LITERACY AND OLDER ADULTS IN THE UNITED STATES

Gail Weinstein-Shr
San Francisco State University

NCAL TECHNICAL REPORT TR94-17
JANUARY 1995

This work was supported by funding from the National Center on Adult Literacy at the University of Pennsylvania, which is part of the Education Research and Development Center Program (Grant No. R117Q0003) as administered by the Office of Educational Research and Improvement, U.S. Department of Education, in cooperation with the Departments of Labor and Health and Human Services. The findings and opinions expressed here do not necessarily reflect the position or policies of the National Center on Adult Literacy, the Office of Educational Research and Improvement, or the U.S. Department of Education.

NATIONAL CENTER ON ADULT LITERACY
UNIVERSITY OF PENNSYLVANIA
3910 CHESTNUT STREET
PHILADELPHIA, PA 19104-3111
PHONE (215) 898-2100 FAX (215) 898-9804

The National Center on Adult Literacy (NCAL) was established in 1990 by the U.S. Department of Education, with co-funding from the Departments of Labor and Health and Human Services. The mission of NCAL addresses three primary challenges: (a) to enhance the knowledge base about adult literacy; (b) to improve the quality of research and development in the field; and (c) to ensure a strong, two-way relationship between research and practice. Through applied research and development and dissemination of the results to researchers, policymakers, and practitioners, NCAL seeks to improve the quality of adult literacy programs and services on a nationwide basis. NCAL serves as a major operating unit of the Literacy Research Center at the University of Pennsylvania.

NCAL publications to date include:

May 1992 *Matching Literacy Testing With Social Policy: What are the Alternatives?*
Richard L. Venezky (*PB92-01, 7 pages)*

Oct 1992 *Life-Span and Life-Space Literacy: Research and Policy in National and International Perspectives*
Daniel A. Wagner (*OP92-01, 15 pages)*

Oct 1992 *Expanding Theories of Adult Literacy Participation*
Karen Reed Wikelund, Stephen Reder, & Sylvia Hart-Landsberg (*TR92-01, 30 pages)*

Oct 1992 *Invitations to Inquiry: Rethinking Staff Development in Adult Literacy Education*
Susan L. Lytle, Alisa Belzer, & Rebecca Reumann (*TR92-02, 44 pages)*

Dec 1992 *Developing the Professional Workforce for Adult Literacy Education*
Susan L. Lytle, Alisa Belzer, & Rebecca Reumann (*PB92-02, 11 pages)*

Jan 1993 *The Analysis of Adult Literacy: Problems in Factor Analysis Bib-Spiralled Item Administration*
David Kaplan (*OP93-01, 18 pages)*

Mar 1993 *The Impact of Workplace Literacy Programs: A New Model for Evaluation of Workplace Literacy Programs*
Larry Mikulecky & Paul Lloyd (*TR93-02, 180 pages)*

Mar 1993 *Literacy and Machines: An Overview of the Use of Technology in Adult Literacy Programs*
Terilyn C. Turner (*TR93-03, 86 pages)*

Jun 1993 *Myths and Misconceptions in Adult Literacy: A Research and Development Perspective*
Daniel A. Wagner (*PB93-01, 10 pages)*

Jun 1993 *Literacy and Development: Rationales, Assessment, and Innovation*
Daniel A. Wagner (*IP93-01, 50 pages)*

Jun 1993 *Early Childhood, Family, and Health Issues in Literacy: International Perspectives*
Laurel D. Puchner (*IP93-02, 45 pages)*

Sep 1993 *What Makes Worker Learn? The Role of Incentives in Workplace Education and Training*
Donald Hirsch & Daniel A. Wagner (Eds.) *(IP93-03, 243 pages)*

Sep 1993 *Prison Literacy: Implications for Program and Assessment Policy*
Anabel Newman, Warren Lewis, & Carolyn Beverstock (*TR93-01, 219 pages)*

Sep 1993 *Management Information Systems in Adult Education: Perspectives from the States and from Local Programs*
Mark A. Kutner, Lenore Webb, Rebecca Herman, & Pelavin Associates, Inc. (*TR93-04, 150 pages)*

Sep 1993 *What Can Employers Assume about the Literacy Skills of GED Graduates?*
David Kaplan & Richard L. Venezky (*TR93-05, 45 pages)*

Sep 1993 *Should Reading-Disabled Adults Be Distinguished From Other Adults Seeking Literacy Instruction? A Review of Theory and Research*
Anne E. Fowler & Hollis S. Scarborough *(TR93-07, 101 pages)*

Sep 1993 *When Less Is More: A Comparative Analysis for Placing Students in Adult Literacy Classes*
Richard L. Venezky, Page S. Bristow, & John P. Sabatini *(TR93-08, 46 pages)*

Sep 1993 *Metacognitive Aspects of Adult Literacy*
Scott G. Paris & Andrea Parecki *(TR93-09, 44 pages)*

Nov 1993 *Teamwork and Literacy: Learning from a Skills-Poor Position*
Sylvia Hart-Landsberg & Steve Reder *(TR93-06, 63 pages)*

NCAL publications to date (continued)

Nov 1993 *Motivations for Learning: Voices of Women Welfare Reform Participant*
Karen Wikelund *(TR93-10, 54 pages)*

Nov 1993 *Initiating Practitioner Inquiry: Adult Literacy Teachers, Tutors, and Administrators Research Their Practice*
Susan L. Lytle, Alisa Belzer, & Rebecca Reumann *(TR93-11, 69 pages)*

Nov 1993 *Coalition Building for Adult Literacy: Historical and Organizational Perspectives*
Anabel P. Newman & Bernadette Lehman *(TR93-13, 68 pages)*

Nov 1993 *Effective Service Delivery in Adult Literacy Programs: A Policy Review and Recommendations*
Judith Ann Koloski *(TR93-14, 46 pages)*

Dec 1993 *Issues and Challenges in Adult Numeracy*
Iddo Gal *(TR93-15, 62 pages)*

Dec 1993 *Adult Literacy Training and the Integration of Human Services*
Elizabeth R. Reisner *(TR93-16, 30 pages)*

Apr 1994 *Measuring Gain in Adult Literacy Programs*
Richard L. Venezky, Page S. Bristow, & John P. Sabatini *(TR93-12, 24 pages)*

Apr 1994 *Understanding Family Literacy: Conceptual Issues Facing the Field*
Vivian L. Gadsden *(TR94-02, 32 pages)*

Apr 1994 *Children, Parents, and Families: An Annotated Bibliography on Literacy Development In and Out of Program Settings*
Vivian L. Gadsden, Ludo C. P. Scheffer, & Joel Hardman *(TR94-04, 84 pages)*

Jun 1994 *Literacy Transfer: A Review of the Literature*
Larry Mikulecky, Peggy Albers, & Michele Peers *(TR94-05, 21 pages)*

Jun 1994 *Instruction and Assessment for Limited-English-Proficient Adult Learners*
Ronald W. Solórzano *(TR94-06, 33 pages)*

Jun 1994 *Early Warning Signs of Functional Illiteracy: Predictors in Childhood and Adolescence*
Nazli Baydar, Jeanne Brooks-Gunn, & Frank F. Furstenberg *(OP94-01, 13 pages)*

Jul 1994 *Use It or Lose It? The Problem of Adult Literacy Skill Retention*
Daniel A. Wagner *(TR94-07, 27 pages)*

Jul 1994 *Technology: New Tools for Adult Literacy, Videoconference Participant Materials*
Joyce Harvey-Morgan, Chris Hopey, & Karl Rethemeyer (Eds.) *(PR94-01, 58 pages)*

Sep 1994 *Supply and Demand for Literacy Instruction in the United States*
Richard L. Venezky & Daniel A. Wagner *(TR94-10, 13 pages)*

Sep 1994 *The Professionalization of the Teacher in Adult Literacy Education*
Timothy Shanahan, Maureen Meehan, & Stephen Mogge *(TR94-11, 20 pages)*

Sep 1994 *The Role of Literacy in the Wealth of Individuals and Nations*
Sue E. Berryman *(TR94-13, 15 pages)*

Oct 1994 *Abilities and Competencies in Adulthood: Life-Span Perspectives on Workplace Skills*
Jacqui Smith & Michael Marsiske (*TR94-12, 36 pages)*

Nov 1994 *Literacy and Adults With Developmental Disabilities*
Karen A. Erickson, David A. Koppenhaver, & David E. Yoder *(TR94-15, 31 pages)*

Nov 1994 *Adult Basic Skills in OECD Countries: Policy Issues and a Research Agenda*
David Stern & Albert Tuijnman *(IP94-01, 12 pages)*

Dec 1994 *Who Counts in Adult Literacy Programs? A National Survey of Numeracy Education*
Iddo Gal & Alex Schuh *(TR94-09, 20 pages)*

Dec 1994 *Literacy and Welfare Reform: Are We Making the Connection?*
Elena Cohen, Susan Golonka, Rebecca Maynard, Theodora Ooms, & Todd Owen *(TR94-16, 47 pages)*

Jan 1995 *Literacy and Older Adults in the United States*
Gail Weinstein-Shr *(TR94-17, 25 pages)*

Information on ordering of NCAL publications may be addressed to Dissemination at NCAL.
Revised January 11, 1995

NCAL MANAGEMENT

Daniel A. Wagner, *Director*
Richard L. Venezky, *Co-Director for Research and Development*
Joyce Harvey-Morgan, *Associate Director*
Vivian L. Gadsden, *Associate Director*
Sandra K. Stewart, *Manager of Dissemination*
Mary O. Russell, *Administrative Coordinator*
Janet C. Smith, *Editor*
R. Karl Rethemeyer, *Manager, Literacy Technology Laboratory*

NCAL SENIOR PROJECT DIRECTORS

María Carlo, *University of Pennsylvania*
Vivian L. Gadsden, *University of Pennsylvania*
Iddo Gal, *University of Pennsylvania*
Joyce Harvey-Morgan, *University of Pennsylvania*
Susan L. Lytle, *University of Pennsylvania*
Larry Mikulecky, *Indiana University*
Scott G. Paris, *University of Michigan*
Laurel D. Puchner, *University of Pennsylvania*
Stephen Reder, *Northwest Regional Educational Laboratory*
R. Karl Rethemeyer, *University of Pennsylvania*
Regie Stites, *University of Pennsylvania*
Richard L. Venezky, *University of Delaware*
Daniel A. Wagner, *University of Pennsylvania*

NCAL NATIONAL ADVISORY PANEL

Chair: Gloria Twine Chisum, *Vice-Chair, University of Pennsylvania Board of Trustees*

Richard C. Anderson, *Director, Center for the Study of Reading, University of Illinois*
Joan D. Baraloto, *Director, Education and Family Initiatives, USA Today*
Jack Bowsher, *Director of Education (ret.), IBM, Inc.*
Jeanne Chall, *Professor, Graduate School of Education, Harvard University*
Lillian Escobar-Haskins, *Executive Director, Governor's Advisory Commission on Latino Affairs, Pennsylvania*
The Honorable William F. Goodling, *U.S. Representative, Pennsylvania*
Carl Kaysen, *David W. Skinner Chair of Political Economy, Massachusetts Institute of Technology*
Gerald Kilbert, *Director of Adult Education, California*
Luis Laosa, *Principal Research Scientist, Research Department, Educational Testing Service*
Noreen Lopez, *Manager, Adult Education Product Development, Contemporary Books, Inc.*
Geraldine Novelo, *Deputy Director (ret.), Instituto Nacional para la Educación de los Adultos, Mexico*
Van D. Ooms, *Senior Vice President and Director of Research, Committee for Economic Development*
Bernard P. Reca, *Vice President, Bell Atlantic*
Anthony Sarmiento, *Assistant Director, Human Resources Development Institute, AFL-CIO*
Robert Schwartz, *Program Director, Education, Pew Charitable Trusts*
Ramsay Selden, *Director, State Education Assessment Center, Council of Chief State School Officers*
Senator Paul Simon, *U.S. Senator, Illinois*
Dorothy Strickland, *Professor, Graduate School of Education, Rutgers University*
Francis X. Sutton, *Vice President (ret.), Ford Foundation*
Calvin Tyler, *Senior Vice President for Human Resources, UPS, Inc.*
Peter Waite, *Executive Director, Laubach Literacy Action*

NCAL EDITORIAL REVIEW COMMITTEE

Hal Beder, *Rutgers University*
María Carlo, *University of Pennsylvania*
Suzanne Cockley, *Virginia Adult Education Research Network*
Aydin Durgunoglu, *University of Illinois, Urbana*
Marcia Farr, *University of Illinois at Chicago*
Beth Foley, *Utah State University*
Maggie Gaines, *Baltimore City Literacy Corp.*
Sheryl Gowen, *Georgia State University*
Keiko Koda, *Ohio University*
Susan L. Lytle, *University of Pennsylvania*
Peter B. Mosenthal, *Syracuse University*
Thomas Reeves, *University of Georgia*
Timothy Shanahan, *University of Illinois at Chicago*
Keith Stanovich, *University of Toronto*
Sondra Stein, *National Institute for Literacy*
Terrence G. Wiley, *California State University Long Beach*

TABLE OF CONTENTS

Table of Contents *i*
Abstract *iii*

Older Adults in the United States: Who Are They? Who Will They Be? 1
Literacy in the United States: Who Are the Illiterate Elderly? 6
Issues in Acquisition of Literacy for Elders: Supports and Constraints 10
Policy, Research, and Practice: Agenda for the Decade 20
Summary and Conclusion. Literacy Education and Elders: Why Bother? 24

References *27*
Appendix *A-i*

LITERACY AND OLDER ADULTS IN THE UNITED STATES

Gail Weinstein-Shr
San Francisco State University

Abstract

This report explores the literacy needs and resources of older adults in the United States. In the first section, several individual profiles are provided to illustrate the range and diversity of elders' circumstances and needs. This is followed by information about broad demographic trends on aging, and the implications of these trends for literacy education. In the second section, literacy in the United States is examined, with a specific focus on the literacy resources of the elderly. The functions and uses of literacy for older adults are examined, including motivations for becoming literate in later life. In the third section, factors that affect the acquisition of literacy by older adults are considered. This includes the cognitive, physical, and sociocultural aspects of learning in general and literacy acquisition in particular. This section also examines the availability, access, and appropriateness of existing literacy instruction. Finally, general directions are suggested for policy, research, and literacy programming that take into account the special needs and resources of older adults.

Education is a basic right for all persons of all age groups. It is continuous and henceforth one of the ways of enabling older people to have a full and meaningful life, and a means of helping them develop their potential as a resource for the betterment of our society.

— 1971 White House Conference on Aging

OLDER ADULTS IN THE UNITED STATES: WHO ARE THEY? WHO WILL THEY BE?

INTRODUCTION

Hazel is a White woman who was 68 at the time of Kevin Freer's research (1990). Born in 1921 in southern Georgia, Hazel did not attend school until she was nine years old, at which time she found herself saddled with responsibilities caring for her blind father. Within three years, she quit school in frustration. Hazel was able to obtain her driver's license without difficulty, since written and oral exams were not yet given. She earned money doing laundry during the years that her children were small. While her job did not require literacy, she always regretted not being able to help her children with their schoolwork.

The death of Hazel's husband would change her circumstances enormously. Although her grown daughter helps when she can, Hazel has found it necessary to become literate in order to manage the tasks for which she used to depend on her late husband. At the age of 68, Hazel has begun working with a literacy tutor. In addition to managing daily life without her husband, a second motivation for learning to read and write, according to what Hazel told interviewer Freer, is for the company. Her biweekly literacy tutoring sessions at the senior center, like Bible lessons at church, give her "something to do, somewhere to go" (Freer, 1990, p. 84).

Pao Joua Lo, in his fifties at the time his story was written (Weinstein-Shr, 1993a), is a retired soldier and is considered a war hero in his community. Like 70,000 Hmong refugees who resettled in the United States, Pao Joua fled the hills of Laos, where his native language was not written until three decades ago. Pao Joua is a grandfather many times over, and is considered both an elder and a leader by many members of Philadelphia's Hmong community.

Pao Joua Lo attended classes at the community college, but dropped out after only one semester. His English literacy skills, while minimal, allow him to scan the newspapers for articles about Southeast Asia, which he then passes along to more literate men in the community. Besides keeping current on events in his homeland, Pao Joua is interested in developing his literacy, among other

things, to be able to record traditional Hmong courtship songs so that his sons can learn what they will need to know to be able to find desirable brides.

Both parents of Miz Lennie, an 81-year-old African-American woman from South Carolina, were born into slavery. According to Vivian Gadsden, despite few years of formal schooling, many of the elders in Miz Lennie's neighborhood see literacy as a communal commodity, which is valued and valuable (Gadsden, 1992, p. 4). Miz Lennie, in an interview with Gadsden, discussed her views on literacy:

> What was always important was that the person had enough sense to treat people—elders and other folks in the community—with respect. That was the real sign of an educated person—to understand his community, his people, and then still be able to go right on and move ahead in life. . . most of all it was [appreciating] who you are as a black person and so you never forget your history. You understand? (Gadsden, 1992, p. 1)

Through eloquent voices like these, Gadsden argues that Miz Lennie and other elders she knows have constructed "meanings of literacy as a way to achieve and rise above the perceived or real inequities of educational and social access" (p. 4).

These elders, their histories, their circumstances, and their purposes for becoming literate as older adults illustrate a small sampling of the diversity of elders. The purpose of this report is to explore the literacy needs and resources of older adults in the United States. In this section, definitions of old age are explored, and selected general information about trends on aging in the United States is presented.

DEFINITIONS OF AGING

It is clear that elders are beginning to constitute both a larger number and a larger proportion of the total population as people live longer healthier lives, and as immigrants to the United States continue to grow old in America. However, there is widespread variation on how the notion of older is defined in the literature, in laws that affect older adults in America, and in communities in which elders are members.

The most common definitions are based on chronological age, although these definitions may vary widely. For example, under the provisions of the Age Discrimination in Employment Act, old age technically begins at 40, whereas anyone 60 and above qualifies as old under the Older Americans Act (Imel, 1991). Studies of literacy and literacy programming may make generalizations about those 50 and older (e.g., Harris, 1970), 55 and older (e.g., Moore, 1988), 60 and older (e.g., Kasworm, 1981; Lumsden, 1979), or over age 65 (Hunter & Harman, 1979; Kirsch, Jungeblut, Jenkins, & Kolstad, 1993).

A second way to define aging is by status. Individuals may be categorized as older workers on the basis of their status as midlife career changers, retirees returning to the labor force, displaced workers or homemakers (Imel, 1991). In many communities, particularly among

immigrants from less industrialized societies where chronological age may or may not be reckoned, the status of elder is acquired through achievements and life roles, such as becoming a grandparent (Weinstein-Shr, 1988). This report synthesizes the literature on elders or older adults, recognizing that there is no general agreement on how this group is defined.

NATIONAL PROFILE OF OLDER ADULTS IN THE UNITED STATES: WHO ARE THEY?

The United States has undergone a number of major demographic changes since the earlier decades of the twentieth century. Discussions of population change tend to focus largely on ethnic and racial shifts. It is often overlooked that the most significant change is related to the age structure of the population. This demographic change affects all racial and ethnic groups. The so-called aging or graying of America is a trend that will continue well into the next century (SSCA et al., 1991).

Some facts illustrate the striking trends that will affect all aspects of life in the United States:

- The number of people age 65+ is growing more rapidly than any other age group in the population.
- At the beginning of the twentieth century, fewer than 1 in 10 Americans was age 55+, and only 1 in 25 was 65+. By 1989, 1 in 5 Americans was at least 55 years old, and 1 in 8 was at least 65.
- Between 1989 and 2030, the 65+ population is expected to more than double.
- The population age 85+ is expected to more than triple in size between 1980 and 2030, and to be nearly seven times larger in 2050 than in 1980.
- Between 1989 and 2050, the population age 85+ is expected to jump from about 1 to 5% of the total population. The 65+ population will increase from 10 to 22% in that same period.
- In 1900, there were about 7 elderly people for every 100 people of working age. As of 1990, the ratio was about 20 for every 100. By 2020, the ratio will have risen to about 29 per 100, after which it will rise rapidly to 38 per 100 by 2030. (SSCA et al., 1991, p. xix)

Older Americans have the lowest economic status of all age groups in the United States. According to SSCA et al. (1991), this is the result of changes in status associated with aging:

> In retirement, elderly people lose earnings and become reliant instead upon Social Security benefits supplemented with pensions and the assets they have accumulated over their lifetimes. With limited potential to improve their income through work, older people become economically vulnerable to circumstances over which they have no control: the loss of

a spouse, deterioration of their health and self-sufficiency, Social Security and Medicare legislation, and inflation. (p. 38)

Although legislation in the 1960s reduced the general poverty level of elders, the average statistics mask large inequities between races and between the sexes. For example, in 1989, the median income of elderly women was 58% that of elderly men. Older women in every age group were substantially more likely to be poor than men of the same age, with the oldest women suffering the greatest poverty.

Those living alone (about 1/3 of all elderly) are at greatest risk: They “constitute one of the most vulnerable and impoverished segments of American society” (SSCA et al., 1991, p. 208). Those who live alone are predominantly women, and being more advanced in age, they have more chronic health problems and need assistance with daily activities. Race is a critical factor, as approximately 60% of all Black women and 72% of Latinos living alone were below the poverty level (SSCA et al., 1991, p. xxi) (see Table 1 in the Appendix).

There is a slightly higher proportion of men to women among the young. However, by the time men and women reach the age of 65, women outnumber men three to two (SSCA et al., 1991, p. xix). Senior women are almost twice as likely to be poor (14% to 7.8%) (SSCA et al., 1991, p. xx). While poverty rates are expected to decline, this inequity is expected to persist well into the next century (SSCA et al., 1991, pp. xix- xxv).

Economic inequity is even more apparent for African-American and Latino women whose median incomes are not even 2/3 of their White counterparts (65% and 64% respectively). Senior women who are heads of household had only 38% of the median net worth of married couples ($47,000 to $124,000) in 1988. Perhaps the greatest discrepancy between men and women 65 or older is in marital status and living arrangements. Men are much more likely to be married and live in family settings than women, who are more likely to be widowed and live alone (SSCA et al., 1991, pp. xx-xxv).

For those 65 and older, several trends have been apparent. Both men and women are retiring earlier than they did forty years ago. In 1950, 46% of all men 65 years of age and older were working compared to only 17% in 1989. For women, this trend was less dramatic (9.7% in 1950 compared to 8.4% in 1989). However, in the 55 to 64 age group, the portion of working women has been increasing, while the percentage of men working has been declining. There are significant differences between ethnic and racial groups. African-American women age 65 and over, for example, have historically been much more likely to work. Recently, their employment rates have nearly converged (SSCA et al., 1991, p. xxii). Other differences along ethnic and racial lines are explored further in the next section.

In its July publication, *A Profile of Elderly Black Americans*, the National Caucus and Center on Black Aged, Inc. (NCCBA, 1988) reported that older Blacks are four to five times more likely to be functionally illiterate than older Whites. Elderly Hispanics have been documented as the most educationally disadvantaged group in our society (Brown, 1989, p. 5), with the Bureau of Census showing 30.9% of all Hispanic men over 65 and

31.5% of elderly Hispanic women to be illiterate. Although the National Adult Literacy Survey (NALS) confirms that Hispanic adults report the fewest years of schooling in this country (just over ten years on average), the survey does not give specific statistics on literacy among various older ethnic populations (Kirsch et al., 1993, p. xvi).

As of 1989, non-White and Hispanic populations had a smaller proportion of elderly people than the White population. Specifically, 13% of Whites were over age 65, compared with 8% of African Americans, 7% of other races, and 5% of Hispanics (of many races). However, beginning in the early part of the next century, the older minority population is expected to increase more rapidly than the older White population because of higher fertility rates. The U. S. Senate Special Committee on Aging reports that between 1990 and 2030, the elder White population will grow by 92%, compared with 247% for African Americans and other races and 395% for older Hispanics (SSCA, 1991). In addition, since the end of World War II, nearly two million refugees have sought haven in the United States, and more than one million legal immigrants have resettled in this country. While the rigors of both voluntary and involuntary displacement initially select against elders, the proportion of elders for whom English is not a native language is shifting as uprooted adults are growing old in America (Weinstein-Shr, 1993c).

At the 1989 hearing, The Challenge of Eliminating Illiteracy, Part II, Senator Paul Simon (D-IL) made the following comments on minorities of all ages and employment:

> Blacks, Hispanics, Asians and other races will account for roughly 57 percent of the labor force growth from 1986 to the year 2000. When women are added, females and minorities will exceed over 80 percent of the work force growth and these are the same groups that have historically been disadvantaged. Minorities dominate the pool of unwanted and increasingly unused labor, with an estimated 44 percent of Blacks and 65 percent of Hispanics that are functionally illiterate. (Simon, 1989, as cited in Brown, 1989, p. 8)

As Brown (1989) points out, within the older population, members of minority groups have experienced lifetime problems in the job market. The National Commission for Employment Policy stated in its ninth annual report that older Blacks are four times as likely and Hispanics more than three times as likely as Whites to have labor market problems (National Commission for Employment Policy, 1985). One result is lifelong poverty, including the life stage of old age.

In sum, the older population is growing exponentially and is living longer than previous generations. The majority of the elderly are women, many of whom are widowed and living alone. The income of older people in America is substantially lower than other age groups, with poverty conditions worse yet for African Americans and other minorities. The educational achievement of elders is below that of other age groups, partly as a result of the opportunities (not) available during their youth. An increasing number of elders are native speakers of a language other than English. Health becomes an increasing problem with age, and lack of information and knowledge about health care and

inadequacy of services aggravate the condition of many. Urban elderly who are poor must grapple with higher crime rates, bad neighborhoods, poor and congested housing, and isolation from wealthier kin who move out to the suburbs. On the other hand, the rural aged suffer from isolation in communities that do not have organizations or infrastructures to serve them (Heisel, 1980).

The notion of *double jeopardy* was first used by the National Urban League (1964) to describe the situation of elderly African Americans. As Heisel (1980) points out, the term *jeopardy* has since been appropriated (and multiplied) in other literature on aging. Double, triple, and quadruple jeopardy are images often used to describe those in high risk groups that overlap: elders who are poor, female, urban or rural, minority, and/or not formally educated (e.g., Kim & Wellons, 1977).

If universal adult literacy is indeed a national goal for education (U. S. Department of Education, 1992; Wikelund, Reder, & Hart-Landsberg, 1992), and if education is a right for all age groups (White House Conference on Aging, 1971, cited in Moore, 1988), then it is critical to examine the needs and resources of this rapidly growing group.

LITERACY IN THE UNITED STATES: WHO ARE THE ILLITERATE ELDERLY?

DEFINITIONS AND MEASUREMENT OF LITERACY

Ways of defining and measuring literacy have changed considerably as literacy demands on individuals in society have changed, and as more appropriate measures have been sought to provide useful information in planning adult educational services. Traditional approaches to assessing literacy, according to Campbell, Kirsch, and Kolstad (1992) use either the number of years of schooling completed or standardized tests to predict grade-level equivalents to determine literacy level. With this approach, a specified level is selected as a cutoff point to distinguish literates from illiterates (which may be different from study to study). The census figures reported by the National Center for Educational Statistics (NCES) revealed that 39.4% of the 65+ age group had completed less than 9 years of school, compared to 13.5% of the 35-64 year-old group and 4.4% of the 25-34 group (Kirsch et al., 1993).

However, some argue that there is little evidence that a person who has completed six years of school is literate (Bormuth, 1973, p. 11). From a historical perspective, it is clear that completion of grades in the early part of the century is a different matter than completing the same number of grades as our society has shifted from an industrial to an information age (Brown, 1989). The use of assessment tools to provide grade-equivalency scores is also problematic, in the degree to which they are "sufficient for adequate

performance with real life reading tasks" (Kirsch & Guthrie, 1977, p. 495). While the traditional approach to assessment may be useful for ranking and selection of adult program participants, the focus on school-based tasks makes the results of little use for placing, diagnosing, or planning programs for adults (Campbell et al., 1992). Specifically, labeling adults as reading at a fourth-grade level does not provide any information about what they can or cannot do, or about their goals in increasing their literacy skills. In addition, the designation of grade levels is not only limited in utility, but may be quite demeaning to adults who are being compared to small children (and not always favorably!). For this reason, during the 1970s, assessment in literacy began to reflect new emphases on the competencies needed by adults for managing in adult contexts, such as family and community.

A competency-based approach, illustrated by the surveys by Harris and Associates (1975) as well as the Adult Performance Level (APL) survey (Northcutt, 1977), is one in which adults are tested for performance measures on tasks that are typical in the lives of adults. Specifically, APL functional competencies included a set of skills—reading, writing, speaking, listening, viewing, computation, problem solving, and interpersonal relations—that are applied to five knowledge areas: consumer economics, occupation knowledge, health, community resources, and government and law (Northcutt, 1977). According to the 1975 Harris study, the oldest group (those over 50 years old) were the most deficient in reading ability, with an illiteracy range by their criteria of 5-17%. The 16-24 age group was the most literate with a range of 1-9%, and the 25-29 and 30-49 year groups had identical illiteracy ranges of 2-11% (McGrail, 1984). In the APL study, 35% of adults age 60-65 were estimated to be functionally incompetent, the highest of all five age groups studied.

While competency-based approaches to assessment are more appropriate than traditional approaches for learning about the literacy resources of adults, several problems still remain. Campbell et al. (1992) point out that within competency-based approaches to assessment, no attempt is made to analyze tasks with respect to the cognitive processes that are required for solving problems, or the factors that contribute to the difficulty of tasks on the assessment instrument. They also point out that the additive scoring model, leading to one single score, rests on the assumption that literacy is a unilateral skill that can be measured along a single continuum. The fallacy of this assumption becomes evident when the same individuals receive very different scores on different competency-based assessment tools, depending on the tasks included.

To address these concerns, the developers of the National Assessment of Educational Progress (NAEP), under a grant to the Educational Testing Service, created a household survey of literacy skills of young adults in which scales were used along three dimensions: prose literacy, document literacy, and quantitative literacy. The concept of using these three continua has been used by the Department of Labor as well as in Mississippi and Oregon state assessments. NAEP has called this the Profile Approach to Assessing Literacy. It is this approach to assessment that was used in the National Adult Literacy Survey (NALS) (Campbell et al., 1992), which was conducted at the time this report was begun.

The NALS panel constructed a framework for its parameters of literacy based on the definition, "using printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential" (Kirsch et al., 1993, p. 2). Agreeing that literacy is not a single skill, the panelists designed a survey that would measure *prose literacy* (understanding texts such as news stories, poems, etc.), *document literacy* (locating and using information found in documents like job applications, transportation schedules, etc.), and *quantitative literacy* (applying arithmetic operations using numbers found in printed materials like order forms, etc.) (Kirsch et al., 1993, p. 3). These scales measure competency in a wider range of tasks associated with literacy and information processing skills than traditional literacy assessments, which are often reported on a single scale (Kirsch et al., 1993, p. 4).

Using the parameters of NALS, average proficiency for the prose and quantitative scales declined sharply for the oldest adults—30 points or so from the 55 to 64 age group. On the document scale, the performance of the first four age groups is more similar, then declines sharply for the 40 to 54, the 55 to 64, and the 65 and over groups (Kirsch et al., 1993, p. 30). The authors attribute this decline to fewer years of schooling completed for the eldest group.

LITERACY RESOURCES OF OLDER ADULTS

In their report on illiteracy in the United States, Hunter and Harman (1979) claim that there are 18-22 million adult functional illiterates, with a high but unknown number of elders represented in that number. One author estimates that between 10-50% of all adults over 60 are functionally illiterate (Lumsden, 1979). Studies based on grade-level attainment or their equivalents, the Harris Survey and APL studies, range in their claims from 5-35%. It remains to be seen what the NALS survey will suggest about the degree of literacy or illiteracy among elders in the United States. What is clear is that by any measure used, older adults in the United States are reported to have fewer personal literacy resources than any other age group (McGrail, 1984). The usefulness of these findings and the degree to which they accurately represent useful information about the resources of older adults are points of controversy among scholars of the elderly.

First, the use of grade level or grade-level equivalency, already under criticism for adults in general, is particularly problematic when applied to a person who was educated nearly a half century earlier (Fisher, 1987; Gonda, 1980). Fisher points out that educational attainment during the first quarter of this century was determined as much by family situation and location as by learner competence. In addition, the literacy demands of that period may have little resemblance to the kinds of literacy tasks required to manage life in the 1990s. Thus, statistics about grade level completed, while easiest to obtain, provide little useful information about adults' competencies, particularly those of older adults.

Performance-based instruments, according to Fisher (1987) are problematic for two reasons. None of the instruments, such as the Louis Harris survey or the APL study, has been specifically developed or adapted for older adults, and therefore none takes into account the specific literacies that elders need for survival. Information about literacy among the elderly is

usually gleaned from studies that are really not designed for them in particular. This is also the case in NALS. Fisher (1987) points out that the notion of survival, in relation to particular forms, does not provide for distinguishing between tasks that may be required once a year (e.g., filling out some government form) and those that are desired for everyday life (e.g., reading a newspaper).

Yet another problem with measures of literacy among the elderly is that current national measures in no way take into account the degree of native language literacy of those surveyed (Wiley, 1991, in press). NALS, for example, has no way to distinguish between a Cambodian peasant who has never held a pencil in his life and a Russian engineer with a doctorate who has not yet learned the Roman alphabet (Weinstein-Shr, 1994). This leaves us with huge gaps in information about both the needs and resources of elders for whom English is not a native language. Without this information, the planning of appropriate programs is nearly impossible.

NEEDS AND RESOURCES: WHAT WE KNOW, WHAT WE NEED TO KNOW

As this report already indicates, criteria for measuring literacy throughout the research literature (which, in the case of elders, is not vast) are not consistent. Discussions of reading and writing skills are based on criteria as varied as grade level, grade-level equivalents, cognitive skills, communication skills, and functional competencies within specific domains. According to the NAEP panel on defining literacy, a person who is literate is one who can “use printed and written information to function in society, to achieve one’s goals, and to develop one’s knowledge and potential” (Campbell et al., 1992, p. 9). Perhaps this definition is one that will shape the work to come in this decade. To measure the degree to which persons can use printed and written information to function in society, can achieve their goals, and can develop their knowledge and potential, it is necessary to know what the functions of literacy are for individuals, the circumstances in which they must manage, and their resources and aspirations in the context of the possibilities. Information of this type with specific reference to older adults is virtually nonexistent (Courtenay, Stevenson, & Suhart, 1982; Fisher, 1987; Rigg & Kazemek, 1983; Taub, 1980). The lack of information about elders is compounded by the paucity of information available on a national level about the native language and literacy resources of immigrant adults in general (Klassen & Burnaby, 1993; McKay & Weinstein-Shr, 1993). The NAEP definition is a useful one, which suggests important directions for inquiry. It is only by having information about the language and literacy resources of elders, however, as well as a detailed picture of both the current and potential uses of literacy for this group, that appropriate measures can be planned to meet their needs.

ISSUES IN ACQUISITION OF LITERACY FOR ELDERS: SUPPORTS AND CONSTRAINTS

In the first section of this paper, three older individuals and their motivations for either attending literacy classes or becoming literatewere described. One widow was motivated both by the loss of her literacy support system and by her increasing social isolation; a second refugee elder wished to use literacy for transmission of Hmong cultural knowledge to his sons and grandsons; yet a third, as the daughter of slaves, associated literacy in and of itself with freedom from bondage. Research on the purposes of elders, their motivations, and the factors that influence their prospects for becoming literate are the subject of this section.

READING AND ELDERS

The discussion below reports on literature that examines the reading habits and interests of the elderly, the functions of reading for older adults, and motivations for elder nonreaders to seek literacy instruction in later years.

The earliest body of literature that addresses literacy issues among the elderly focuses on the reading habits and interests of older adults. Part of the impetus for these studies was to assist library programs, community services, and nursing home programs in meeting the needs of elders through provision of appropriate materials. A number of studies and reviews were produced in the seventies (De Santi, 1979; Harvey & Dutton, 1979; Kingston, 1981; Robinson & Haase, 1979; Robinson & Maring, 1976; Romani, 1973; Sharon, 1973), with results that were sometimes contradictory. Romani (1973), for example, found that a retired person reads more after than before retirement (p. 391), while Sharon (1973) found that "young adults tend to read more than older persons, while the very old spend the least amount of time on reading" (pp. 157-8). According to Kingston (1981), "the reading behavior of the elderly is closely related to previous reading habits, education and socioeconomic status" (p. 206). Wolf (1980) and Courtenay et al. (1982) concur that the reading interests of the elderly are as diverse as the population itself, making generalizations about elders as a group problematic at best, and misleading at worst.

The functions of reading for elders that have been identified in the literature are quite broad. Among those functions identified are the following:

- gaining information and knowledge (Kingston, 1981; Moore, 1988),
- enjoying leisure time and entertainment (Harvey & Dutton, 1979; Moore, 1988),

- personal renewal (Gentile & McMillan, 1979; Kingston, 1981),
- improving consumer wisdom (Kasworm, 1981),
- development of skills for living or coping with life as an older adult (Kasworm, 1982; Wolf, 1980),
- addressing intergenerational conflict and communication (Heisel, 1980; Weinstein-Shr & Lewis, 1990),
- attending growing concerns with health and nutrition (Heisel, 1980; Kasworm, 1982),
- awakening memories and reminiscences (Wilson, 1979),
- enhancing life in a nursing home (Lovelace, 1979),
- seeking companionship and enlightenment (Bramwell, 1992), and
- cultural transmission (Weinstein-Shr, 1993).

Among the attempts to synthesize and categorize these functions are proposed polarities such as instrumental versus expressive (Hiemstra, 1976) and information versus entertainment (Moore, 1988).

There is little disagreement in the existing literature regarding the positive consequences of reading for enhancing lives (Kingston, 1981). Wilson's (1979) description of the *Readerama*, for example, and the reading discussion groups described by Lovelace (1979) exemplify ways in which reading activities positively impact potentially bleak nursing-home life. Among the claims about literacy for elders in general are that literacy experiences have the potential to elevate older people's values and attitudes, feelings of self-worth, sense of humor, and mental and physical development (Gentile & McMillan, 1979), and that ". . . there is strong evidence of the importance of reading in fulfilling the needs of the older person for entertainment, knowledge, the satisfaction of intellectual curiosity, cultural development and companionship..." (Harvey & Dutton, 1979, p. 213).

While existing research findings identify many positive influences on the lives of older adults that result from reading, as Fisher (1987) points out, the majority of research focuses on lifelong readers rather than nonreaders or new literates. In addition, the emphasis in these early surveys is largely on those of high socioeconomic status. While there is general agreement on the positive effect of reading, the empirical evidence is scant. In addition, there is little or no research to examine the negative impact of the absence of literacy in the lives of nonreaders (Fisher, 1987, 1988; Freer, 1990). It is this kind of information that is critical in understanding why an older adult would choose to become literate in later life, and in providing support that takes those motivations into account.

Why would an adult choose to become literate in later years? The motivations for becoming literate or receiving literacy instruction are only recently coming into focus. By contrast, the resources of nonliterate adults for coping with daily life are well documented. Nonreaders often develop very efficient coping skills to manage tasks that require literacy skills. These strategies include relying on others within one's social network who possess adequate language and literacy resources (Fingeret, 1983; Weinstein-Shr,

1993a), and developing routines in employment and daily activities that minimize or circumvent the need for literacy (Fisher, 1987). For older adults in particular, the need for literacy at all has been called into question, especially as "the mere fact that an individual has survived for [60 or] 80 years implies at least some degree of past functional competence (Courtenay et al., 1992, p. 344). Furthermore, it has been pointed out that "lack of basic literacy skills has not deterred many older adults from living their lives as productive successful adults" (Kasworm, 1981, p. 10).

While adults may have managed without individual literacy resources for many years, older adulthood is often characterized by changes that can have a profound impact on existing coping mechanisms for daily living. Aging may be characterized by

> . . . the loss of employment through retirement, the loss of significant others through death and relocation, the gradual loss of mobility, and the loss of time-structuring and meaning-affirming mechanisms. These take away those persons and routines upon which effective coping is most often based. . . . In this transitional context, how does the older adult nonreader receive and transmit information? What impact has literacy on successful aging? (Fisher, 1987, p. 47)

For immigrants and refugees, lack of English literacy in the later years may create especially poignant dilemmas, as native language loss is accelerated among children (Wong-Fillmore, 1991), a shared language of communication between the generations is slowly lost, and older adults find fewer resources for telling their children and grandchildren about their past. While uprooted adults may not be concerned with survival in the physical sense, mortality creates a different threat when adults do not have the resources that they need to pass on the values, knowledge, traditions, and stories of their beginnings (Weinstein-Shr, 1994).

These motivations for becoming literate may not be synonymous with motivations for attending literacy instruction. Hazel, described in the introduction, attends classes at church for "something to do, somewhere to go" (Freer, 1990, p. 84). The majority of older adults are women who have been widowed, and attendance at literacy classes or reading groups may provide companionship in the face of solitude (Bramwell, 1992). One group of Navajo elders has reportedly attended English literacy class for nearly 15 years despite little tangible evidence of progress! (H. Stern-Sanchez, personal communication, 1992). Some other need is obviously being met as elders gather with persistence to pursue English language and literacy instruction.

Cognitive, Physical, and Sociocultural Factors Affecting the Acquisition of Literacy

When older adults choose to develop their literacy skills, what are the factors that affect their success? This section examines cognitive, physical, and sociocultural aspects of aging that may affect older adults' endeavors to become literate.

Folk theories about the generations tend to center on the stereotype that elders cannot learn a language or acquire literacy, and there is some research that suggests that cognitive functioning declines with age (Garrett, 1992). One frequently cited change is a decrease in the weight of the brain. Dekeban and Sadowsky (1978) reported a 7% decrease in brain weight of elderly males studied, with neuronal death suggested as a major contributing factor to this brain weight loss (Wisniewsky & Terry, 1973). The consequence of this decline is hypothesized to be reduced efficiency of the brain's functioning (Schoie, 1982; Schow, Christenson, Hutchinson, & Nerbonne, 1978; Wantz & Gay, 1981).

Some specific studies on reading and elders support these hypotheses and include research that suggests that

- older adults are unable to recall meaningful verbal information such as words, sentences, and instructional text as well as young adults (Glynn & McMillan, 1979);
- elders struggle with limited recall, as well as "inefficient implementation of attentional and organizational processes" (Glynn & McMillan, 1979, p. 253);
- the nervous system's ability to channel perceptual information into and out of sensory registers declines with age (Kline & Szafran, 1975);
- older people have perceptual deficits that are manifested in complex learning situations (Rabbit, 1968); and
- elders have special difficulty discriminating important information from "perceptual noise" (Kausler & Kleim, 1978; Schonfield, Trueman, & Kline, 1972).

Glynn and McMillan (1979), conclude further that

> . . . older adults appear to have particular difficulty when confronted with complex verbal-learning tasks that require them to discriminate between relevant and irrelevant items of information. Under some circumstances, they may be unable to extract as much relevant information from verbal materials as young adults. Since recall performance is necessarily limited by the amount of relevant information perceptually registered, older adults may exhibit lower levels of recall. (p. 254)

While studies such as those cited above support the common belief of elders as being less equipped to learn, there is a growing body of literature challenging the notion that age is inevitably linked with intellectual decline. Some argue that test scores may actually be a function of level of education (Glynn & McMillan, 1979; Gonda, 1980; Schaie & Strother, 1968), or of physical decline that disadvantages the older adult in the testing environment (Domey, McFarland, & Chadwick, 1960).

In fact, the only area in which there is substantial agreement among researchers is in the conclusion that older learners seem to need more time than younger people to react (Birren, 1965) because of longer time periods needed

for “interpretation, decision-making and association” (Schoie, 1982, p. 83). With additional time, older learners perform similarly to young learners (Fozard & Popkin, 1978). Furthermore, cognitive performance can increase when participants are permitted to use their own learning strategies (Gonda, 1980). Among the ways that literacy providers for older adults can take cognitive factors into account are to allow learners to set the pace (Jacobs, 1985; Moore, 1988), and to be flexible in approach so that older adults can use the strategies for learning that they have been using for more than half a century (Weinstein-Shr, 1993c).

In the literature on language learning, a review of research indicates that adults may, in fact, learn languages more quickly than children in the early stages because they have more highly developed cognitive strategies (Krashen, Long, & Scarcella, 1979), and that if older people remain healthy, their intellectual abilities and skills related to language learning do not decline (Ostwald & Williams, 1985). A growing body of literature supports the assertion that cognitive functioning of the aged is similar to cognitive functioning of the same individuals in their own youth (Haase, Robinson, & Beach, 1979), and that cognitive abilities in general simply do not decrease with age (Imel, 1991; Moore, 1988; Palmore, 1974; Riegel & Riegel, 1972; Walsh & Baldwin, 1977). In sum, there is increasing evidence that “age, by itself, is often the least important factor in cognitive functioning in later life, relative to sociocultural, historical, and health related factors” (Gonda, 1980, p. 288). The historical factors have been discussed above. It is to the physical and sociocultural factors that the discussion now turns.

Physical factors associated with aging may play a more critical role than cognitive factors in the ability of elders to benefit from literacy instruction. Medications for health problems associated with elders may interfere with concentration (Grognet, 1989). Visual acuity and the extent of the visual field often both decline with aging (Garrett, 1992, p. 235). Some learners may experience hearing loss from repeated exposure to noise, or a decrease in hearing acuity that interferes with ability to discriminate central sounds from background noise (Garrett, 1992, p. 233). In general, “. . . poor health conditions, sensory or perceptual deficits, fatigue in [literacy] class, wheelchairs and arthritis, problems with writing or sitting for long periods of time . . . can all impair learning capacity” (Moore, 1988, p. 16).

Because these obstacles are physical, they can be overcome with rather straightforward solutions. The ideal setting for learning among older adults with physical impairments is a comfortable learning environment that compensates for these impairments. This may involve using materials with large print and space that is well-lighted and wheelchair accessible, and eliminating background noise (Joiner, 1981). In addition, literacy acquisition is more likely for elders, just as it is for anyone else, when physical and mental health needs are well attended.

After careful examination of both cognitive and physical factors, there appears to be no reason to believe that elders are not able to learn a new language or become literate in later life. Those factors that may have the most impact on elders’ prospects for becoming literate are the sociocultural factors that influence attitudes and assumptions about elders and about literacy.

It has been argued that the greatest obstacle to acquisition of language or literacy for elders is the set of negative attitudes and assumptions about aging that interfere with taking positive action (Schlepegrell, 1987). These attitudes may be held by professionals or family and community members who help create the contexts in which elders lead their lives, as well as by elders themselves.

In one body of literature, aging is defined as

> . . . the deterioration of a mature organism, resulting from time dependent, essentially irreversible changes intrinsic in all members of a species such that, with the passage of time, they become increasingly unable to cope with the stresses of the environment thereby increasing the probability of death. (Handler, 1970, as cited in Garrett, 1992, p. 232)

With underlying assumptions about aging based on definitions like the one above, professionals would be most likely to see their own role as presiding over a slow demise, with an ultimate goal of making the deterioration as quiet and unproblematic as possible. If, on the other hand, elders are seen as resources with wisdom to tap and cultural knowledge to share, the approach to their care and instruction will be entirely different. It has been argued that, indeed, preconceptions and attitudes towards aging and the elderly have an enormous influence on the ways in which social service professionals (Garrett, 1992), employers (Imel, 1991), and literacy educators deal with members of the aging community, and the success they meet in facilitating learning and growth.

It is also important to note that the attitudes of professionals may be greatly influenced by the degree to which they share membership in older adults' linguistic communities. Monolingual English-speaking professionals may exhibit very negative language expectations towards nonnative speakers whose language and cultural background they do not understand (Wiley, 1986). With the increasing numbers of uprooted adults who are growing old in America, this is an issue that must be taken into account as strategies are devised for meeting the language and literacy needs of our nation's diverse family of elders.

Employers make critical decisions that affect the education of older adults who are in the workforce. The degree to which older workers are seen as a resource has an immediate impact on the investment that employers are willing to make in upgrading their skills and preparing them for changes in the workplace (Imel, 1991). The advancement or stagnation of older adults in their jobs has a direct consequence for adequacy of retirement income (Brown, 1989). Prospects for self-sufficiency in retirement have obvious consequences for the national economy, especially as the cadre of elders grows exponentially and the number of youths in the labor force shrinks proportionally.

The attitudes of family and community members also plays an important part in the degree to which elders see their own potential and find ways to continue learning. Garrett (1992) points out that as role loss in personal and social relationships depletes the social network of an elder, family and community members can play a crucial role in facilitating communication and breaking growing isolation. She points out that the need for human beings to interact and communicate is intimately connected with self-identity, socialization, and independence. As opportunities to communicate, either orally or in writing, are diminished, the quality of life is dramatically affected.

Families and communities can play a critical role in assuring that elders remain connected, and that interaction is maximized to provide a counterbalance to the growing isolation that accompanies physical and social changes intrinsic to the aging process.

Finally, the attitudes of older adults themselves play a critical role in prospects for continued learning. For many of those born in the early part of the century, lifelong learning may not be an expectation of aging. There is evidence that those who received greater educational opportunities are more likely to see ongoing education as natural and desirable (Gonda, 1980). For older adults who have been uprooted, cultural adjustments contribute to difficulty in learning. The experience of dislocation, coping with enormous cultural change, and loss of status in the family or community can have a great impact on desire to learn language or acquire literacy (Grognet, 1989). These attitudes and experiences also determine the purposes that an older adult has in becoming literate or pursuing language and literacy skills.

In sum, the attitudes of professionals; the responses of employers, families and communities; and the beliefs and assumptions of elders themselves all contribute to the sociocultural context in which literacy education takes place. Literacy instruction is most likely to be effective when (a) older workers have real opportunities for job advancement, (b) elders have a chance to break their social isolation (Weinstein-Shr, 1989), (c) they can spend time with peers engaged in the positive endeavor of lifelong learning (Coster & Webb, 1979; Pearce, 1991), and (d) educators and other professionals genuinely feel that they have as much to learn as they have to teach in their work with elders. With the right supports, it is clear that language and literacy acquisition are not only feasible, but likely to succeed. The next question is the degree to which appropriate instructional services are available and accessible to those older adults who wish to become literate. This question is addressed below.

ACCESS TO APPROPRIATE LITERACY INSTRUCTION: THE STATE OF THE NATION

The final set of factors that influences the prospect for older adults to expand their literacy skills in later life is the availability, accessibility, and appropriateness of literacy instruction.The availability of programs is a direct result of resources appropriated for their design and implementation. Funding for adult literacy efforts comes from the federal government, state governments, private sector employers, and voluntary organizations. One study completed for the Federal Interagency Committee of Education found that there are 79 literacy-related programs administered by 14 federal agencies. The four federal agencies most active in the area of literacy for older adults are the Department of Health and Human Services (through the Administration on Aging and the Family Support Administration's Refugee Resettlement Program); the Department of Labor (through the Senior Community Service Employment Programs and the Job Training Partnership Act); the Department of Education (through the Adult Education Act, English a Second Language Program, Adult Education Special Projects, and Workplace Literacy); and through ACTION (a Retired Senior Volunteer Program).

Although numerous literacy initiatives exist at the federal level, the National Commission for Employment Policy found that these federal programs are generally not coordinated with each other and have no centralized database containing information on all the federal literacy programs (Brown, 1989). It remains to be seen how the establishment of the National Institute on Literacy will address this problem as attention to adult literacy issues becomes more centralized.

Adult education programs that focus on adult basic education and English as a second language comprise the primary federal effort to address basic skills needs of adults, and thus are the focus of this report. It is not possible to look at the situation of older adults in particular without first acknowledging the context of literacy instruction for American adults in general. As Brown (1989) points out, only 2% of the federal budget is spent on education, with a small fraction of that directed at adult education efforts. It has been estimated that only 5% of eligible adults are currently served by existing adult literacy programs (National Governor's Association, 1990, as cited in Wikelund, Reder, & Hart-Landsberg, 1992). For the millions of Americans and resident aliens who are not native speakers of English, it is estimated that less than 10% of the adults who need English as a second language (ESL) services are currently receiving them (Wrigley & Chisman, 1993). *Education Week* reports that

> . . . thousands of prospective students, many of them recent immigrants are being turned away from adult English classes. . . . Whether in Los Angeles, Houston, New York City or Albuquerque, adult education officials report too few classes for too many students. . . . education officials in Los Angeles were unable to serve roughly 40,000 adults seeking English language instruction in 1986—more than twice the number turned away in 1985. New York City reported that 6,000 were on waiting lists for English and that many more had been lost due to lack of record keeping. (as cited in Bingham, 1990, p. 210)

In large metropolitan areas that are heavily impacted by immigration, waiting lists thousands long and waits of up to several years for ESL classes are becoming the rule rather than the exception (McKay & Weinstein-Shr, 1993). Whatever the reasons, it is clear that only a fraction of those who could benefit from language and literacy instruction are receiving it.

The educational landscape for older adults in particular is even bleaker. The American Association of Retired Persons estimates that of the 23 million adults who are classified as functionally illiterate, those over 60 years old account for about a third. Despite this very high proportion of older adults among America's educationally underprepared, only 6.2% of participants in current literacy programs (about 184,000 out of three million individuals aged 16 or older) are over 60 (Brown, 1989).

Participation in literacy instruction has become a topic of interest regarding adults in general (e.g., Wikelund et al., 1992) as well as elders in particular (Beder, 1989; Pearce, 1991). Explanatory models are emerging in which motivations and deterrents are taken into account in explaining or predicting participation. Growing attention to these issues creates the context for informed decisions about provision of literacy instruction. It is beyond the scope of this

report to examine this issue in depth. Rather, two critical factors are mentioned briefly below.

One factor that affects participation in programs that are indeed available and funded, is the degree to which they are accessible. For many adults, jobs with long hours, responsibilities for providing child care, lack of transportation, the dangers of using public transportation during night hours in inner city neighborhoods, or rural isolation, all contribute to the difficulties they may have in gaining access to available services. For older adults, mobility is often even more restricted than for other adults. As Pearce (1991) points out, if any one physical deterrent cannot be overcome, participation in literacy instruction is impossible. A second aspect of accessibility lies within the educational system itself. For both native literacy and ESL services, lack of centralized information and referral may make programs inaccessible even when they may be available.

One California researcher who is a native speaker of English reported her experience trying to help a nonnative speaker enroll for classes:

> No one at the main campus could give me adequate information. Having gotten the name of a possible location for the ESL program from a passerby, I was forced to resort to the telephone book to find the address.
>
> At the ESL campus, I stood in a long line. Finally, I talked to a clerk who was a student trainee, had limited English skills, and did not know much about the programs for which she was registering people. The schedule of classes listed a course called “pre-ESL.” The clerk could not elaborate on it. She did not direct me to a counselor or explain testing and placement procedures. I was given a paper and a time that my friend should register and was warned that if she did not get there by 6:00 a.m., the classes would probably be full. (Miller, 1991, pp. 52-3)

If classes are not easily accessible to native speakers, they are even less accessible to nonnative speakers, and for all practical purposes, may be almost entirely inaccessible for older adults.

If an older adult manages to gain access to instruction, the appropriateness of that instruction will determine the degree to which the class actually provides access to literacy. To what extent, then, are existing adult literacy efforts appropriate to the needs of older adults? The setting in which literacy instruction takes place is the first critical decision in program design that will determine whether or not an older adult feels comfortable, and thus whether learning is likely to take place. For those with positive previous experiences with formal schooling, school settings may be appropriate. However, for many older adults, schools may be associated with past failure or with other unpleasant associations. The most promising settings may be those in which older adults already gather for other purposes, and in which literacy instruction is only one aspect of social and intellectual life. For adults of more advanced age in particular, the ideal

setting is one that takes into account limited mobility as well as need for adequate lighting and noise reduction.

A second element of appropriateness is the content of instruction. While older adults are as diverse as the rest of the population in their needs and interests, there is little disagreement in the literature that general adult basic education instruction is of marginal interest to older adults. Some studies indicate that older people prefer instruction that is instrumental (Hiemstra, 1972), while others find a preference for approaches that are expressive (Fisher, 1986). Instrumental approaches are those that address the practical problems of everyday living such as reading medicine labels, comparison shopping, gaining access to information or services, or solving literacy-related problems in the workplace. Focus on expressive aspects of language and literacy, in contrast, may entail reading fiction, writing poetry, recording oral history, or otherwise using literacy in celebrating or lamenting the human condition.

It has been suggested that appropriateness of content is related to the developmental stages of older adults, beginning with physical changes as early as 45, preparation for retirement between 56-64, and retirement after 65, with the concerns and issues that accompany these stages. Whatever the desires of a particular group or individual may be, one important finding is that the preferences of elders themselves often do not match the choices made for them by administrators. This suggests that older adults are more likely to find literacy instruction to be relevant and appropriate if they themselves have had an opportunity to provide input regarding the content of instruction.

Finally, a third aspect of literacy instruction that determines appropriateness is the composition of the class and the manner of delivery. While the studies are few and highly interpretive, reports tend to support the value of programs that are specifically designed for older learners. Unfortunately, in their review of initiatives specifically for older adults, the American Association of Retired Persons found that very few of the existing adult literacy efforts reach older adults, and fewer still serve older minorities (Brown, 1989, p. ii). Despite their high numbers among those who could benefit from literacy instruction, older adults are rarely considered in the design of literacy instruction.

One exception is an aspect of Section 353 of the Adult Education Act, as amended by the National Literacy Act of 1991 (P.L. 102-73). According to this legislation, states are required to set aside at least 15% of their federal funds for Special Experimental Demonstration and Teacher Training Projects (U. S. Department of Education, 1992). Among the ways that states may choose to use this fraction of funds is to create special programs for older learners. Although this option exists in the current funding structure, there are few incentives to exercise that option.

In light of the information that is available about the special needs and circumstances of older adults, it makes intuitive sense that programs are more likely to be effective if they can accommodate the common needs of older learners, with provision for instruction by informed educators who give attention to pacing, accommodate past experience and learning strategies, and address the common concerns of older learners. The results of these efforts will

undoubtedly provide more information about the efficacy of gearing instruction specifically to older adults, and a greater understanding of which methods are most effective.

POLICY, RESEARCH, AND PRACTICE: AGENDA FOR THE DECADE

In an overview of directions for adult second language literacy, Weinstein-Shr (1993b) advocates emphasis on these positive directions in recent literacy theory and practice:

- Shift focus from individuals and educational institutions to workplaces, families, and communities.
- Recognize the role of learners' existing knowledge in construction of new knowledge.
- Promote collaboration at all levels.

These themes are also useful for looking at positive directions in addressing the language and literacy needs of older adults, both native and nonnative. In the following section, policy, research, and practice are discussed in light of these themes.

POLICY DIRECTIONS

As older adults comprise a larger proportion of our population, it will become increasingly costly to ignore the educational development of these individuals. If literacy is seen as a tool for economic, social, and personal development, policies are needed that promote the nurturing of literacy skills in the contexts where their potential for use is greatest. As the workforce ages, it will become appropriate for employers to expand the focus of their educational efforts beyond younger workers to include older workers as well. In federally funded family literacy efforts, it is ironic that model programs almost never include elders among their targeted participants, even though the family may provide the most important context for supporting and nurturing aging adults, and even though retired adults may be the most underrecognized resource for supporting the physical and emotional sustenance of children. Community centers where elders gather are rarely the focus of literacy efforts, yet these institutions may play a critical role in the degree to which older adults remain vital, contributing members of society. An investment in elders by earmarking funds for demonstration projects in each of these contexts would be one important first step for federal and state educational policy.

A second positive direction in the creation of sound educational policy would be to take substantive action to preserve the linguistic and cultural resources that elders possess by virtue of their experience in other settings or

in earlier times (see Wiley, 1986). Allocating resources for native language literacy instruction is one way that educational policy can protect national resources that are in danger of extinction. Another way is to provide systematic support for collection of oral histories and lore (both in English and/or in the elders' other native languages), a powerful source of material for appropriate and effective adult literacy instruction. In addition, integration of such material into family literacy or school curricula is among the ways in which the knowledge and experiences of older adults can serve as resources not only for their own education but also for the education of children.

Finally, models of collaboration hold great promise for effective educational policy. Partnerships between literacy and aging professionals are among those that can easily be nurtured through funding incentives. Project LEEP (Literacy Education for the Elderly Project) is an example of a systematic effort between the National Council on Aging (NCOA) and Literacy Volunteers of America (LVA) to combine their expertise for providing effective literacy instruction to elders. In this national demonstration project, NCOA identified appropriate settings, recruited older adults, and provided helpful information to tutors, teachers, and material developers about elders' needs and preferences. LVA tapped its own volunteer network and provided literacy training and ongoing tutor support with NCOA input for provision of literacy services at senior centers throughout the country (Jacobs, 1985). On an even smaller scale, a collaborative effort between Temple University's Center for Intergenerational Learning and a coalition of ethnic organizations provided a model for appropriate delivery of language and literacy services to older refugees. Project LEIF (Learning English through Intergenerational Friendship) has served over 1,000 Southeast Asian and Latino elders in Philadelphia over the last eight years, and has been replicated in cities around the country through linking adult educators, gerontogists, and ethnic community leaders. Both LEEP and LEIF resulted in program development manuals to foster similar efforts by others (Jacobs, 1986; Weinstein-Shr, 1989). Initiatives at the federal level can provide incentives for natural partners to collaborate across traditional network lines in meeting the language and literacy needs of elders, whether those elders are members of monolingual or multilingual communities.

RESEARCH NEEDS

As this report has indicated, literacy issues among older adults have received very little attention in the research literature. The field is wide open, with several important promising directions for inquiry.

First, in order to understand the literacy needs of older adults, it is important to understand the contexts in which older adults operate. The uses of literacy in the workplace and its concomitant set of social relations have become an increasing object of interest, though little attention has yet been focused specifically on older workers. One promising direction is research in which the workplace is viewed as a social context in which roles and relationships must be taken into account (Gowen, 1992). The uses of language and literacy in the context of the family is also a fertile ground for investigation. Weinstein-Shr (1994) recommends research that examines the role of language and literacy in the renegotiation of intergenerational relationships. It is argued here that this type of research will enable us to understand more fully the processes through which grandparents, parents, and children remain connected to or become alienated from one another, and thus the degree to which the generations are

able to act as resources for one another. Finally, by exploring and documenting the community contexts in which older adults manage daily living, information will become available about the possibilities for channeling literacy efforts to enhance the contribution of older adults while improving their own quality of life.

In order to build on the resources that learners bring, it is necessary to discover what those resources are. First, we need to know more about the literacy resources of older adults, using measures that are appropriate for the population. Little is known about English literacy and less yet is known about native language literacy resources among bilinguals in this group. Second, recent ethnographic studies of adult learners have provided some insight into the ways that adults with limited literacy resources bring enormous social resources to bear in the management of everyday living (Fingeret, 1983; Gillespie, 1993; Weinstein-Shr, 1993a). Yet, with the exception of a handful of studies (e.g. Fisher, 1990; Freer, 1990), few qualitative research efforts have focused specifically on older adults. There is much to learn about how older adults with limited English language and literacy resources manage their daily lives, and about the areas in which resources for solving problems are inadequate. A third area of research that can illuminate the nature of resources that adults bring is the nature of cognitive resources and learning strategies that older adults bring to any learning situation. Ample resources have been invested in training reading specialists for children, but there is no comparable effort for adults. The poverty of our lexicon regarding elders and education is a reflection of our national neglect of this group. The notion of pedagogy is based on a prefix meaning children—it has been argued that the time has come for specific investigations into effective *geriagogy* (A. Pelham, personal communication, 1993).

Collaborative research efforts are those that provide the most promise for illuminating the possibilities for literacy acquisition in later years. An appreciation for the possibilities of elders, the nature of the context in which they operate, the nature of language and literacy acquisition in later years, and the social and historical context in which they must struggle to survive and to make meaning are all part of the picture that must be painted through future research efforts. Gerontologists, sociologists, psychologists, educational linguists, and ethnographers are among those who bring complementary perspectives to work with older adults. Research teams can approach complex research questions in ways that are more comprehensive than any one researcher alone from the confines of a single discipline. Collaborative research has the most promise for informing program design and classroom practices that make sense in light of the particular needs and resources of older adults.

PROMISING PRACTICES

Literacy instruction is most likely to be effective when the needs of learners are central to program design and delivery of instruction. Policy initiatives and research efforts directed at addressing the particular needs of older adults will determine the degree to which adequate, accessible, and appropriate literacy instruction is possible. With each demonstration effort, information about how to meet the special needs of older adults grows (see

Coster & Webb, 1979; Jacobs, 1986; Moore, 1988; Spore, 1980; Weinstein-Shr, 1988).

The first important direction will be to work toward eliminating barriers that keep older adults from full participation in literacy education. Reducing physical barriers to participation must be a first priority, so that older learners can receive instruction in settings that are safe, accessible, and convenient. This requires attention to where elders live, work, and gather, and to the resources allocated for recruitment. Social and psychological barriers can be reduced by a general commitment at a national, state, and local level to lifelong learning for people of all ages. Public education efforts need to be included to promote this commitment.

Building on the strengths of learners requires first identifying those strengths, and then using them both in planning programs and through the fabric of daily instruction. For nonnative speakers of English, information in the native language itself can be an important asset. Bilingual teachers, tutors, or assistants can help to ensure that learners are able to tap their own linguistic resources in expanding their repertoire. Furthermore, there is scant but growing evidence that development of native language literacy may be critical in creating the conditions for acquisition of second language literacy. For native or nonnative speakers alike, recognition of what they do well, experimentation with varied learning techniques, and attention to their own learning strategies are all ways in which adults can begin to identify their own strengths and bolster the confidence that they will need for undertaking a rigorous educational challenge.

Promising classroom practices include several kinds of collaborative work. Collaboration between professionals is exemplified by the partnership between workplace professionals, who can dictate content of instruction with literacy, and ESL educators, who can provide appropriate materials, learning activities, and teaching techniques. Collaboration between learners can be extremely powerful, especially when different kinds of knowledge are tapped. In workplaces, the literacy skills of some workers may be balanced by the historical knowledge of the organization or long-practiced skill on the part of other workers. With a shift to collective management and reorganization of workplaces, cooperative problem solving is an increasingly appropriate form of work and learning. Among the most promising workplace literacy programs are those in which coworkers, team leaders, and supervisors participate in various aspects of the educational programs. In some family literacy programs, children may provide translation or illustration to stories about the way it used to be that only elders can tell. In intergenerational programs like these, the language and literacy skills of the younger people are used (and developed) in tapping and documenting the cultural knowledge of the elders (see Weinstein-Shr & Quintero,1994; Wigginton, 1985). Another kind of collaboration is that which occurs when older learners work with literacy providers, giving input into curriculum design and methods of instruction. Programs based on participatory approaches provide useful models for serving learners who have well-developed strategies for learning, and who are likely to have "been around" longer than their younger instructors. When program designs and classroom practices leave room for learners to shape their learning environments and for instructors to learn from students, learning and exchange is maximized and all participants are enriched.

Summary and Conclusion. Literacy Education and Elders: Why Bother?

Until now, there has been little attention to the literacy needs and resources of older adults. There are compelling reasons to change that situation.

The first set of reasons revolves around the linkages between older adult illiteracy, the workforce, and the economy. There has been a strong case made that in the shift from an industrial to an information- and service-based economy, the literacy skills of the workforce have a direct impact on productivity and prosperity (Chisman, 1989). Changes in the workplace require higher levels of reading, writing, and computing skills, as well as the ability of workers to continually learn and adapt to changing circumstances. As the "graying of America" continues, the civilian workforce itself also grows older. This is one way in which older adults will play an increasing role in our country's competitiveness in the international marketplace. In addition, as people live longer, they are able to work longer. With labor shortages predicted for the future, older workers can potentially play a critical role in addressing that shortage.

A second set of reasons for attending to the literacy needs of older adults is to enhance the quality of life for elders themselves. Simple justice dictates that after a lifetime of hard work and contribution to the society, adults' later years should be ones in which a person can live in security and comfort. The degree to which adults are literate is likely to affect the economic resources with which they face retirement, the problem-solving skills that they bring to the changing social and economic circumstances that accompany aging, and the pleasures that they can enjoy with leisure time. As Simone de Beauvoir says in her conclusion to *La Vieillesse* (*Old Age*) (1970), to avoid making old age a derisory parody of earlier phases of life,

> . . . there is only one solution. . .[and that is] to continue to work toward the ends that give meaning to our lives. . . . [These are] devotion to individuals, to groups, to causes, to social, political, collective, and creative ends. (p. 567)

The ways in which we invest in elders have direct impact on the degree to which they can continue that meaning-making work.

Finally, investment in older adults directly impacts not only the economy in general, and elders themselves in particular, but all members of society. Children are the first beneficiaries when channels are created for remembering the past and for tapping the wisdom and cultural resources of the elderly. There is little argument that those who know where they have come from are better equipped to create with confidence and purpose a vision of where they wish to go. In addition, the circumstances of children and elders symbolize collectively our nation's connections with its history and

commitment to its own future. Ultimately, all of us benefit from movement toward a more just and humane society in which we, ourselves, are inevitably growing older.

REFERENCES

Beder, H. (1989). *Reasons for nonparticipation among Iowa adults who are eligible for ABE.* Sioux City: Western Iowa Tech.

Bingham, J. (1990). On the English proficiency act. In K. Adams & D. Brink (Eds.), *Perspectives on official English* (pp. 215-228). NY: Mouton De Gruyter.

Birren, J. (1965). Age changes in speed of behavior. In A. Welford & J. Birren (Eds.), *Behavior, aging and the nervous system* (pp. 25-45). Springfield, IL: Thomas.

Bormuth, J. R. (1973). Reading literacy: Its definition and assessment. *Reading Research Quarterly*, *9*, 7-66.

Bramwell, R. D. (1992). Beyond survival: Curriculum models for senior adult education. *Educational Gerontology*, *18*, 433-446.

Brown, H. (1989). *Literacy training and older Americans.* Washington, DC: Public Policy Institute, American Association of Retired Persons.

Campbell, A., Kirsch, I., & Kolstad, A. (1992). *Assessing literacy: The framework for the National Adult Literacy Survey*. Washington, DC: U. S. Department of Education.

Chisman, F. (1989). *Jump Start: The federal role in adult literacy*. Southport, CT: Southport Institute for Policy Analysis. (ERIC Document Reproduction Service No. ED 302 675)

Coster, K., & Webb, B. (1979). *Grey and growing: Program packages for the older adult: A manual and supplement manual*. Towson, MD: Baltimore Country Public Library.

Courtenay, B., Stevenson, R., & Suhart, M. (1982). Functional living among the elderly: Where we are(n't). *Educational Gerontology*, *8*, 339-352.

De Beauvoir, S. (1970). *La Vieillesse*. Paris: Editions Gallimard.

Dekeban, A. S., & Sadowsky, D. (1978). Changes in brain weight during the span of human life. *Annals of Neurology*, *4*, 345-356.

De Santi, R. J. (1979). Cue system utilizations among older readers. *Educational Gerontology*, *4*, 271-277.

Domey, R. G., McFarland, R. A., & Chadwick, E. (1960). Dark adaptation as a function of age and time: A derivation. *Journal of Gerontology, 15*, 267-279.

Fingeret, A. (1983). Social network: A new perspective on independence and illiterate adults. *Adult Education Quarterly*, *33*(33), 133-146.

Fisher, J. C. (1986). Participation in educational activities by active older adults. *Adult Education Quarterly*, *36*(4), 202-210.

Fisher, J. C. (1987). The literacy level among older adults: Is it a problem? *Adult Literacy and Basic Education*, *11*(1), 41-50.

Fisher, J. C. (1988). Older adult readers and nonreaders. *Educational Gerontology*, *14*, 57-67.

Fisher, J. C. (1990). The function of literacy in a nursing home context. *Educational Gerontology*, *16*, 105-116.

Fozard, J. L., & Popkin, S. J. (1978). Optimizing adult development: Ends and means of an applied psychology of aging. *American Psychologist*, *33*, 975-989.

Freer, K. J. (1990). *The value of literacy for the rural elderly: A naturalistic study.* Unpublished doctoral dissertation, Florida State University.

Gadsden, V. L. (1992). Giving meaning to literacy: Transgenerational beliefs and messages about access. In V. L. Gadsden (Ed.), *Theory Into Practice. Special Issue: Literacy and the African-American Learner, 31*(4), 328-336.

Garrett, B. (1992). Gerontology and communication disorders: A model for training clinicians. *Educational Gerontology*, *18*, 231-242.

Gentile, L. M., & McMillan, L. M. (1979). Reading: A means of renewal for the aged. *Educational Gerontology*, *4*, 215-269.

Gillespie, M. (1993). Profiles of adult learners: Revealing the multiple faces of literacy. *TESOL Quarterly, 27*(3), 529-533.

Glynn, S. M., & McMillan, K. D. (1979). Text-learning capabilities of older adults. *Educational Gerontology*, *4*, 253-269.

Gonda, J. (1980). Relationship between formal education and cognitive functioning: A historical perspective. *Educational Gerontology, 5*, 283-291.

Gowen, S. (1992). *The politics of workplace literacy: A case study*. New York: Teachers College.

Grognet, A. G. (1989). Elderly refugees and language learning. *Aging*, *359*, 8-11.

Haase, A. M., Robinson, R. D., & Beach, R. (1979). Teaching the aged reader: issues and strategies. *Educational Gerontology*, *4*, 229-237.

Handler, P. (1970). *Biology and the future man*. NY: Oxford University Press.

Harvey, R. L., & Dutton, D. (1979). Reading interests of older adults. *Educational Gerontology*, *4*, 201-214.

Harris, L. (1970). *Survival literacy study*. Washington, DC: National Reading Council. (ERIC Document Reproduction Service No. 068 813)

Harris, L., & Associates. (1975). *The myth and reality of aging in America*. Washington, DC: The National Council on the Aging.

Heisel, M. (1980). Adult education and the disadvantaged older adult: An analytical review of the research literature. *Educational Gerontology, 5*, 125-137.

Hiemstra, R. (1972) . Continuing education for the aged: A survey of needs and interests of older people. *Adult Education*, *22*, 100-109.

Hiemstra, R. (1976). Instrumental and expressive learning: Some comparisons. *Educational Gerontology, 1*, 227-236.

Hunter, C., & Harman, D. (1979). *Adult illiteracy in the United States*. New York: McGraw-Hill.

Imel, S. (1991). *Older worker training: An overview*. Columbus, OH: Ohio State University, National Center for Research in Vocational Education. (ERIC Clearinghouse on Adult, Career, and Vocational Education)

Jacobs, B. (1985). *Tutoring older adults in literacy programs: Project LEEP*. Washington, DC: National Council on the Aging, Inc.

Jacobs, B. (1986). *Combatting illiteracy among the elderly: A cost-effective strategy* (final project report). Washington, DC: Literacy Education for the Elderly (LEEP), National Council on the Aging, Inc.

Joiner, E. B. (1981). *The older foreign language learner: A challenge for colleges and universities* (Language in Education Series No. 34). Washington, DC: ERIC Clearinghouse and Languages and Linguistics. (ERIC Document Reproduction Service No. ED 208 672)

Kasworm, C. E. (1981). *The illiterate elderly*. Paper presented at the Third White House Conference on Aging, Washington, DC.

Kasworm, C. E. (1982). Older learners in adult basic education. *Adult Learning and Basic Education*, *6*, 195-207.

Kausler, D. H., & Kleim, D. M. (1978). Age differences in processing relevant versus irrelevant stimuli in multiple-item recognition learning. *Journal of Gerontology*, *33*, 87-93.

Kim, P., & Wellons, K. (1977). Quadruple jeopardy: To be old, poor, and Black in an urban area. *The Gerontologist, 17*, 81.

Kingston, A. J., Jr. (1981). Reading and the aged: a statement of the problem. *Educational Gerontology*, *4*, 205-07.

Kirsch, I., & Guthrie, J. (1977-8). The concept and measurement of functional literacy. *Reading Research Quarterly*, *13*(4), 485-507.

Kirsch, I., Jungeblut, A., Jenkins, L., & Kolstad, A. (1993). *Adult literacy in America: A first look at the results of the National Adult Literacy Survey*. Washington DC: U. S. Department of Education, National Center for Educational Statistics.

Klassen, C., & Burnaby, B. (1993). Literacy and adult immigrants in Canada: A reflection on research and policy gaps. *TESOL Quarterly*, *27*(3), 377-398.

Kline, D. W., & Szafran, J. (1975). Age differences in backward monoptic visual noise masking. *Journal of Gerontology*, *30*, 307.

Krashen, S., Long, M., & Scarcella, R. (1979). Age, rate and eventual attainment in second language acquisition. *TESOL Quarterly, 13*(4), 573-582.

Lovelace, T. (1979). Reading activities to enhance the lives of nursing home patients. *Educational Gerontology*, *4*, 239-34.

Lumsden, D. B. (1979). Editorial comment: Why Johnny's grandparents can't read. *Educational Gerontology*, *4*, 297-305.

McGrail, J. (1984). *Adult illiterates and adult literacy programs: A summary of descriptive data*. Andover, MA: National Adult Literacy Project, Far West Laboratory, San Francisco, CA & the Network, Inc.

McKay, S., & Weinstein-Shr, G. (1993). English literacy in the United States: National policies, personal consequences. *TESOL Quarterly, 27*(3), 399-420.

Miller, C. (1991). *Some contextual problems relative to the acquisition of literacy by Hmong refugees*. Unpublished master's thesis, California State University, Long Beach.

Moore, J. (1988). *Developing successful adult basic education programs for older adults*. Asheboro, NC: Randolph Community College.

National Caucus & Center on Black Aged, Inc. (NCCBA). (1988). *A profile of elderly Black Americans*. Washington DC: Author.

National Commission for Employment Policy. (1985). *Older workers: Prospects, problems and policies* (9th annual report). Washington, DC: Author.

National Governor's Association. (1990). *Educating America: State strategies for achieving the national education goals* (report of the Task Force on Education). Washington, DC: Author.

National Urban League. (1964). *Double jeopardy: The older Negro in America today.* Washington, DC: Author.

Northcutt, N. (1977). *Adult functional competency: A summary*. Austin: University of Texas.

Ostwald, S. K., & Williams, H. Y. (1985). *A new taxonomy of second language learning strategies*. Washington, DC. (ERIC Clearinghouse on Languages and Linguistics FL No. 015 798)

Palmore, B. (Ed.). (1974). *Normal aging II*. Durham, NC: Duke University Press.

Pearce, S. D. (1991). Toward understanding the participation of older adults in continuing education. *Educational Gerontology*, *17*, 451-464.

Rabbit, P. M. (1968). Age and the use of structure in transmitted information. In G. Talland (Ed.), *Human aging and behavior*. New York: Academic Press.

Riegel, K. F., & Riegel, R. M. (1972). Development, drop and death. *Developmental Psychology*, *6*, 306-319.

Rigg, P. (1985). Petra: Learning to read at 45. *Journal of Education*, *167*(1), 129-139.

Rigg, P., & Kazemek, F. (1983). Literacy and elders: What we know and what we need to know. *Educational Gerontology*, *9*, 417-24

Robinson, R. D., & Haase, A. (1979). The reading process and the elderly. *Educational Gerontology, 4*, 223-228.

Robinson, R. D., & Maring, G. (1976). The aging process and its relationship to reading: A review of literature from gerontology with implications for future research. *NRC, 23*, 70-78.

Romani, D. (1973). Reading interests and needs of older people. *Library Trends, 21*, 390-403.

Schaie, K. W., & Strother, C. R. (1968). A cross-sectional study of age changes in cognition behavior. *Psychological Bulletin*, *70*, 671-680.

Schleppegrell, M. (1987). *The older language learner*. Washington, DC: ERIC Clearinghouse on Languages and Linguistics.

Schoie, W. K. (1982). *Longitudinal studies of adult psychological development*. Guildford Press.

Schonfield, A. E., Trueman, V., & Kline, D. (1972). Recognition tests of dichotic listening and the age variable. *Journal of Gerontology*, *27*, 487-493.

Schow, R., Christensen, J., Hutchinson, J., & Nerbonne, M. (1978). *Communication disorders of the aged*. Baltimore, MD: University Park Press.

Senate Special Committee on Aging (SSCA). (1991). *Lifelong learning for an aging society: An information paper*. Washington, DC: U.S. Government Printing Office.

Senate Special Committee on Aging, the American Association of Retired Persons, the Federal Council on the Aging, & the U.S. Administration on Aging (SSCA et al.). (1991). *Aging America: Trends and projections*. Washington, DC: Author.

Sharon, A. T. (1973). What do adults read? *Reading Research Quarterly*, *9*, 148-169.

Spore, M. (1980). *Extending basic education to the elderly: A guide to program development*. Albany: Bureau of Community and Continuing Education Program, New York State Education Department.

Taub, H. (1980). Life-span education: A need for research with meaningful prose. *Educational Gerontology*, *5*, 175-187.

U.S. Department of Education. (1992). *Fact Sheet #7: Literacy education for older adults*. Washington, DC: Adult Learning and Literacy Clearinghouse.

Waller, S. R. (1990). *Elderly Hmong in transition: Mental health, acculturation, and learning English*. Unpublished doctoral dissertation, University of New Mexico.

Walsh, D. A., & Baldwin, M. (1977). Age differences in integrated semantic memory. *Developmental Psychology*, *13*, 509-514.

Wantz, M. S., & Gay, J. E. (1981). *The aging process: A health perspective*. Cambridge, MA: Winthrop Publishers.

Weinstein-Shr, G. (1988). *Project LEIF: Learning English Through Intergenerational Friendship: A manual for building community across generations and across cultures*. Philadelphia: Temple University Center for Intergenerational Learning.

Weinstein-Shr, G. (1989). Breaking the linguistic and social isolation of refugee elders: An intergenerational model. *TESOL News, 13*, 9-13.

Weinstein-Shr, G. (1993a). Literacy and social process: A community in transition. In B. Street (Ed.), *Cross-cultural approaches to literacy* (pp. 272-293). New York: Cambridge University Press.

Weinstein-Shr, G. (1993b). Directions in adult ESL literacy. *TESOL Quarterly, 23*(3), 517-528.

Weinstein-Shr, G. (1993c). *Growing old in America: Learning English literacy in the later years*. Washington, DC: National Clearinghouse on Literacy Education. (ERIC Digest EDO-LE-93-08)

Weinstein-Shr, G. (1994). Learning from uprooted families. In G. Weinstein-Shr & E. Quintero (Eds.), *Immigrant learners and their families: Literacy to connect the generations*. Washington, DC: Center for Applied Linguistics/Delta Systems.

Weinstein-Shr, G., & Lewis, N. (1991). Language, literacy and the older refugee in America: Research agenda for the nineties. *College ESL, 1*(1) 53-65.

Weinstein-Shr, G., & Quintero, E. (Eds.). (1994). *Immigrant learners and their families: Literacy to connect the generations*. Washington, DC: Center for Applied Linguistics/Delta Systems.

Wigginton, E. (1985). *Sometimes a shining moment: The foxfire experience.* Garden City, NY: Anchor Press/Doubleday.

Wikelund, K., Reder, S., & Hart-Landsberg, S. (1992). *Expanding theories of adult literacy participation: A literature review* (Technical Report No. TR-92-01). Philadelphia: University of Pennsylvania, National Center on Adult Literacy.

Wiley, T. (1986). The significance of language and cultural barriers for the Euro-American elderly. In C. L. Hayes, R. A. Kalish, & D. Guttmann (Eds.), *European-Americans: A guide for practice*. Springer, NY: Rowman & Littlefield Publishers, Inc.

Wiley, T. (1991). *Measuring the nation's literacy: Important considerations*. Washington DC: National Clearinghouse on Literacy Education. (ERIC Digest No. EDO-LE-91-04)

Wiley, T. (in press). *Literacy and language diversity in the United States*. Washington, DC: Center for Applied Linguistics/ Delta Systems.

Wilson, M. M. (1979) Enhancing the lives of the aged in a retirement center through a program of reading. *Educational Gerontology*, *4*, 245-251.

Wisniewsky, H. M., & Terry, R. D. (1973). Morphology of the aging brain, human and animal. *Progress in Brain Research, 40,* 167-187.

Wolf, R. E. (1980). What is reading good for? Perspectives from senior citizens. *Journal of Reading*, *21*, 15-17

Wong-Fillmore, L. (1991). When learning a second language means losing the first. *Early Childhood Research Quarterly 6*(3), 323-346.

Wrigley, H., & Chisman, F. (1993). *Sparks of excellence.* Washington, DC: Southport Institute for Policy Analysis.

APPENDIX A: TABLE

Table 1

Race and Poverty of Those 65+ and Living Alone

	White	Black	Latino
Percentage below poverty	19	40	57
Percentage near (or below) poverty (@125%)	32	60	72

Note. From SSCA et al., 1991, p. 221.