis of the 2000 data by the Center for Immigration Statistics (CIS) suggests that, at the current time, immigrants are more likely to be poor and remain poor longer than in the past. The poverty rate for immigrants in 2000 was 50 percent higher than that of native-born Americans, as opposed to 1970 when the percentage of immigrants living in or near poverty was lower than the percentage of nativeborn Americans living in or near poverty. The CIS believes this increase in poverty is due to lower education levels among immigrants. In addition, the CIS study found that immigrants were 30 to 50 percent more likely to be on welfare than native-born Americans and made up 60 percent of the uninsured population.

In 2000, special funds for ESL learners became available to provide English literacy and civics education services to immigrants and other limited-English-proficient populations. During the first year, 1,326 adults were served. The majority had citizenship as their goal.

English Proficiency in the Workplace

It is estimated that in the near future almost one-third of new entrants into the workforce will be immigrants. Census reports indicate that immigrants with serious English language difficulties tend to be those earning the lowest incomes. Often the only employment opportunities available to limited-English-speaking adults are jobs such as housekeepers, janitors, gardeners, and farm laborers, as well as jobs in assembly plants that require no skills. These jobs pay low wages, usually lack benefits, and have frequent layoffs. Moreover, the lack of English proficiency also restricts access to educational opportunities, including job training.

BASIC SKILLS AND TECHNOLOGY

New technologies are changing the ways people live, work, and learn. As a result, the ability to use technology effectively is a basic skill and a critical aspect of literacy. Those who are not technologically literate are at a disadvantage at home, in the workplace, and in the community – as they conduct personal business, attempt to access all types of information, and compete in the job market.

Furthermore, parents who lack technology skills are unable to help their children succeed in what has become a technology-based K-12 education system. The ability to use technology as a learning/teaching tool, a means of communication, and a source of information and resources is a parenting skill that contributes to the self-sufficiency and overall well-being of the family.

Moreover:

- In alignment with workforce development goals, parents must be technology-literate as workers, as will their children as they prepare to become members of the future workforce.
- In school, children are learning to learn through the use of technology, and the Internet is quickly becoming an important part of a child's future. As such, parents must be computer literate to be fully involved in what and how their children learn.
- At home, there are potential dangers associated with children's use of the Internet; modern parenting requires knowing how to ensure that children are safe while online.

Adults need a full range of literacy skills to operate all forms of technology, whether it be using a telephone answering machine, a VCR at home, or an automatic teller machine to do banking; to operate a personal computer and to access online information; and to operate technological equipment at the workplace. To be technologically literate requires a range of basic skills, particularly reading, computation, and critical thinking skills that include the ability to (1) access and assimilate information, (2) identify and solve problems, (3) research solutions, (4) judge and compare information, and (5) take the abstract and apply it to the specific.

Digital Divide Research Reports

The National Telecommunications and Information Administration (NTIA) conducted a series of surveys to determine the status of technology usage in the U.S., based on the belief that each year being digitally connected becomes ever more critical to economic, educational, and social advancement. Now that a large number of Americans regularly use the Internet and other forms of technology to conduct daily activities, people who lack access to those tools are at a growing disadvantage. Therefore, raising the level of digital inclusion, by increasing the number of Americans using the technology tools of the digital age, is a vitally important goal.

The first NTIA survey, Falling Through the Net: A Survey of "Have Nots" in Rural and Urban America, was conducted in 1994 and revealed that:

- The rural poor had the lowest use of computers (4.5 percent).
- Rural senior citizens had the lowest usage of computers, followed by urban senior citizens and the youngest rural citizens.
- Overall, the fewer the number of years of education, the lower the computer usage.

The second NTIA survey, Falling Through the Net: New Data on the Digital Divide, was conducted in 1997 and revealed that, despite significant growth in computer ownership and usage overall, the growth had occurred to a greater extent within some income levels, demographic groups, and geographic areas, while in certain groups the digital divide had actually increased between 1994 and 1997.

- Being in a rural, urban, or central city made a difference; urban areas had slightly higher numbers of computer owners (37.2 percent) than rural areas (34.9 percent) and central cities (32.8 percent), which had the lowest rates of usage.
- Households earning between \$5,000 and \$10,000 had the lowest computer usage (7.9 percent), and those earning between \$10,000 and \$35,000 had less computer usage (36.6 percent) than those earning more than \$75,000 (76 percent).
- The level of education affected computer usage as much as income; the higher the education, the greater the likelihood a person had a computer.
- College educated people were 10 times as likely to own a computer than a person without any high school education.

The third NTIA survey, Falling Through the Net: Defining the Digital Divide, was conducted in 1999 and revealed that the level of education plays a key role in determining a person's or household's likelihood of owning a computer or using the Internet. Overall, Americans with less education, who could have gained the greatest benefit from the Internet's educational value, were being left behind.

- In general, 61.6 percent of those with a college education were using the Internet in 1999, while only 6.6 percent of those with an elementary education or less were using the Internet.
- At home, college graduates were over eight times more likely to have a computer than the least educated, and almost 16 times more likely to have home Internet access.

Overall, Americans with less education, who could have gained the greatest benefit from the Internet's educational value, were being left behind.



- In rural areas, those with college degrees were over 11 times more likely to have a home computer and 26 times more likely to have home Internet access than those with an elementary education.
- Urban households earning over \$75,000 were over 20 times more likely to have home Internet access than rural homes at the lowest income levels.
- Approximately 59 percent of people making over \$75,000 used the Internet at home or at work, but only 16 percent of those making between \$5,000 and \$10,000 used the Internet.
- Those with college degrees were 10 times more likely to have Internet access at work than people with only some high school education.
- People earning under \$20,000 and using the Internet outside the home were more than twice as likely to get access through a public library or a community center than those earning more than \$20,000.
- People earning under \$25,000 reported that cost was the primary reason they did not use the Internet at home; people earning over \$25,000 reported the primary reason was that they didn't want it.

The fourth NTIA report, Falling Through the Net: Toward Digital Inclusion, was conducted in 2000 and revealed that a noticeable divide still existed between those with different levels of income and education, different racial and ethnic groups, the elderly and young people, single and dualparent families, and those with and without disabilities. The findings include the following data:

- The overall level of U.S. digital inclusion is rapidly increasing: more than half of all households (51.0 percent) have computers, up from 42.1 percent in December 1998.
- The rapid uptake of new technologies is occurring among most groups of Americans, regardless of income, education,

- race or ethnicity, location, age, or gender, suggesting that digital inclusion is a realizable goal.
- Groups that have traditionally been digital "have nots" are now making dramatic gains.
- Rural households are much closer to the nationwide Internet usage rate of 41.5 percent.
- In 2000, 38.9 percent of rural households had Internet access, a 75 percent increase from 22.2 percent in December 1998.
- Americans at every income level are connecting at far higher rates from their homes, particularly at the middle income levels.
- Internet access among households earning \$35,000 to \$49,000 rose from 29.0 percent in December 1998 to 46.1 percent in August 2000.
- Access to the Internet is also expanding across every education level, particularly for those with some high school or college education.
- Households headed by someone with "some college experience" showed the greatest expansion in Internet usage of all education levels, rising from 30.2 percent in December 1998 to 49.0 percent in August 2000.

Nonetheless, a digital divide remains or has expanded slightly in some cases, even while Internet access and computer ownership are rising rapidly for almost all groups. For example:

- The August 2000 data show that noticeable divides still exist between those with different levels of income and education, different racial and ethnic groups, old and young, single and dualparent families, and those with and without disabilities.
- With regard to computer ownership, the divide appears to have stabilized, although it remains large.

Americans are using the Internet in the following ways.

- E-mail remains the Internet's primary application—79.9 percent of Internet users reported using e-mail.
- Online shopping and bill paying are seeing the fastest growth.
- Low-income users were the most likely to report using the Internet to look for jobs.

Overall, the findings in this report show that there has been tremendous progress in just 20 months, but much work remains to be done. Computer ownership and Internet access rates are rising rapidly nationwide and for almost all groups. Nonetheless, there are still sectors of Americans that are not adequately digitally connected.

Technology and Adult Education

Technology can be used to reach more learners, provide greater instructional flexibility, motivate learners, increase resources for teaching and learning, offer a wider range of professional development opportunities, and facilitate administrative tasks, including data collection and reporting.

- Participation in services increases when learners are offered opportunities for instruction that circumvent childcare, work, transportation, and geographic remoteness barriers.
- Computer software offers opportunities to individualize instruction to fit adults' own learning styles and needs.
- Learner motivation often increases when technology is used—some learners find technology interesting, others are motivated by the immediate feedback that is available, and still others feel there is less of a stigma associated with technology-based literacy education.
- Computer software and the Internet offer a wealth of resources for both teaching and learning (OVAE Fact Sheet).

Adult Learning Through Technology

Like other instructional tools, technology can deliver high-quality teaching that either promotes or perpetuates poor teaching which results in little learning. Technology has the potential to enhance adult learning because it offers adults flexibility in scheduling instruction at times and places that are convenient. It also provides learners with access to teaching expertise that otherwise may be limited to a specific geographic area or program. Technology can also be used to bring learners together from different locations or to increase learner autonomy through self-directed learning opportunities. No matter how technology is used, it must be emphasized that technology does not promote learning; educators do. How educators use technology is the key to successful learning.

Literacy, Electronic Networking, and the Internet

A technical report by the International Literacy Institute and the National Center on Adult Literacy, Literacy, Electronic Networking, and the Internet (1998) focuses on electronic networking and the Internet as they relate to adult literacy programs. The report looks at why adult literacy programs are lagging behind in the use of new technologies and includes findings from reports by the Office of Technology Assessment (U.S. Congress, 1993) and the National Center on Adult Literacy (Hopey et al., 1996; ILI & NCAL, 1995) that show some use of computers for administrative purposes, but little for instructional purposes. All reports agree that a lack of funding to purchase hardware and software for instruction or communication is a major barrier; however, the level of interest in expanding the use of technology is growing rapidly.

In addition to the need for funding for the purchase of software, the cost of developing adult literacy software is also a factor. Overall, the findings in this report show that there has been tremendous progress in just 20 months, but much work remains to be done.

Distance learning is defined as the delivery of education or training through electronically mediated instruction, including satellite, video, audio graphic, computer, and multimedia technology. It refers to teaching and learning situations in which the instructor and the learner and learners are geographically separated and therefore rely on electronic devices and print materials for instructional delivery (The United States Distance Learning Association).

Literacy providers who are interested have a difficult time finding software that is of high quality and appropriate for adult learners. On the other hand, software developers are reluctant to invest in adult literacy software because the market demand is small (Harvey-Morgan, 1996).

Internet usage has grown more than any other area, due to easy access at a relatively low cost (Hopey & Harvey-Morgan, 1995; Hopey et al., 1996; NCAL, 1995). Bulletin boards and information servers are meeting the information needs in adult literacy as they (1) reduce the isolation of adult literacy learners and practitioners, (2) facilitate communication among staff and learners, (3) increase access to resources, (4) streamline administrative and reporting processes, and (5) provide a delivery mechanism for instruction and staff development (ILI & NCAL, 1998). While the potential exists, there is often a lack of staff training and information on how to implement and use technologybased opportunities.

The reports outline the benefits of technology-based learning for adults to include (1) reaching more learners, (2) using learning time more efficiently and effectively, (3) sustaining motivation, (4) individualizing instruction, and (5) providing access to resources. For adult literacy practitioners, the benefits include (1) more success recruiting and retaining learners, (2) enhanced curricula with online resources and interactive, individualized learning activities, (3) more opportunities to meet staff development needs, (4) improved assessment and data collection and reporting, and (5) streamlined coordination, management, and administration.

The Literacy, Electronic Networking, and the Internet Report concludes that:

• Technology for education must provide a real and timely service that pays a

- return on the investment with highquality results.
- New technologies require training on how to implement them in a cost-effective way.
- Technology-based educational programs must be carefully evaluated to ensure learning achievements.
- Technology-based learning should also offer adults an opportunity to develop technology skills that will be useful in the workplace, at home, and in lifelong learning opportunities and training.
- The real cost of technology may be in ignoring the potential of technologies and distance learning, thereby maintaining the gap between the informationally rich and informationally poor.

HEALTH LITERACY

The issue of health literacy emerged from a rising concern among health care providers, adult education practitioners, and other stakeholders about the number of adults who lack the literacy skills needed to maintain a healthy lifestyle and engage in appropriate health care.

Low-level health literacy skills cost the U.S. health care system approximately \$73 billion annually in unnecessary doctor visits, hospitalizations, and longer hospital stays. The primary source of expense is longer hospital stays. These costs are passed on to patients, employers, taxpayers, and health care funders; 16 percent of these added expenses (\$11 billion) are incurred by the patient.

Patients with inadequate health literacy have a complex array of communication difficulties, which may interact to have a negative influence on health outcomes. These patients report worse health status and have less understanding of their medical conditions and treatment.

Major disparities in disease and death rates exist among different populations.

- Disease does not affect all segments of society equally.
- Disparities result from the interplay of financial, structural, and personal barriers, such as socio-economic conditions, cultural and language factors, and a lack of education and low levels of basic skills.

Improving and sustaining access to highquality and continuous primary health care and medical treatment services is critical to eliminating disparities in health outcomes. Lack of access to primary health care results in poor health outcomes—a lack of basic skills can be an access barrier to health care services.

Defining Health Literacy

Health literacy involves the ability to:

- Read, understand, and act on health care information, health promotion activities, and medical instructions.
- Understand basic mathematical concepts as they relate to medication and health information.
- Understand and navigate the health care system.
- Function in health care settings, to be one's own health advocate, and to request clarification about health or medical information when needed.
- Make educated decisions regarding one's health and that of one's family.

Patients with the greatest health care needs may have the least ability to read and comprehend information needed to function successfully as patients (AMA Foundation, *Tackling the Problem of Health Illiteracy*).

 Health literacy involves proficiency in reading, writing, math, critical thinking, and communication skills. The ability to read educational materials regarding prevention of health problems, medicine labels, medical instructions, and health care system information is critical to healthy living and health care.

- One of the major barriers to health literacy is the heavy reliance on print materials written at the 10th+ grade level.

 Consequently, individuals with low levels of basic skills are at risk of not being able to understand information distributed by health care providers. As a result, low-literate adults often lack information about where to go and when to seek health care (Weiss, 1992; Williams et al., 1995).
- A number of studies have revealed that informed consent forms and medicine package information inserts are among the most difficult and complex reading materials patients encounter in health care settings. Most often, these are written at the 8th-grade to college level (Smith, 1994).
- Communication skills are critical in health care settings and involve receiving and transmitting health care information. According to Ruth Parker, MD, low-literate patients are "a setup for misinformation, miscommunication, and mistakes, all of which have a whole lot to do with quality" (QI/TQM, 2001). In addition, critical thinking skills are needed to enable adults to assimilate information, form questions, and make decisions regarding healthy living and health care.
- Numeracy skills are also needed to measure appropriate dosages of medications, know when to take medicine, and read temperature or other measurements (Williams et al. 1995).

Who Is at Risk

Low health literacy is particularly common among the older population and low-income people. More than 66 percent of U.S. adults age 60 and over have either inadequate or marginal literacy skills; about 45 percent of all functionally illiterate adults live in poverty (Kirsch, 1993).

THE POWER OF LEARNING: NEW PRIORITY ISSUES

Research indicates that, in general, adults with low levels of basic skills and their families tend to have more health problems than individuals with higher level skills. This is often due to one or more of the following:

- They are less likely to make regular doctor visits and have preventive medical tests.
- They are less able to read medication labels and written instructions for follow-up medical care.
- They are less likely to have smoke detectors, fire extinguishers, or first aid kits in their homes.
- They smoke more and drink more coffee.
- They exercise less.
- They tend to live in substandard housing located in dangerous neighborhoods.

In 1995, Williams, Parker, Baker, and others from Emory University in Atlanta conducted a study of more than 2,600 adults who sought emergency care at Grady Memorial in Atlanta and Harbor-UCLA Medical Center. They found that:

- 20 percent of low-income outpatients did not understand when their next appointment was scheduled.
- 25 to 58 percent did not understand the instructions to "take medicine on empty stomach."
- 49 percent could not determine whether they were eligible for free care from reading a hospital financial form.
- 41 to 75 percent could not understand a standard consent form.
- 33 percent could not read and understand basic health-related materials.

Gazmararian and others (1999) examined health literacy among Medicare enrollees in a managed care organization and found that:

- Patients with inadequate literacy skills were five times more likely to misinterpret their prescriptions than patients with adequate reading skills.
- Patients with low literacy levels averaged two more doctor visits per year than those with marginal or adequate literacy skills.
- Patients with poor literacy skills have a hard time understanding basic medical instructions and are frequently ashamed and hide it.

• They have jobs that tend to be more hazardous, and they tend to get hurt on the job more frequently (Perrin, 1989).

As a result, low-literate adults tend to use substantially more health care services than those with higher level skills. In addition, research indicates that inadequate health literacy may increase the risk of hospitalization, for which low-literate patients are less likely to have health insurance.

Key Research Findings

Research indicates that patients who ask questions about their health and engage doctors in conversation about their health care tend to have fewer ailments than those who do not communicate well with their doctors. In general, patients ask less than one percent of the questions; low-literate patients often need even more encouragement to ask questions.

A 1996 study of patients with reading difficulty confirmed that 67 percent of them had never told their spouse and 19 percent had never told anyone about their reading problem (Baker et al., 1997).

Research has identified an inverse association between education and cardiovascular disease rates and associated mortality rates. For example:

- Between 1974 and 1985, smoking declined in higher educated groups at five times the rate of that of less educated groups.
- Maternal education is associated with higher use of health services.
- Conversely, lack of maternal education is correlated with (1) mothers having more fatalistic views of children's health and taking fewer precautions to safeguard their children's health, and (2) higher infant mortality rates.

BASIC SKILLS AND AGING

In 1890, the average lifespan was 47 years. Today, people can expect to live into their 80s, almost twice the lifespan of 100 years ago.

Of the four million adults served in adult education programs nationwide in 1997, approximately 18 percent were 45 years of age and older. Of those, 33 percent were 60 years of age and older. The 2000 Pennsylvania Census Data reveal the following about the Commonwealth's population:

The total population of the	
Commonwealth	12,281,054
The number of Pennsylvanians	
65 and older	1,919,165
The number of grandparents	
responsible for grandchildren	80,423

PA's Adult Literacy Survey reports that adults over 55 years old, and particularly over 64, were more likely to perform in the lowest two literacy levels than younger adults. In fact, between 79 and 90 percent of adults over 65 performed in the lowest two levels of literacy.

Low levels of basic skills are due in part to the fact that older citizens tend to have fewer years of schooling than younger people. On average, one person in three in the 55 to 69 year age bracket lacks proficiency in basic literacy skills. In comparison, one in five adults between the ages of 45 and 54 has a serious basic skills problem. In other words, the older you are, the less likely you are to have the basic skills needed for everyday life.

Participation in Adult Education

Participation rates in adult education decline steadily with increasing age. Older adults tend to avoid activities they believe exceed their coping abilities and undertake those they consider themselves capable of handling. As such, older adults may not participate in adult education because of the length of time it will take and/or the effort that will be involved. Moreover, any obstacle to participation may cause older adults to experience serious doubts or give up even before they enroll.

Age-Related Employment Issues

The fastest growing segment of the population is the older adult. As such, the 21st century may be known as the era of lifelong learning and lifelong working (Longworth, 1999). Moreover, the traditional notion of retirement may be replaced with lifelong working, which may mean entering one or more new careers that require new learning.

Employment can be an aging issue in several different ways.

- People are living longer and healthier lives and many see full- or part-time employment as a means of remaining productive in their later years.
- In other cases, increased longevity has created economic pressures for older adults, causing them to remain longer in the workforce.
- Increasing demands for workforce productivity, a projected shortage of skilled and experienced workers, and older adults who are healthier and living longer than previous generations are influencing future employment practices (Imel, 1996).
- The decline of expertise in the workplace due to forced retirements and early retirement incentives is also an issue.

Older adults who do participate in adult education report the following reasons for improving their basic skills:

- Gaining new knowledge and information.
- Improving their consumer knowledge.
- Developing skills to be self-sufficient.
- Concerns about health, nutrition, and safety issues.
- Personal renewal and enjoyment.
- Adjusting and adapting to relocation.
- Adapting to loss of employment.
- Adapting to loss of family members.
- Adapting to loss of mobility.

New Retirement Practices

Inflation, increasing health care costs, and inadequate pensions are deciding factors when older adults elect to remain employed or re-enter the workforce past the traditional retirement age (Doeringer, 1990; Glied & Stabile, 1999; Herz, 1995). Among 60-year-old workers, more than 50 percent retire from a career job, but only one in nine actually disengages from the workplace (Ruhm, 1990; Weckerle & Shultz, 1999). A new type of retirement is evolving as "bridge employment," which is a form of partial retirement in which an older worker alternates periods of disengagement from the workplace with periods of temporary, part-time, occasional, or self-employed work (Weckerle & Shultz, 1999).

Despite the new view of retirement, older workers who lack basic skills are often the first to lose their jobs and the last to find new employment. Older, employed adults often find their job status in jeopardy as job descriptions change due to technological advancements, new workplace priorities, and global competition.

Research Findings on Workplace Performance

- Shea (1991) summarized studies on older workers by pointing out that "age-related changes in physical ability, cognitive performance, and personality have little effect on workers' output except in the most physically demanding tasks."
- In a review of older worker studies, Rix (1990) concluded that many aging workers continue to work at peak efficiency and that there is usually much more variation within age groups than among age groups.
- Farr, Tesluk, and Klein (1998) found that there is no consistent relationship between age and performance across settings.
- Some studies have shown a stronger negative relationship between age and work performance for nonprofessional and low-level clerical jobs, than for higher-level craft, service, and professional jobs (Avolio, Waldman, & McDaniel, 1990; Waldman & Avolio, 1993).

Job Training and Older Workers

When job training declines sharply with increasing age, the result can have a direct impact on retirement income and self-sufficiency in old age. The Office of Technology Assessment (OTA) reports that "surveys of workers...show that older employees receive a smaller share of both on-the-job training and outside courses than younger workers, and that training declines with age within the older worker population."

Employers are often reluctant to invest limited job training dollars in upgrading the skills of older workers. In part, this may be due to employers' perceptions of the extent of older workers' trainability. Surveys of employers indicate that they rate older workers highly in terms of their dependability, loyalty, and commitment, but they are unsure about their abilities to learn new skills.

In a survey of 400 human resource specialists, 17 percent of survey respondents rated older workers' ability to learn new skills as either "excellent" or "very good." Only 10 percent believed that older workers were comfortable with new technologies (American Association of Retired Persons, 1986). In another survey, personnel administrators reported that not only did older employees resist training, but they also experienced difficulty in mastering new concepts, ideas, and approaches (OTA, 1990; Rix, 1990).

Employers are also likely to invest less in training older workers because they question whether an investment in training or retraining older workers will "pay off" in terms of the company being able to recoup its training costs (OTA, 1990; Sheppard & Rix, 1977).

According to the OTA's 1990 report, "the attitudes of management are the greatest hurdle older workers face" in terms of training in new technologies (p. 252). Although few companies have systematically analyzed the costs and benefits of training older workers, the limited research suggests that any added costs of training older workers may be offset by savings elsewhere. For example, because older workers often stay on the job longer than younger workers, the return on investment in their training is actually greater than that of younger workers (Rix, 1990).

However, some employers provide training and retraining opportunities for their older workers for the following reasons:

- To avoid the expense and time of recruiting additional skilled personnel.
- To prevent skill obsolescence and to prevent workers from becoming outdated (Hale, 1990).

Learning and Older Workers

Most researchers agree there is some decline in functioning after age 60, but just what the decline is and how it affects the ability to learn is unclear (Hale, 1990; Merriam & Caffarella, 1999). Cognitive processes, such as intelligence, logical thinking, memory, and creativity, may decline as a part of the aging process, but such deterioration is by no means universal (Hale, 1990).

There are a few age-specific studies that support the ability of older adults to learn new things, especially as related to technological changes in the workplace. The results of these studies indicate that older workers can adjust well to computerized word processing, but that they may take longer to learn and need more assistance while learning (OTA, 1990; Rix, 1990). One study comparing adults aged 20 to 39 with those aged 50 to 84 found that older

adults took twice as long to learn, but achieved nearly equal performance levels (OTA, 1990).

Family and Community Roles for Older Adults

Older adults are often asked to be child-care providers within their extended families, yet research indicates that low levels of basic skills can affect their ability to perform this critical role. In fact, low levels of basic skills are strongly and consistently associated with low academic achievement among the children in their care. A child being cared for by an adult with poor basic skills is less likely to do well in school than one who has a caregiver with higher level skills.

Older people can be a vital source of community support as volunteers in community organizations, yet research clearly shows that low levels of basic skills are associated with very low volunteerism rates. Literacy problems reduce the pool of senior citizens who are willing and able to volunteer in their community.

ESL and Older Adults

Some of the difficulties faced by elderly immigrants in the United States are similar to those experienced by all older Americans; other difficulties are due to growing old in a foreign culture. Research findings indicate that the majority of this group are women, who often lack information or strategies for self-sufficiency, especially when their family and social networks are not strong.

Different intergenerational roles in a new society can add to the complexity of daily living. Native language loss among immigrant families was once a three-generational process, but growing numbers of families are experiencing difficulty keeping a language of communication between two generations, which, in turn, interrupts cultural transmission, with negative consequences for members of each generation (Wong-Fillmore, 1991; Weinstein-Shr, 1993).



Recommendation One: Workforce Development

The ABLE ICC recommends that strategies be developed to increase employers' awareness of the connection between basic skills and increased productivity and profitability in the workplace. Although much has been accomplished publicizing the need for a skilled workforce, there still remains a need to reach small businesses, large corporations, labor, and business organizations and associations with solutions to basic skills problems. Special attention is recommended for small businesses that need assistance in growing their companies through retaining and retraining their workforce.

Recommendation Two: Skill Standards

The ABLE ICC recommends that industry skill standards be used to develop a framework for basic skills that can, in turn, strengthen the link between adult basic and literacy education and workforce development training. The ICC also recommends the forging of a formal relationship among state agencies to advance the integration of basic skills into industry-driven workforce job training programs through the CareerLink System. Such a relationship should involve working with CareerLink Centers to guide and support their use and oversight of the workforce/literacy connection. It should also monitor the implementation of a pilot that will provide literacy instruction in a contextualized format in a specific indus-

try cluster. The pilot can provide a blueprint for working with other industries and programs to incorporate basic skills as an integral component of workforce training activities.

Recommendation Three: English as a Second Language (ESL)

In response to the rapidly increasing numbers of limited English-speaking Pennsylvanians, the ABLE ICC recommends that ESL be addressed as a separate issue, as well as an integral part of other adult basic and literacy education issues. One of the priority issues to be addressed is the overwhelming demand for services from a wide variety of ESL clients and the inability of literacy providers to meet the need for appropriate services with immediacy. In so doing, efforts must be made to increase awareness of and sensitivity to language and cultural differences. Efforts must also be made to identify the different and complex needs of limited English-speaking adults. The ICC also recommends the development of a framework to determine best practices for the delivery of different types of ESL services.

Recommendation Four: Welfare Reform

To ensure that education and training are integral parts of welfare services, the ABLE ICC recommends that basic skills issues related to the reauthorization of TANF be examined and monitored as programs for welfare recipients are developed and delivered. The ICC recommends that work activities be expanded to include education and training, that education and training become part of clients' plans, and that basic skills are considered critical in equipping adults with the skills needed to retain and advance in jobs.

The ICC also recommends flexibility and innovation in program design, involvement of clients in education and training early in their benefits cycle, and the inclusion of provisions for welfare clients with multiple

barriers. Finally, because those to be served are most in need and more costly in terms of assistance, the ICC recommends maintaining funding levels.

Recommendation Five: Literacy and Technology

Although great progress has been made in the use of technology in adult basic and literacy education, the ABLE ICC recommends that the application of technology to the administration, delivery, and assessment of adult basic and literacy education services be expanded. As such, it is suggested that efforts be made to explore connecting with existing technology networks and the creation of new interagency partnerships to expand all types of programming and learning opportunities.

Recommendation Six: Health Literacy

As a first step, the ABLE ICC recommends developing a comprehensive definition of health literacy that encompasses the scope of perspectives, while making a distinction between health literacy and health education. Once a definition has been developed, efforts should be made to increase the awareness of all health literacy stakeholders of the need for providing and promoting health literacy. The ABLE ICC also recommends identifying best practices and obtaining testimonials and recommendations from existing health literacy information providers. Networks should be identified or established for the dissemination of health-care information, and local training and information-sharing opportunities should be made available to literacy and health-care providers.



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