The Year 2001 in Review

Thomas G. Sticht

On September 11, 2001, a massive terrorist attack hit New York City and the Pentagon in Washington, DC. Understandably, in the midst of all the carnage and concern for the security of the United States, and in the wake of the huge decline in the nation’s economy that followed the attack, adult education and literacy development took a back seat alongside other domestic interests as the government focused on the need to protect and defend the nation. Although nothing could approach the devastating effects of the terrorist attacks on the nation, the year 2001 was difficult for the adult education and literacy field in other ways too.

CHALLENGES TO THE FIELD

The field encountered three major challenges in 2001. First, a report from the National Center for Education Statistics (NCES) captured the attention of the media by raising questions about the findings of the National Adult Literacy Survey (NALS) and the scale of need for adult literacy education in the United States. Next, the National Reporting System (NRS) revealed major operating problems within the Adult Education and Literacy System (AELS)—that is, with those programs that receive part or all of their funding under the provisions of the Workforce Investment Act of 1998 (Title II
of the Adult Education and Family Literacy Act of 1998; U.S. Congress, 1998). Finally, strong advocacy overrode a White House proposal that would have led to an inflation-adjusted decrease in federal funding for the AELS.

**NALS Findings Questioned**

NALS was a door-to-door survey of information-processing skills involving literacy tasks of a representative sample of adults in the United States in 1992 (Kolstad, 2001). Researchers developed and administered three different literacy scales for the NALS: Prose, Document, and Quantitative. On each scale, adults were assigned to five different literacy levels, with Level 1 indicating a low level of literacy and 5 indicating a high level of literacy. An individual’s assignment to a given level was based on his or her having an 80% \( (p = .80) \) chance of being able to perform the average task at that level. According to this guideline, using the prose scale, some 20% of adults were placed in Level 1, and 27% were placed in Level 2—the two levels considered by the researchers to represent adults with poorly developed literacy skills. Similar findings were obtained on the Document and Quantitative scales.

In January 2001, the NCES published a final technical report on the NALS (Kolstad, 2001). In chapter 14, Andrew Kolstad, original project director for the NALS at the NCES, reversed an earlier position that he had supported and challenged the accuracy and hence the validity of the 80% standard, stating that a 50% standard produces the fewest errors when determining the likelihood that people may or may not be able to perform literacy tasks. In an article (Mathews, 2001) in the *Washington Post* on July 17, 2001, Kolstad confirmed the findings of the NCES final technical report and concluded that large numbers of adults cited as having poor literacy skills and placed in Level 1 or 2 of the NALS had likely been characterized incorrectly by the use of the 80% standard; they could perform more literacy tasks both within and above their assigned level than was previously thought.

The NCES report thus questioned the findings of the NALS and other reports (e.g., the International Adult Literacy Survey [IALS]) that rely on its assumptions about the percentage of the population in each level. Consequently, continued use of NALS or IALS data to indicate the scale of need for literacy education among adults in the United States and other nations poses a challenge: On what basis can the question of how many adults lack adequate literacy skills be answered? Perhaps the National
Assessment of Adult Literacy scheduled for 2002 will address the limitations of the NALS identified by Kolstad and provide suitable data to meet the challenge of how to state more accurately the scale of need for adult literacy education.

**Enrollment and Quality Assurance in Doubt**

The NRS was established by the U.S. Department of Education (DOE), Office of Adult and Vocational Education, Division of Adult Education and Literacy, to collect data required by the Adult Education and Family Literacy Act of 1998. Following extensive technical assistance to the states and valiant efforts by state and local practitioners to implement the requirements of the NRS, data for the first full year of implementation (2000) have revealed two troublesome aspects of AELS operation.

Most troublesome was the continuation in 2000 of a trend in the decline in the numbers of adults enrolled in the AELS. In 1997 enrollments were around 4.1 million. In 1998, when the Adult Education and Family Literacy Act became law and the NRS, with its strong emphasis on the use of standardized tests for measuring learning gains, was implemented, enrollments started to drop. In 1999 they fell by 500,000, to 3.6 million (Sticht, 2002), and in 2000 they fell by an additional 700,000, to around 2.9 million (Pugsley, 2001b). This means that in a period of just 3 years, enrollments in the AELS fell from a high of 4.1 million in 1997 to 2.9 million in 2000, a figure similar to the enrollments of 2.879 million in 1985. If these figures are real and not just the result of more accurate accounting procedures in the NRS, then they represent a loss of more than 1 decade’s worth of progress in encouraging adults to access and enroll in the AELS. At this writing, no official explanation for the decline has been found.

Another troubling aspect of the 2000 data from the NRS concerns quality assurance. Although states and territories made significant efforts to institute the NRS accountability system and most met or exceeded the quality performance targets established with the DOE for the first year of their 5-year goals, the targets were somewhat low. According to Ron Pugsley, director of the DOE’s Division of Adult Education and Literacy, “Many of the performance targets negotiated with the department tended to be at the low end of the spectrum this first year” (Pugsley, 2001a). This may reflect caution on the part of state officials in setting their performance goals, as there was concern that if goals were not reached, reductions in program funding would follow. Whatever the reason, this finding raises important questions about the way that performance targets for the AELS
are determined across the country and the way that high-stakes NRS requirements to show continuous improvement may affect the establishment and achievement of these targets.

**Marginal Increase in Federal State Grant Funds**

As already noted, the AELS includes those programs across the nation that receive funding in the form of state grants (Title II of WIA; U.S. Congress, 1998) authorized by the Adult Education and Family Literacy Act. In April 2001, President George W. Bush, son of Mrs. Barbara Bush, one of America’s greatest advocates and supporters of adult literacy education, submitted a request for fiscal year 2002 funding for the AELS of $540 million, the same amount allocated for fiscal year 2001. This may foreshadow a policy of doing more with the same resources in response to projected deficits for the federal government in the wake of the September 11 attacks. But adjusted for inflation, the president’s request amounted to a proposed decrease in funding, suggesting that the AELS do more with less.

In September, when Congress reconvened after the summer recess, the field initiated lobbying efforts to see if Congress could be persuaded to increase fiscal year 2002 funding over what the president had requested. Given the impact of the terrorist attacks on the federal budget, in which projections of surpluses were transformed into projections of deficits, many adult literacy educators did not expect additional funding.

Thanks to the intensive lobbying efforts of the National Coalition for Literacy (NCL) and others, however, Congress finally approved a $35 million increase in the state grants for the AELS. Although the total budget remains far less than the $1 billion the coalition had been hoping for (National Institute for Literacy, 2000), it nonetheless amounted to an inflation-adjusted increase of some 4% in purchasing power.

**Deadline for the Change in the Tests of General Educational Development (GED)**

The GED test battery was developed in 1942 to give military personnel whose armed service had prevented them from completing high school an opportunity to demonstrate that they possessed academic skills and knowledge comparable with those who had completed high school. Since their early use by the military, the GED tests have been extended for use by any adult without a high school diploma in the United States and Canada, and
more than 15 million adults have used the tests to qualify for secondary education or jobs requiring a high school level of education. (See Online Resources at the end of this chapter for more information on the GED tests.)

To keep the GED tests up-to-date in terms of the changes that take place in secondary school curricula, they are revised from time to time. Most recently, the 1988 series of GED tests was revised to form a new version that became effective on January 1, 2002. This placed a huge strain on the adult secondary education field, as students who had started studying for the 1988 version of the GED needed to complete the tests by the end of 2001. Many state adult education offices across the country took various strategies to get adults to finish the 1988 version of the GED by December 31, 2001. In Ohio an 18-month program called Get Ready, Get Set, Get Your GED brought in more than 2,000 students in the first 6 months of the campaign. The Kentucky legislature provided $2.5 million to promote the GED with the slogan “Education Pays,” and other special activities took place in other states.

The payoff for these extensive efforts to have adults complete the 1988 series of tests came in the form of the more than 1,069,899 adults worldwide who took one or more of the five 1988 GED tests in 2001. This was a 31.1% increase over comparable data for the year 2000. On January 1, 2002, the new GED test battery became operational.

**ADVANCES IN THE FIELD**

Despite the pervasive uneasiness in the nation and the difficulties just discussed, several activities undertaken by adult students, volunteer literacy organizations, health literacy advocates, adult literacy providers, and new national and international organizations held out hope for the field.

**The Voice for Adult Literacy United for Education (VALUE) Leadership Institute**

Moving to have a larger impact on adult education policy and practice, VALUE, the nationwide organization of adult literacy students, held a national Adult Learner Leadership Institute in Columbus, Ohio, July 19–21, 2001. The conference provided a forum for recognizing adult learners who had taken leadership positions in various states to advocate for adult literacy education and to train others to take leadership positions in their states. In a post-conference report, Archie Willard, president emeritus of
VALUE, noted that of the 140 people attending the meeting, 107 were adult learners from 29 different states (Willard, 2001).

Willard went on to note that the New Readers organization in Iowa had undertaken to meet with Iowa Secretary of State Chet Culver to increase the involvement of his office with adult literacy education and that Rhode Island had put in place a bill of rights for adult learners that could serve as a model for other states. Willard also emphasized how important it is for adult learners to have a say in adult literacy education policy, practice, and advocacy activities, citing the life experiences that only they can bring to the table. He concluded with a call to action for adult learners: “As taxpayers and voters, let’s see that the Adult Education and Literacy System of the United States is properly funded and that it is regarded as an important part of our education system.”

Merger of Laubach Literacy International (LLI) and Literacy Volunteers of America (LVA)

In a move that will have a major impact on adult literacy education practice, two of the oldest and largest volunteer literacy organizations in the United States—LLI, founded by Dr. Frank C. Laubach in 1955, and LVA, founded in 1962 by Ruth Colvin—announced on May 21, 2001, their intention to merge. The combined organization will support programs providing literacy services for some 225,000 adult learners through a national network of approximately 160,000 volunteers and 1,450 local, state, and regional literacy providers.

In May 2001, the boards of each organization signed a Memorandum of Understanding that combined the operations of LLI and LVA and located the new literacy organization at Laubach Literacy’s headquarters in Syracuse, New York. The agreement stipulated that the national governing board of the new organization has a maximum of 26 members and that at least 1 is an adult literacy student. In late 2001, the new organization resulting from the merger was named ProLiteracy Worldwide and was scheduled to begin operation in 2002. (See Online Resources at the end of this chapter for more information on ProLiteracy Worldwide.)

Health Literacy Initiatives

Health literacy is a subspecialty of the adult education and literacy field that has been around for at least a quarter century but grew rapidly in the 1990s. Broadly concerned with communication, health literacy deals with
issues such as the readability of written materials conveying health information, alternative media for communicating health information, patient and physician or other health provider communication, special problems of low English proficient adults in health communications, and the provision of language and/or literacy education in the context of health-related information. During 2001, two major activities took place to advance the health literacy field.

The first activity was the symposium called Health Literacy: Implications for Seniors, sponsored by the DOE in August. Its purpose was to develop strategies for helping those older adults and their families with limited basic skills to communicate more effectively with healthcare providers. Contributing to the symposium were federal and state government organizations, including the DOE, the U.S. Department of Health and Human Services, the National Institute for Literacy, and the Georgia State Department of Technical and Adult Education. A number of nonprofit organizations also contributed to the symposium, including the American Medical Association, the National Center for the Study of Adult Learning and Literacy (NCSALL), the National Senior Citizens Education and Research Center, World Education, the Adult Literacy Media Alliance, and the System for Adult Basic Education Support.

The other major activity in health literacy was the celebration of National Health Literacy Month in October. The goal was to help health literacy advocates raise awareness in their communities about the need for understandable health information. Across the United States and Canada, people organized regional health literacy conferences and symposia, contacted local media and political representatives, created new task forces or joined existing partnerships, developed courses on health literacy for professional training, wrote articles for newspapers or in-house newsletters, and organized informational events for the general public to promote the need for understandable health information. (See Online Resources at the end of this chapter for more information on health literacy.)

National Literacy Summit 2001, Year 1 Report

Hoping to influence both policy and practice in adult literacy education, members of the National Coalition for Literacy (NCL) and others convened in Washington, DC, in September 2000 and released the report, *From the Margins to the Mainstream: An Action Agenda for Literacy* (National Institute for Literacy, 2000). The agenda outlined 76 specific recommendations aimed at achieving the following goal: “By 2010, a system of high
quality adult literacy, language, and lifelong learning services will help adults in every community make measurable gains toward achieving their goals as family members, workers, citizens, and lifelong learners” (p. 1).

During the next 12 months, the NCL took the lead in implementing the action agenda. On September 7, 2001, the NCL celebrated the first anniversary of the initiative as part of International Literacy Day in Washington, DC. Another report was released, this one announcing that during the year more than 25,000 copies of the agenda had been distributed, and that 69 local, state, and national organizations had made 163 commitments to achieving 1 or more of the 76 goals. The NCL also drafted legislation once again calling for Congress to appropriate $1 billion in state grants as the federal share of funding for the AELS. Plans for Year 2 included the continued pursuit of commitments to the achievement of the 76 action steps, advancement of the federal legislative proposals drafted in Year 1, and facilitation of actions at the local level that would have an impact at the national level.

**New Organizations for Adult Education and Literacy**

Four new organizations were formed in 2001 to advance the cause of adult education and literacy policy and practice in the United States.

One is the International Literacy Network (ILN), which consists of 21 national and international organizations and aims to advocate for literacy development across the life span. To that end, it sponsored events on September 8, 2001, International Literacy Day, in Washington, DC, that included the launch of a new national directory of literacy providers. (See Online Resources at the end of this chapter for more information on the ILN.)

Midyear, the Council for Advancement of Adult Literacy (CAAL) announced its formation to provide an “independent new national voice for adult literacy in the U.S.” Start-up funding was provided by Harold W. McGraw, Jr., who in the mid-1980s provided the initial support for the Business Council for Effective Literacy, which played a seminal role in transforming the Adult Education Act of 1966 into the National Literacy Act of 1991 (U.S. House of Representatives, 1991). (See Online Resources at the end of this chapter for more information on CAAL.)

On October 9, 2001, the National Technology Laboratory (NTL) was formed at the National Center on Adult Literacy at the University of Pennsylvania. With a grant of $2.4 million from the DOE, the new lab, tentatively
called TECH.21, will “serve as a hands-on, virtual research-to-practice and dissemination system for high quality applications for adult education” (press release). (See Online Resources at the end of this chapter for more information on the NTL.)

At the beginning of the year, the William F. Goodling Institute for Research in Family Literacy was established at Pennsylvania State University with a $6 million federal appropriation. The institute aims to improve family literacy education through research and its application to practice and professional development. In October 2001 the institute sponsored a meeting of literacy providers to develop a research agenda for family literacy. A report of the agenda was planned for 2002.

DEVELOPMENTS INFLUENCING PRACTICE

Major activities during the year were aimed at advancing the practice of adult literacy education, particularly in the areas of reading instruction and the teaching of English to speakers of other languages.

Evidence-Based Principles for Adult Basic Education Reading Instruction

In 2000, a Reading Research Working Group (RRWG) was formed to identify, evaluate, and report existing research that could inform adult reading instruction. The RRWG was sponsored by the National Institute for Literacy (NIFL) in collaboration with NCSALL. It represented a part of NIFL’s efforts to provide educators, parents, and others with access to scientifically based reading research, including research-based tools for improving literacy programs and policies for children, youth, and adults, through the National Reading Excellence Initiative.

In late 2001 the group released two reports. One report focuses on principles that can be derived from the research and maps out a research agenda for the future. The other focuses on instructional practices that can be drawn from the existing research base.

In its work, the RRWG reviewed research on alphabetics (or decoding), fluency, vocabulary, comprehension, and computer technology. The group identified four categories of information based on the research reviewed. *Principles* are findings representing the strongest statements that could be made about adult reading instruction and are based on findings from two
or more experimental studies and any number of nonexperimental studies. Trends are findings based on fewer than two experimental studies. Ideas for adult reading instruction are based on the review of reading instruction research at the K–12 level conducted and reported by the National Reading Panel. Comments are weaker, less conclusive findings from the K–12 research.

The RRWG reports cover a wide range of reading research categorized as pertaining to assessment or instruction. With these new reports, practitioners have access to information that can be used to develop evidence-based programs of adult literacy education. In addition, NIFL, NCSALL, and others will be able to draw on the RRWG reports to establish and conduct research projects that will further inform the practice of adult reading instruction.

**English for Speakers of Other Languages (ESOL)**

Over the years, ESOL has emerged as the major activity in the AELS. In 1980, 19.2% of AELS enrollments were in ESOL. In the 15-year period between 1980 and 1996, ESOL enrollments rose to more than 38.6%, an increase of more than 100% (Sticht, 1998, pp. 4–5). By 1999 ESOL students made up almost half (47%) of AELS participants (Tolbert, 2001). Responding to this increase in ESOL learners, several agencies sponsored activities during 2001 concerning instruction in English, literacy, and civics education for adult students enrolled in ESOL programs.

In February, the National Center for Language Education (NCLE) convened a meeting with representatives of labor unions, the DOE, and NCSALL. Meeting attendees explored the extent of the need for adult ESOL instruction in the United States, the importance of cultural pluralism in ESOL instruction, the need to work with disabled learners in the ESOL community, and other topics aimed at improving the ESOL field through research and professional development. (See Online Resources at the end of this chapter for more information on the NCLE meeting’s final report, Adult ESL in the New Millennium.)

In August NIFL published the report, *English Literacy and Civics Education for Adult Learners* (Tolbert, 2001). The report provides an overview of federal legislation for ESOL and civics instruction, a historical perspective on ESOL instruction in the United States, a brief survey of current instructional approaches used with the ESOL learner population, and a
profile for each of 12 demonstration projects funded by the DOE. It also includes a number of Internet resources for information on ESOL.

In September some 100 ESOL teachers met in Washington, DC, at a national symposium on adult ESOL research and practice. The symposium was sponsored by the U.S. DOE Division of Adult Education and Literacy, the NCLE, and the Smithsonian Institution.

According to a brief note about the symposium from the division’s director, Ron Pugsley, “Teachers joined in discussions of challenges they face in adult English literacy instruction and compared their ‘real world’ experiences with findings presented by nationally known researchers on what works in teaching limited English-speaking adults and how adults learn English.” (See Online Resources at the end of this chapter to access Pugsley’s note.)

The importance of ESOL instruction to the future of the AELS is indicated by U.S. Census projections indicating that over the next 50 years the number of foreign-born persons in the United States could increase from 26 million to more than 53 million (Tolbert, 2001, p. 16). This suggests that ESOL will continue to be a major component of AELS’s educational activities, along with adult basic and adult secondary education, in the first half of the 21st century.

**DIRECTIONS IN RESEARCH**

During the year NIFL (2001) published *A National Plan for Research and Development in Adult Education and Literacy*. This report resulted from a joint project of NIFL, NCSALL, and the U.S. DOE Division of Adult Education and Literacy. It calls for research on (a) adult learning, recruitment, and persistence; (b) the types of instruction that work best; (c) learner assessment and program evaluation; (d) staff development; and (e) policy and structure. The last refers to the fact that adult education programs are often constrained to some extent by the structure of the service delivery system in which they operate and the policies that govern that system. Research on policy and structure deals with the ways in which a delivery system as a whole can better respond to student needs.

In August 2001 the Partnership for Reading, consisting of representatives from the DOE, NIFL, and the National Institute of Child Health and Human Development, convened a meeting of researchers, practitioners, and policymakers to assess the current state of knowledge about effective approaches to improving the literacy skills of adults and about the role of
family literacy services in providing parents with the knowledge and skills they need to support their children’s literacy development. The report on the meeting called for “a program of systematic, programmatic, multidisciplinary research to determine the most effective instructional methods and program organizational approaches for both adult literacy programs and family literacy programs.” It noted the following needs:

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

On September 28, 2001, the National Academy of Sciences, Division of Behavioral and Social Science and Education, posted an Internet message announcing the formation of the Workshop on Alternatives for Assessing Adult Education and Literacy Programs. Sponsored jointly by the DOE Division of Adult Education and Literacy and NIFL, the 9-month project brings together a group of persons knowledgeable about alternative methods for evaluating adult education and literacy programs. Through discussions among the workshop participants, a literature review, and a survey of NIFL state efforts and projects (i.e., the Equipped for the Future [EFF] project), the workshop aims to develop and report information about alternatives to standardized tests for evaluating the learning outcomes of adult education and literacy programs. This report should serve to stimulate further research and development on assessment in the AELS. (See Online Resources for more information on the EFF workshop and project.)

**Founding of First Lab Schools for Adult Education**

In a first for the field of adult literacy education, NCSALL established in mid-2001 two laboratory schools to provide stable environments for conducting high-quality research; facilitate close collaborations between researchers and practitioners; allow for systematic innovation, experimen-
tation, and evaluation of promising new instructional methods, materials, and technologies; and create knowledge that improves the field’s understanding of adult learning and literacy and improves practice.

One of the lab schools is located at Portland State University and is called The Lab School: A National Labsite for Adult ESOL. With Dr. Stephen Reder as lead investigator, the lab school will conduct classroom-based research and professional development in adult ESOL education.

The second lab school is called The National Labsite for Adult Literacy Education and is directed by Dr. Hal Beder. The labsite is formed by a partnership between Rutgers University and the New Brunswick Public Schools Adult Learning Center. The aim is to provide a place where researchers and practitioners can work in partnership to create knowledge that enhances the field’s understanding of adult learning and the improvement of practice in literacy education for native language speakers. (See Online Resources for more information on NCSALL’s lab schools.)

TRANSITIONS

Director Andrew Hartman departed the National Institute for Literacy for a new position in a nonprofit organization located in the western part of the nation. Prior to assuming his position at NIFL, Hartman worked for Congressman William F. Goodling and played a key role in drafting the legislation for Even Start. Sandra Baxter is serving as acting director until a new NIFL governing board is put in place and a permanent director is found. Baxter directed the National Reading Excellence Initiative at NIFL prior to assuming the position of acting director.

In the DOE, Carol D’Amico was appointed by the White House and confirmed by the Congress as assistant secretary of Education for Vocational and Adult Education. Prior to her appointment, D’Amico served as dean for workforce development at Ivy Tech Community College of Indiana. She has also worked as a policy and planning specialist for the Indiana Department of Education and a senior program analyst for the Indiana General Assembly. She has taken the leadership role in the Preparing America’s Future initiative in the DOE Office of Vocational and Adult Education, which includes among its goals that of improving the literacy and English fluency of underserved Americans.

Finally, it is difficult to find words to express the great loss to the field of Malcolm Knowles, who died at age 84 from a stroke at his home in Fayetteville, Arkansas, on Thanksgiving Day. From his organizational work
as the first executive director of the Adult Education Association of the United States (now the American Association for Adult and Continuing Education) to his development of the theory of andragogy in adult learning, Knowles arguably contributed more to the development of the professional field of adult education than anyone else in the 20th century. Fortunately, his legacy lives on in the 21st century through the seminal publications he wrote and the work of thousands of adult educators who have studied and learned from his work.

CONCLUSION

Overall, the year 2001 was a sad one for the nation, including the adult education and literacy field. Many ESOL students of Arabic backgrounds or of the Islamic faith felt threatened and bewildered by the bombardment of news about terrorism, causing additional stress among teachers already stretched to the breaking point to serve the million-plus ESOL students with very limited resources. On adult education and literacy Internet electronic mailing lists, teachers and students alike sought ways to cope with the aftermath of September 11.

The hopes for significant increases in federal resources for the Adult Education and Literacy System fell by the wayside as projected surpluses in the federal budget turned to projected deficits. For this reason, even the small, inflation-adjusted increase in purchasing power of 4% for the AELS was unanticipated and greatly appreciated. Congressional delays in passing the education budget left administrators and those who rely on federal funds for their work wondering what they would be able to do in the coming year.

This mostly dreary report notwithstanding, there were encouraging signs for the future of the field. New organizations sprang up to help advance the field; national, state, and local events to advocate for adult education and literacy were pursued with as much optimism as could be mustered under the circumstances; new research pointed toward new practices in reading and ESOL instruction; and various agencies actively pursued a literature review and planning mode that resulted in new plans for research and the improvement of practice in the coming years. All of this suggests that if things change for the better—that is, if adequate resources become available for public awareness, educational provision, staff development, research, dissemination, and development—a more positive note may be sounded in the year in review for 2002.
REFERENCES


ONLINE RESOURCES

Additional information on the following subjects can be found at the Web sites listed.

CAAL: www.caalusa.org
EFF project: http://www.nifl.gov
GED tests: www.gedtest.org
Health literacy: www.healthliteracy.com
ILN: www.theiln.org
NCSALL: http://ncsall.gse.harvard.edu
NTL: www.literacyonline.org
Partnership for Reading: www.nifl.gov/partnershipforreading
ProLiteracy Worldwide: www.proliteracy.org
William F. Goodling Institute for Research in Family Literacy: www.ed.psu/goodlinginstitute/about.asp
Workshop on Alternatives for Assessing Adult Education and Literacy Programs: http://www4.nas.edu
In an address to members of the national organization of adult learners, Voice for Adult Literacy United for Education (VALUE), Dr. Thomas G. Sticht stated a truism: “The Adult Education and Literacy System serves the powerless.” Although estimates of the number of adults with low literacy in the United States vary, no one denies that these adults are primarily the working poor and public assistance recipients, and they are disproportionately represented by people of color and immigrants. Moreover, the majority of adults enrolled in literacy programs are women. Thus, adult basic education (ABE) serves primarily those individuals likely to have had restricted access to opportunity and power, not only because of their socioeconomic class but also because of the dynamics of racism and sexism in our society. Although no figures are available on the sexual orientation of literacy learners, Kerka (2001) reported that gay, lesbian, bisexual, and transgender students also present issues that should be of concern to adult educators.
The socially constructed categories of race, gender, class, and sexual orientation not only locate individuals and groups within global, national, and local social structures, they also establish social identities that shape people’s experiences and cultures. The prevalence of poor people, people of color, immigrants, and women in ABE programs, along with growing concern about issues of sexual orientation, situate the work of the field within “interlocking systems of power and oppression” (Tisdell, cited in Imel, 1995, p. 1). Social inequality described and experienced along lines of race, gender, and class helps to determine who needs literacy instruction, who gets it, how these learners experience it, and what impact it has on their lives. Moreover, both individuals and policymakers in U.S. society expect literacy to remedy the effects of and ultimately reduce social inequality. At the same time, educators may be mandated to teach in ways that reinforce, rather than transform, differences of class, race, gender, and sexual orientation that affect the life chances of learners.

This social context of ABE—along with the identities and social locations of its teachers and learners, the political economy of funding for its programs, and the differential rewards its learners reap from educational achievement—raises concerns for adult educators regarding pedagogy, curriculum, and policy. In this chapter I identify these dimensions of ABE, beginning with the demography of low-literate adults in the United States and in ABE programs and what this demography reveals about the intersection of ABE with gender, race, class, and sexual orientation. The history of ABE and its association with struggles against inequality are reviewed as a backdrop for the discussion of how and whether ABE programs and classrooms provide literacy instruction that challenges or reinforces inequalities of race, class, gender, and sexual orientation. Examples of pedagogical approaches that question these pervasive forms of inequality are provided. The chapter concludes with recommendations for research, policy, practice, and advocacy at classroom, program, and policy levels.

THE DYNAMICS OF DEMOGRAPHY IN ABE

The dynamics of racism, class inequality, sexism, and homophobia influence the lives of everyone in the United States, including their access to

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1This review is intended as an overview of race, gender, class, and sexual orientation in ABE, not as an exhaustive exploration of each of these complex issues. Clearly, each kind of inequality merits more study and could be the subject of an article or book on its own.
literacy. As Fine (1997) pointed out, educational research and popular discourse on inequality read as if racism affected only those in minority groups and sexism affected only women. She pointed out that the racism experienced by people of color in U.S. schools could not exist without the simultaneous privileging and “advantaging” of Whites and Whiteness by the same educational institutions.

Although indicators of class, race, and gender are separated out in the discussion that follows, readers should keep in mind that these factors act in concert in their effects on our institutions and our lives, as described in the section that follows on education, employment, and inequality. Race, class, and gender clearly affect the power of individuals to successfully negotiate educational institutions and to reap the rewards for having done so. This is reflected in the relative poverty and predominance of people of color among those with low literacy. Gender presents a more complex picture; in K–12 and at the community college and college levels, women appear to do better than men, although sexism is apparent in the predominance of men at graduate levels, not only in such traditionally male fields as engineering, math, and science, but also in traditionally female fields such as adult education, including ABE. Finally, socioeconomic circumstances remain strong predictors of educational success across race and gender, and educational achievement is a strong predictor of employment success. The latter ensures that individuals with low literacy are more likely to be poor; in an economy moving away from industry and toward information, this is increasingly likely to be so. The connections between sexual orientation (being gay, lesbian, bisexual, or transgender) and literacy, and between sexual orientation and education and employment, are not as well studied. We do not have data on the sexual orientation of those participating in literacy programs. For these reasons, sexual orientation is not as prominent in the discussion that follows.

Class

Sticht (2002) noted that some 4,000 organizations operate programs funded by the Adult Education and Family Literacy Act (Title II of the

Perhaps this introductory review will spark the kind of research and writing that would inform such work.

2In this chapter, the term adult education refers more broadly not only to ABE (including literacy, English for speakers of other languages [ESOL], and adult secondary education [ASE] or General Educational Development [GED] preparation) but also to postsecondary education and training programs commonly offered by community colleges, degree and certificate programs, and vocational schools.
1998 Workforce Investment Act) and that these programs (formerly funded through the Adult Education Act of 1966) served about 31 million learners from 1992 to 1999. Of these students, Sticht told us, 7.9 million were the working poor, 3.3 million received welfare, 9.3 million were unemployed, and 2.2 million were incarcerated. More than two thirds of 15 million enrollees between 1992 and 1996 did not complete 12 years of education or receive a high school diploma, and 3.4 million were immigrants (Sticht, 2002). Although these categories cannot encompass all of the features of class, they are reasonably approximate indicators of its strongest marker, socioeconomic status.

Table 2.1, which shows figures from the U.S. Department of Education, Office of Vocational and Adult Education, Division of Adult Education and Literacy. Retrieved from http://www.ed.gov/offices/OVAE/9499hinvest.html#char

<table>
<thead>
<tr>
<th>Year</th>
<th>Working Poor</th>
<th>Unemployed</th>
<th>Welfare Recipients</th>
<th>Homeless</th>
<th>Yearly Total Served</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995–1996</td>
<td>1,017,268</td>
<td>1,196,866</td>
<td>436,212</td>
<td>38,113</td>
<td>4,042,172</td>
</tr>
<tr>
<td>1996–1997</td>
<td>1,026,395</td>
<td>1,103,475</td>
<td>383,116</td>
<td>30,326</td>
<td>4,017,272</td>
</tr>
</tbody>
</table>


1998 Workforce Investment Act) and that these programs (formerly funded through the Adult Education Act of 1966) served about 31 million learners from 1992 to 1999. Of these students, Sticht told us, 7.9 million were the working poor, 3.3 million received welfare, 9.3 million were unemployed, and 2.2 million were incarcerated. More than two thirds of 15 million enrollees between 1992 and 1996 did not complete 12 years of education or receive a high school diploma, and 3.4 million were immigrants (Sticht, 2002). Although these categories cannot encompass all of the features of class, they are reasonably approximate indicators of its strongest marker, socioeconomic status.

Table 2.1, which shows figures from the U.S. Department of Education, Office of Vocational and Adult Education (OVAE), indicates characteristics related to the class of individuals served by ABE between 1995 and 1998. Individuals in severely economically disadvantaged categories accounted for more than one half to nearly two thirds of learners served over these program years.

In terms of overall national literacy needs, data from the 1992 National Adult Literacy Survey (NALS) indicate a close relationship between low literacy and dependence on public assistance. Dependence on public assistance indicates poverty, difficulty in obtaining and sustaining employment, and/or wages so low that assistance in the form of monetary aid or foods stamps is required. Although NALS data were collected prior to the initiation of welfare reform, the economic prosperity of the late 1990s, and the consequent entry of many public assistance recipients into the workforce, these data remain the best available on national literacy and economic

This figure is a composite of all those served during those years and does not indicate 31 million different individuals.
dependency. In their summary of NALS findings in this regard, Barton and Jenkins (1995) noted the following: “The likelihood of being on welfare goes up as literacy levels go down; the two are intertwined. In the general population, the higher the literacy levels, the greater the number of weeks worked during the year, the higher the average weekly wage, and the higher the annual income. The same pattern holds true in the welfare population” (p. 3).

These statements support the integral relationship between social class, as indicated by income and earning capacity, and likelihood of literacy. As NALS data show, the average literacy skills of public assistance recipients are much more limited than those of the general U.S. population; in fact, they lie below those of the least skilled workers.

The NALS uses Prose, Document, and Quantitative literacy scales ranging from 1 to 5, with 1 representing the lowest level of literacy. Half of welfare recipients performed at this level, with another one third scoring in Level 2 (Barton & Jenkins, 1995, p. 3). Although literacy level and education acquired are related, they are not coterminous, and about one half of the welfare recipients surveyed by the NALS did not graduate from high school (p. 5). This was twice the national percentage at the time.

Current trends in wages and the relationship between wages and education reflect widening disparities along lines of class. Between 1976 and 1996, the median earnings of 25- to 34-year-old men without a high school diploma fell by 30%, whereas earnings of 4-year college graduates increased by a range from 60% to 133% (Tyler, Murnane, & Willett, 2000, p. 2).

According to the Bureau of Labor Statistics (2001), 6.8 million of the 32.3 million people living at or below the official poverty level were in the labor force in 1999. These individuals are the working poor. Although the vast majority (70%) of working poor are White, at nearly all major educational attainment levels women were more likely than men and Blacks more likely than Whites to be among the working poor. As might be expected, the risk of being among the working poor declines significantly for those with a high school diploma, and the risk for workers with associate and bachelor’s degrees is even lower.

**Race and Ethnicity:**
**Minority Populations in ABE**

In the literature on race and education, individuals of African descent and those of Hispanic or Latino ethnicity—indeed all people who are classified
as non-White—are often lumped together and referred to as *minorities*. Only from a narrow U.S. perspective do people of color constitute minorities. From a global vantage point, those of European descent are in the minority, and this is increasingly so. The term *minorities* is used in this chapter only when others are quoted. Likewise, the term *race* is treated as a social construct that advantages and privileges those of European descent and phenotypic Whiteness as it disadvantages those outside of this ideologically fashioned norm. Owing to restrictions in length, issues of race are discussed broadly as they pertain to individuals outside this norm. Regrettably, in setting a context that establishes inequality, it is not possible to devote space to the myriad ways in which the experiences of people of African descent, Latinos, Asians, and American Indians differ.

Data recorded by the OVAE on ethnicity (U.S. Dept. of Education, 2001) are shown in Table 2.2. Note that in 2000 Hispanics alone outnum-bered Whites, whereas Hispanics and Blacks together accounted for more than one half of all learners served in that year. These figures should be considered relative to national figures collected in the 2001 census. The latter indicate that among the U.S. population as a whole, Whites make up 75.1%, Hispanics or Latinos 12.5%, African Americans 12.3%, Asians 3.6%, American Indians or Alaskan Natives 0.9%, and Native Hawaiians or Pacific Islanders 0.1%. Thus, we see that people of color are disproportionately represented among those both in literacy programs and in need of literacy (see Table 2.3) when compared with their representation in the general population. Although concern about the participation of African Americans relative to literacy needs has been an issue in ABE (D’Amico, 1990), 2000 data show an increase from 4% to 5% over the preceding 3 years in African-American enrollment numbers reported by the OVAE.

<table>
<thead>
<tr>
<th>American Indian/ Alaskan Native</th>
<th>Asian/Pacific Islander</th>
<th>Black, not of Hispanic Origin</th>
<th>Hispanic</th>
<th>White, not of Hispanic Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>47,359</td>
<td>490,944</td>
<td>704,719</td>
<td>1,524,294</td>
</tr>
<tr>
<td>1997</td>
<td>46,558</td>
<td>482,604</td>
<td>664,952</td>
<td>1,590,278</td>
</tr>
<tr>
<td>1998</td>
<td>42,333</td>
<td>481,037</td>
<td>662,109</td>
<td>1,663,984</td>
</tr>
<tr>
<td>1999</td>
<td>51,466</td>
<td>384,975</td>
<td>621,914</td>
<td>1,469,218</td>
</tr>
<tr>
<td>2000</td>
<td>48,532</td>
<td>214,698</td>
<td>614,475</td>
<td>1,029,608</td>
</tr>
</tbody>
</table>

Quoting early figures released by the 2000 census, then Director of Adult Education and Literacy Ron Puglsey (Tilghman, 2001) reported in his weekly *Thursday Notes* to the field that enrollments in ESOL rose by 42% during the last 10 years and that an estimated 70% of fiscal year 2000 instructional costs were spent on ESOL and ESOL/civics instruction. Although some ESOL students are born in the United States, many are immigrants. Thus, the fact that students in ESOL classes outnumbered those in ABE and ASE in most recent years (see Table 2.4) should not be read as a clear indicator of the proportion of immigrants to native-born adults served by federally funded basic education programs. As already mentioned, Sticht (2001) estimated that 3.4 million of the 15 million learners served by ABE from 1992 to 1996 were immigrants.

Because many immigrants to the United States are from developing nations, racism and anti-immigrant sentiments often combine to increase the discrimination they encounter in such U.S. institutions as schools and the workplace (Quiroz-Martinez, 2001, p. 17). Immigrants of color enter the race, class, and gender hierarchy of the United States in complex ways,
depending on relations between the United States and their country of origin, the needs of the global labor market, their legal status, their education level, and so forth. Census 2000 data indicate that 8 to 9 million illegal immigrants live in the United States, and more than one half of them are Mexican. Eighteen percent of all residents at least 5 years old speak a language other than English at home; 60% of these residents speak Spanish.

Immigrants who enter literacy programs vary in their eligibility for various kinds of programs and financial aid, in their ethnicity and language, the prior “culture” of their schooling, and other ways. The class background of immigrants varies, but even those well educated in their home countries may work at menial jobs because of lack of fluency in English, occupational or professional licensing issues, differences in education credentialing between the United States and their country of origin, and legal status. Some immigrants in the lowest literacy levels lack literacy and education in their native languages as well as in English. Thus, many immigrants work in low-wage jobs and experience the lack of power and opportunity associated with disadvantaged class status (Bacon, 2001, pp. 30–32).

In an article assessing cultural diversity in New York City, Askins (1993) reported that more than 140 different cultural and linguistic traditions were represented in the city’s publicly funded literacy programs during the 1991–1992 program year. U.S.-born and Dominican learners made up the largest groups, accounting for 30% of New York City program participants, and those born in Russia were the third largest group, making up 14% of ESOL learners. Dominicans, Haitians, Colombians, Ecuadorians, and Puerto Ricans were found in both ESOL and ABE classes, with more Puerto Ricans enrolled in the latter than the former. The top 10 countries, in terms of numbers of learners in programs at that time, were the Dominican Republic, the United States, Russia, Puerto Rico, Haiti, Colombia, China, Ecuador, Jamaica, and Mexico (p. 1). Although data on country of origin are not available for the adult literacy system as a whole and New York City is far from typical, these data hint at the diversity possible in classrooms and programs.

**Gender**

Women outnumber men in ABE programs nationally and in most states. In 2000, for example, women outnumbered men in programs in 35 of the 50 states and three of the four U.S. territories that collect such data, and in no state or territory did women constitute less than 41% of enrollees.
Overall for that year, women made up 52% of ABE students. Similarly, women constituted the majority of ABE learners in 1998 and 1999 (U.S. Department of Education, 2001).

The NALS reported in 1993 that about equal percentages of men and women scored in the lowest level of Prose, Document, and Quantitative scales. Although access to training for particular careers may be segregated by gender as well as race and class, it is also true that women appear to be slightly more successful students overall than men. According to a March 2000 U.S. Census Office Update, 30% of young women had completed college, but only 28% of young men had done so. Among adults in the workforce, moreover, men generally scored lower than women using Document and Prose literacy scales and outnumbered women in the lowest level of literacy overall. Yet, more women than men consistently participate in adult literacy and ESOL programs.

Sticht (2002) summarized the data on men in ABE programs as follows: Men make up a larger proportion of adults without a high school diploma, and men in the workforce are less literate than their female counterparts. Although men are more likely to say they do not read well, they are less likely to enroll in programs, to show up if they do enroll, and to persist once enrolled. Age mediates this gender difference in relation to ABE, such that men between the ages of 16 and 24 outnumber women, but the proportion shifts as age increases. By age 60, women outnumber men by 34% in ABE programs.

These data raise a number of questions concerning literacy and participation in ABE programs by gender. Perhaps the existing employment opportunities and wages for men with literacy needs are greater than those for women. This explanation was given by an African-American woman participating in a focus group on recruitment and retention of African Americans in literacy programs. “Most of these jobs some of these black men got, they don’t have to read to do it,” she said. “Like construction, or working on the waterfront. Most of these people, black and white, don’t know how to read” (cited in D’Amico, 1990, p. 6). Men are more likely to have access to unionized jobs in heavy industry that do not require literacy but pay relatively well, although this is certainly less so since the industrial restructuring of the 1980s (Connelly, 2001). One reason why more young men are attending ABE programs may be the decline in the number of jobs for men with little education that pay wages that can support a family. Women, conversely, may have the added incentive of acquiring literacy and English language skills because they bear primary responsibility for children. However, the aging of children also frees women to enter...
programs as they get older, as reflected in the higher proportion of women that attend programs among those age 60 and older.

It may be that school itself, dominated by female teachers, is an environment in which men have difficulty. If men are more likely to have negative experiences in school, this would constitute a dispositional barrier to enrolling voluntarily in school as an adult. In a study of low-income, multiracial adolescent resisters to schooling, MacLeod (1987) noted the following:

As boys, [the subjects of the study] inhabit a subculture whose values receive . . . validation from the dominant culture. The cultural inversion employed to turn “bad” into “good” is based on a valuation of machismo taken to the extreme. . . . Lacking in nearly every category that defines success in America, the [subjects] latch onto and inflate the one quality they still have: their masculinity. (p. 143)

Perhaps gender expectations in U.S. culture magnify the shame men feel about not being able to read, write, and compute fluently. African-American women in the focus group study just referred to suggested that men might be ashamed to learn in front of women, backing up the assertion with the observation that men did go to school in the all-male environment of prison.

Among immigrant populations in ABE programs, attitudes toward gender, and consequently toward education for women, vary greatly from one culture to another. In a study of the cultural diversity of participants in programs funded by the New York City Adult Literacy Initiative (NYCALI), Askins (1994) reported that some women experienced “culturally sanctioned constraints and limitations on participation in adult education programs” (p. 14). Such “constraints” could entail physical abuse or conflicts around their housekeeping and child care responsibilities.

**Education, Employment, and Inequality**

The disproportionate number of African Americans among adults with low literacy reflects the influence of racism on the relationship between this population and educational institutions, practices, and policies in the United States. Africans who came to this country as enslaved laborers were legally forbidden to acquire literacy in many states and suffered inadequate educational facilities once legally entitled to public schooling. Despite the landmark Supreme Court decision in *Brown v. Board of Education* in 1954, African Americans have continued to fight for equity in
education on many fronts. There is a long literature on the experience of African Americans in schools, racial gaps in educational achievements and outcomes in the K–12 system, and possible causes and remedies for the latter (see Powell, 1997, for a review of this work). The following discussion illustrates the confluence among race, gender, education, and labor market outcomes.

Although levels of literacy and degree of success in the labor market are closely linked (Barton & Jenkins, 1995, p. 8), a 2001 study by the National Center for Education Statistics (NCES) on the relationships among educational achievement (as measured by scores on the National Assessment of Education Progress [NAEP], a test given to K–12 students), educational attainment (level of education or credentials earned), and wages indicates that race continues to influence the economic rewards an individual may reap as a result of educational success.

The NCES (2001) study contains data on samples of young adults taken between 1979 and 1992. Among young men, the Black–White gap in earnings doubled over this time period from 16% to 32%. However, among Blacks and Whites who demonstrated similar educational achievement, racial gaps in educational and employment outcomes were consistently smaller; in some instances, they disappeared. For example, among men with similar educational achievement, the Black–White gap was two fifths smaller than among men as a whole. Women had a significantly smaller overall gap in earnings by race, and for young women with similar achievement levels, either no racial gap appeared or, in some samples, Black women earned more than White women with similar educational achievement scores.

An interesting finding of the NCES (2001) study is that the postsecondary educational attainment of Blacks exceeded that of Whites with similar educational achievement levels on the NAEP. For example, Blacks earned high school diplomas or certificates of GED at equal or higher rates than Whites with similar test scores, and they attended college at higher levels than Whites with similar achievement levels. For young adults with similar educational achievement, for example, Black attendance at college was 6% to 17% higher than White attendance. Moreover, Black college attendees completed college at a higher rate than Whites with comparable educational achievement. In the general population of young adults, in contrast, Blacks’ rate of college attendance was 4% to 7% lower from 1979 to 1989 and 10% lower in the most recent sample. Among all young adults who had some college, completion rates were consistently lower for Blacks, ranging from 13% to 19% lower.
The NCES (2001) report makes clear that educational achievement can mitigate, but not always erase, the impact of race on educational attainment and labor market outcomes. Although these findings support arguments for programs that increase Black educational achievement, educational institutions in the United States are currently turning out too few African-American high achievers. The real story thus lies with racial differences in achievement. Here, the overall findings of the report document persisting gaps by race in educational achievement, college completion, labor force participation, hourly wages, and employment. These gaps occurred despite some narrowing of scores between Blacks and Whites on the NAEP over the past 25 years and despite the fact that by 1997 Blacks and Whites remained in high school at similar rates (p. vi). The report suggests possible explanations for the gap, including differences in home and school environments, and concludes the following: “Achievement differences do not necessarily cause gaps in educational attainment, employment, or earnings, but they reflect a set of circumstances responsible for Black–White disparities in both the academy and the economy” (p. xv).

This conclusion and the NCES (2001) data hint at, but do not factor in, socioeconomic status, which has been shown to strongly predict educational achievement levels. Thus, socioeconomic status, in concert with the impact of racism, acts to perpetuate the maintenance of disproportionate numbers of African Americans in class circumstances likely to perpetuate low educational achievement. The motive for the higher percentages of Blacks who attain educational credentials, vis-à-vis their White counterparts at similar achievement levels, may be to reduce this impact of racism on labor market outcomes.

In an era when ABE outcomes are increasingly seen in terms of their impact on employment, these findings are important because they illuminate the complexity of the relationships between race, gender, education, and outcomes that influence class. They also parallel recent studies of labor market returns by race, gender, scores on the GED test and subsequent educational experiences of high school dropouts (discussed next).

Although a large body of data confirms the strong relationship between education level on the one hand and employment and wages on the other, this association is strongest for White men (Harrison, 1986). Explanatory factors for the role of race in the education–employment relationship include the poor quality of education many people of color experience, variation in patterns of occupational choice and job availability by race, and persistent segregation. Assessing the relative weights of these
factors, Fitzgerald concluded that "a large part of the problem lies . . . in continuing discrimination in hiring and compensation" (cited in Harrison, 1986, p. 1).

Likewise, in an analysis of publicly funded job training programs in New York City, Lafer (1992) documented the segmentation of labor by gender and race within the context of the city’s transforming economy and demography. Lafer’s data show that employers in key industries have responded to the increasing number of people of color in the labor force, despite the rise in educational levels among these groups, by “expanding the secondary labor market characterized by low wages and few opportunities for advancement” (p. 224). Based on his analysis of job training outcomes and labor market trends, Lafer stated that, in the effort to reduce poverty and expand employment outcomes for minorities, “vigorous affirmative action policies may prove more effective than job training” (pp. 229–230).

Gender, along with race, influences the economic rewards of education. Although income rises with education level, White men outearn White women and both men and women of minority groups at all education levels. Nonetheless—overall patterns of discrimination in hiring and wages notwithstanding—education still constitutes a way for White women and minority women and men to increase their earnings relative to their less-skilled counterparts. Tyler, Murnane, and Willett (2000) showed that wage increases by cognitive skill level among high school dropouts are greatest for men and women of color and are also greater for White women than for White men. Another way of saying this is that Tyler et al.’s research suggests that raising cognitive skills raises income level relative to other members of one’s gender and minority group status, but not relative to White men. Gender and race trump skills in the latter case, with White male privilege alone accounting for some part of income differential, as suggested in Roediger’s (1991) The Wages of Whiteness.

In a longitudinal study of female high school dropouts, those who obtained GEDs and went on to receive additional education or training experienced a payoff in earnings (Boudett, Murnane, & Willet, 2000). Ten years after dropping out of high school, women who obtained a GED within 3 years of leaving school showed an earnings gain of 25%; having a GED plus 1 year of training or college boosted income by nearly 50%. Although these findings support the value of education and are thus heartening for women, they are mitigated by the fact that even those women who acquired a GED and completed 1 year of training or college earned less than $8,000 per year, or only 87% of poverty-level income.
Moreover, although education can increase income for minority group members and White women, access to education and training is mediated by race, gender, and class. The rise in the cost of 4-year colleges and the corresponding restricted access to these institutions is common knowledge. Perhaps more relevant to adult learners is Schneider’s (1997) study of education and job training paths among public assistance recipients and dislocated workers, which documented differential access to training and education by race and class. Social networks shaped by race and class, work experience, and education level resulted in referrals to mandatory job development and job-specific skills programs for African Americans, in referrals to community college and tuition-based programs for Whites and Asians, and to exclusion from the training system for Latinos. Schneider concluded the following: “Dramatic differences in career training paths across race and nationality and gender reveal that patterns of discrimination as well as socialization toward certain kinds of employment persist” (p. 10).

These differences emerge in a recent study of racial disparities in the treatment of recipients of public assistance under welfare reform in Illinois, Florida, and Virginia. Forty-one percent of Whites and no Black recipients at all indicated that caseworkers encouraged them to go to school: One white respondent stated: “They encouraged me to get my GED. I’ve been in school since October, working on the GED. I hope to graduate in the spring. My worker kept telling me, ‘You’re smarter than you think.’ She really convinced me I could do it.” A black respondent stated: “They talk to you any kind of way. They say, ‘Go get a job.’ I told them I only had two parts left on my GED and I wanted to finish, they said, ‘That’s not what this program is about.’” (Savner, 2000, p. 4)

Experiences in school, the workplace, and other institutions present contradictory messages about how and whether education translates into employment and wage outcomes. Although increased education may raise an individual’s employment outcomes relative to peers, education by itself has not reduced the overall inequalities between those advantaged by Whiteness and the rest of the population or between men and women. And educational success continues to be heavily influenced by class. The distinction between education for individual success on the one hand and education directed at changing institutions to make them more just and inclusive on the other underlies issues of pedagogy in ABE, as discussed in the sections on ABE history and practice that follow.
Sexual Orientation

New research on sexual orientation indicates that 5% of men and 4% of women report having had a sexual encounter with a same-sex partner, and 2.8% of men and 1.5% of women identify themselves as homosexual or bisexual (Laumann, Michael, Gagnon, & Michaels, 1994). Although data on sexual orientation are not collected on learners enrolled in ABE programs, we can assume that at least these same proportions of ABE learners have had some homosexual experiences and identify themselves as homosexual or bisexual. In addition to learners who identify themselves as lesbian, bisexual, transgender, or gay are those learners who interact with gay-identified people in their lives outside the classroom, as well as learners who encounter lesbian or gay issues in popular culture. Moreover, heterosexism, or socially mandated heterosexuality, is intertwined with the larger system that marginalizes subordinated groups as just described. Mandated heterosexuality is part of the system of gender relations, for example, that defines women in oppressive ways, so that White lesbians face oppression because of both their sexual identity and because they are women. Gay people of color have the added subjugation of racism, and gay men in general are treated in ways that reinforce male supremacy by denigrating those men who fail to realize cultural norms of masculine identity.

Moreover, if negative school experiences get in the way of acquiring literacy, gay and lesbian youths are at higher risk than heterosexuals for low literacy. Hill (1995) pointed out that 45% of gay males and 20% of lesbian youths experience verbal or physical abuse and that 28% of those who have been harassed in these ways drop out of school (Telljohann & Price, cited in Hill, 1995). For many gay youths, abuse at school is compounded by their experiences with family members, who are responsible for more than one half of all assaults on gay youths. In fact, 26% of gay and lesbian youths are forced to leave home. Eighty percent of gay learners report severe fear and isolation (Eaton, cited in Hill, 1995), explaining in part the fact that gay youth are two to three times more likely to commit suicide than heterosexual youths. Up to one third of youth suicide has been attributed to gay and lesbian adolescent issues (Gibson & Kourany, cited in Hill, 1995). The likelihood of abuse at school and home during adolescence and the high incidence of dropping out may mean that the proportion of gay and lesbian adults in ABE programs exceeds that in the general population.
Hill’s (1995) extensive literature review documents the role of mainstream adult education⁴ in the reproduction of heterocentric hegemony at the expense of “gay resistance discourse” (p. 142). He credited largely informal means of education, namely popular and folk liberation education, with promoting “resistance education” (p. 148), or the reconstruction of knowledge in ways that confront stigmatization, discrimination, and self-hatred. However, these forms of education take place outside of formal education programs and institutions, occurring instead in independent gay educational and cultural organizations, service organizations, occupational associations, political organizations, the mass media, and the indigenous gay press.

Hill pointed to the formation of lesbian and gay special interest groups among education professionals in both K–12 and adult education as evidence that teacher concerns with issues of sexual orientation in the classroom are growing. Moreover, he argued that education has played both “emancipatory and oppressive” (p. 142) roles with respect to the gay and lesbian community, a duality that theorists of inequality also assert with reference to class, race, and gender. As Giroux (1983) pointed out, a primary function of schools is to reproduce both the dominant social ideology and the prevailing social structure. Yet, there is also a history within education of linking learning to social justice; in ABE, this tradition is represented by Freire, Horton, and others who advocated education that aims for social change. These contradictory threads underlie historical debates about the purpose of adult literacy and pedagogy in ABE, a subject to which we now turn.

RACE, CLASS, AND GENDER IN THE HISTORY OF ABE

The history of ABE, in light of the race, class, and gender characteristics of those it has served, is as contradictory as its current state. Quigley (1997) noted that arguments for ABE as social policy have been associated with social regulation of subordinate groups and with building consensus, unifying the nation, and enforcing mainstream notions of moral behavior. Characterizing the 19th century as one of “fear and loathing,” he pointed out the association of illiteracy with social crisis and impending disaster (pp. 71–72).

⁴Again, the term adult education is meant to encompass all forms of ABE and also refers to postsecondary, degree, and certificate and vocational programs aimed at adults.
The association of literacy with knowledge and power had its counter-part in the denial of both literacy and power in the institution of slavery. The maintenance of slavery rested in part on “the power of the master to forbid education” (Goodell, cited in Quigley, 1997, p. 75). The first law to confirm this power, passed in South Carolina, stated:

Whereas having slaves taught to write, or suffering them to be employed in writing, may be attended with great inconveniences; be it therefore enacted . . . that all and every person or person whatever, who shall hereafter teach, or cause a slave to be taught, to write, every person or persons shall, for every offense, forfeit the sum of one hundred pounds of current money. (Goodell, cited in Quigley, 1997, pp. 75–76)

Anti-education laws were so pervasive and successful that by the end of the Civil War, even though African Americans sometimes risked their lives to attain literacy, only 5% of the enslaved could read. According to Chisman (2002), “the fact that most slaves were denied education provided the impetus for the first national literacy movement” (p. 3). This movement enlisted White and Black organizations from the north, including Quakers and the African Methodist Episcopal Church, and the freed African Americans of the south, along with some agents of the federal government and the Freedman’s Bureau. Literacy for adults was as great a concern as literacy for children, such that the demand for literacy exceeded the supply of teachers, books, and schools. The sacrifices made by the Black community to support this movement are legendary; however, the movement for literacy collapsed in the national backlash following Reconstruction, as literacy tests became a way to restrict the franchise for African Americans.

In the second half of the 19th century, literacy became embroiled in immigration issues, and Americanization programs were proposed to bring English and literacy to immigrants. The YMCA, one organization that sponsored such programs, gave as its rationale: “Unless we can assimilate, develop, train, and make good citizens out of them, they are certain to make ignorant, suspicious, and un-American citizens out of us. Unless we Americanize them, they will foreignize us” (Carlson, cited in Quigley, 1997, p. 79). Quigley summarized the policy on literacy up through the 1920s as an increase in federal legislation to regulate low-literate adults, with a strong sense of pity for them at the local level. However, Reid (1999) traced the education programs for immigrants set up by settlement houses to a more progressive belief in education for all, although he noted that many schools barred new immigrants—especially immigrants of color—from attending.
The Depression of the 1930s ushered in a new era of social programs sponsored by the federal government, including literacy programs. The Civilian Conservation Corps not only provided jobs for the unemployed but also offered thousands of undereducated and illiterate young men classes in literacy. In 1934, Dr. Ambrose Caliver, an African-American graduate of Columbia Teacher’s College, wrote the Magna Carta of Negro Education, which asserted the rights of African Americans to equal education. Although this government-endorsed document remains “one of the few moments when government, clearly influenced by one committed person, employed literacy social policy for the redistribution of social justice” (Quigley, 1997, p. 82), the political climate soon changed. During World War II, justification for literacy was framed as important to both self-defense and the productivity of the labor force, and the 1950s continued this association of literacy with human capital development.

Social policy often reflects a social engineering and regulation perspective on ABE, but literacy learning was also associated with the voting rights movement. Septima Clark and Bernice Robinson implemented Citizenship School programs for this purpose during the civil rights movement. Rosa Parks, initiator of the legendary bus boycott of in Montgomery, Alabama, had prior to the boycott attended a workshop at the Highlander Center, the well-known civil rights educational organization in New Market, Tennessee, under popular educator Myles Horton (McWhorter, 2001, pp. 90–95).

The civil rights movement, and the decision favoring equal access to education embodied in Brown v. the Board of Education (1954), also raised the issue of literacy with regard to race. Funding for ABE was first institutionalized in the Economic Opportunity Act of 1964 as part of the host of programs designed to produce the Great Society articulated by then President Lyndon Johnson. Although many of these programs resulted from the struggle for equality by African Americans, they also revealed that the nation had a large population of undereducated adults (Chisman, 2002, p. 7).

Literacy was also associated with equal status for workers, with worker education developing along with the movement to establish unions in the United States. The liberatory power of education for subordinate groups has long been recognized and encouraged by social justice movements that have included literacy in their work, unions among them. More recently, unions have formed partnerships with management to address the literacy needs of workers in the context of changing workplace demands in particular industries as well as in the restructuring of work nationally. Global competition, new technologies, downsizing, the demise
of manufacturing, and the rise of service and information industries have raised the demand for literacy in the workplace. Increasingly, individual workers need to upgrade skills and education to remain employable, as the expectation of long tenure in any given job is reduced. The loss of traditional union jobs that accompanied the industrial restructuring of the 1980s led unions to demand retraining allowances for workers in their negotiations with management. During this decade, funds for joint labor–management education programs became part of collective bargaining agreements. The resulting programs, run as independent nonprofit entities, now constitute the second largest postsecondary source of education after the college and university system (Connelly, 2001).

Currently, the growth of unions depends on organizing new immigrants and involving more members in active campaigns in communities and industries. This trend toward union democratization requires that workers apply literacy and skills to union building (Chenven, 2001, p. 3). Expressing the spirit of the new worker education at a meeting of steelworkers involved in the Institute for Career Development, the industry’s labor management joint education and training fund, Bruno (2001) said the following:

To triumph over politics, or international commodity and financial markets, steelworkers have to conceptualize themselves as worthy and capable of doing work that embodies the unity of conception and execution. It means understanding that steelworkers are not ill educated, possessing less than average intelligence or saddled with little or no honorable skills. The archetypal steelworker named Dutch, whom Frederick Taylor—the father of modern industrial work organization—tempted over a hundred years ago into mindless beast-of-burden work for a few additional shillings, has long since perished. Today, steelworkers are expected to participate in decision making and become computer literate, and operate sophisticated computerized equipment. (p. 4)

Quigley (1997) characterized social policy on literacy as having evolved from an emphasis on regulating subordinate groups in the 19th century to an emphasis on social engineering in the 20th century, with “fleeting attempts to use literacy education for the redistribution of social justice” (p. 71). Examples of the latter would be the freedman’s schools that began during the Civil War; the central role given to literacy learning in voter registration during the civil rights movement; the role given to education by unions in their struggles to increase wages, benefits, and rights for workers; and the efforts of those engaging in Freirian and other popular education pedagogies that link learning with community
empowerment. The Highlander Center, which Rosa Parks attended in the 1950s, has been a hub of literacy for social action and 3 years ago hosted the formation of VALUE, the first national organization of adult learners, whose mission is to raise the voices and power of learners in the field of literacy education.

There continues to be tension between those who aim social policies at reforming the poor, workers, immigrants, and people of color into productive yet compliant citizens and workers and those who support movements for equal rights and social justice among these groups through an engaged literacy directed at questioning and challenging the status quo. This tension is present in debates over the role of education in welfare reform (D’Amico, 1999), typologies of ABE pedagogy (Quigley, 1997), definitions of literacy (Shultz, 1997), discussions of policy (Cervero & Wilson, 2001), and the classroom. It is also evident in larger debates in education concerning the impact of changing demography and demands for inclusive pedagogies and curricula.

These debates span K–12 schools through colleges, law schools, and graduate schools, and they concern both curriculum content and pedagogical approach. Among adult educators, Quigley (1997) identified four working philosophies that underlie literacy practice: vocational, liberal, humanist, and liberatory. The vocational philosophy takes a view of learning that focuses on performance skills and clearly measurable behaviors. Emphasis is on recall and recognition of information. Liberal approaches ground literacy education in the cultural knowledge of the Western world and view literacy as a means to enlightenment and enriched quality of life. Humanist literacy educators, whom Quigley argued are the largest group among adult educators, focus on learners’ values, beliefs, and attitudes, and they aim to raise learner self-esteem and motivation. Liberatory adult educators see the process of acquiring literacy as a means for personal and social change. For these educators, developing a critical consciousness is inseparable from learning to read, and the goal of education is for learners oppressed by their race, class, gender, or sexual orientation to recognize the sources of their oppression and to work with others to change these conditions.

Adult education thus sits squarely at a crossroads of contradictions. Arguments for increased funding for the field claim, with reason, that access to ABE supports employment, family literacy, and the empowerment of marginalized communities. Yet, the field itself suffers from marginalization, being handicapped by a lack of funding that reflects the unequal distribution of power and resources that education is purported to
change. Moreover, it is asked to raise education and employment levels in a context that rewards these achievements disproportionately, according to race, class, and gender. Added to these contradictions are the class, race, and gender composition of teachers and administrators on the one hand and learners on the other. Both oppressed groups and the powerful support and use literacy, albeit for different ends, thus giving rise to the contradictory tangle of programs and policies that characterizes the history and current situation of ABE.

**Race, Class, Gender, and Sexual Orientation in ABE Practice**

Cervero and Wilson (2001) proposed “three starting points that, when linked together, offer a map for understanding the fundamental issues of practice in adult education. . . . (1) There is a reciprocal relationship between power and adult education, (2) adult education is a site of struggle for knowledge and power, and (3) all adult educators practice with a social vision” (p. 10).

Cervero and Wilson’s (2001) starting point for the discussion of adult education practice also makes a good point of departure for a discussion of ABE practice as it is influenced by issues of power surrounding race, class, gender, and sexual orientation. The preceding part of this chapter established as a context for this section the first point just stated—“the reciprocal relationship between power and adult education”—by looking at the role these forms of structural inequality play in determining who needs literacy, who participates in literacy programs, how wider social relations are expressed in the impact of education on employment, and how these forms of inequality intersect as individuals seek both education and employment success.

The relationship between education and power has been implicated in the discussion of why the field fails to reach millions of adults who need literacy. Explanations for this failure have been classified as situational (concerning factors associated with adult learners’ lives, e.g., work schedules, the need for child care or transportation, fear of traveling at night in neighborhoods considered dangerous, and health issues), dispositional (having to do with attitudes, beliefs, or feelings regarding past education, e.g., negative school experiences, or influenced by education, such as motivation to learn and belief in one’s ability to learn), and institutional
(having to do with characteristics of programs, e.g., location, schedule, and curriculum).

Gender, race, class, and sexual orientation can affect all of these factors. Situational barriers, for example, might involve the uncertain schedules low-wage workers sometimes have to keep or the fact that they have to work two jobs to support a household. Gender issues might influence the ability to attend programs because of lack of child care, given that women still bear primary responsibility in this area. Moreover, poor health is linked to poverty and low literacy as well as to groups disadvantaged by gender and race. Recent welfare reform policy assumes that low-wage workers can and will continue their education while working—a difficult endeavor for many low-wage workers, particularly those responsible for children or plagued by ill health (Strawn, Greenberg, & Savner, 2001). Paradoxically, those who most need additional education, individuals trapped in low-wage jobs whose incomes cannot support families, can have great difficulty attending classes. Although programs can try to accommodate such learners with flexible scheduling, distance learning options, and on-site child care or referrals to child care programs, the removal of situational barriers involves working for national policy change in welfare reform, minimum wage laws, child care, and access to education for adults. This section of the chapter focuses instead on programmatic aspects of ABE as these affect dispositional and institutional barriers, with the goal of inspiring change that challenges barriers to literacy among adults.

The ways in which race, class, gender, and sexual orientation can influence dispositional resistance to participation in education programs are suggested by theorists who see educational institutions as sites for both reproducing these inequalities and for waging struggles over the content, conduct, and outcome of education. The logic of resistance runs counter to the view of schooling as a means of developing social relations and calls for struggle against, rather than submission to, domination (Giroux, cited in MacLeod, 1987). In poignant terms, Quigley (1997) described his work on resistance, which includes a study of resisters to school drawn from literature:

It became obvious that in each of the novels and short stories, the protagonist’s resistance to school was more than just a rejection of school . . . it was a positive quest for freedom that each protagonist undertook with absolute conviction and, in some cases, with risk to reputation and even life. In their eyes, resistance to school meant a determination to stay true to the beliefs and values of their own culture, their own race, or their religious heritage.
Instead of conforming to what they saw as the spurious values promoted by schooling, they resisted authority as they saw it. The protagonists were seeking to gain the liberty to follow a culture, a value system or lifestyle that they held to be superior to that of school. (p. 201)

Similarly, in his work with ABE learners, Quigley (1997) noted that dispositional barriers emerge within the first few weeks of enrollment and that these grow out of a felt discrepancy between the experience of the program and the learners’ known world. This discrepancy has to do with learners’ rejection of a world they perceive to be dominating, oppressive, and uninterested in their perspective rather than with a rejection of education or literacy per se. Adult learners whose experiences with early schooling were negative because of their race, class, gender, or sexual orientation are likely to vote with their feet when participation in ABE recalls these experiences. How can educators signal to adult learners the differences between themselves and those oppressive institutions? That is the question to which we now turn.

No national data on ABE staff are available by gender, race, class, or sexual orientation. Figures are available for the number of full-time and part-time paid staff and volunteer staff, and they indicate that between 1996 and 1998, 36% to 48% of full-time staff were volunteers, and 13% to 20% of full-time staff were paid. From these figures, we see that ABE programs consist predominantly of part-time staff and volunteers, indicating that the marginalized status of the field extends to its staff. Nevertheless, by virtue of the fact that they have acquired literacy and must in many states and programs have also acquired teacher certification or a college degree, staff usually differ from students in class privilege, if not always in income.

Although no statistics on ethnicity or race exist, a few studies shed some light on racial differences between learners, teachers, and other program staff. In a 1996 national evaluation of teacher training funded by Section 353 legislation, which targeted training of full- and part-time staff in adult education, a survey of staff of participating ABE programs was conducted (RMC Research Corporation, 1996). More than 700 teachers responded. Although this sample is not representative, the figures on ethnicity are interesting. Of those responding, 74% were White, 13% African American, 9% Hispanic, 1% American Indian or native Alaskan, and 2% Asian or Pacific Islander. Seventy-seven percent were women. The survey’s author noted that the incidence of minority population is lower than in the general population. The percentages also differ markedly from those of the national student population, with the exception of the percentage of
American Indians, which is 1% for both staff in this sample and for the student population. The smallest difference in percentage occurs between teachers (13%) and learners (16%) of African descent.

Research (D’Amico, 1995) done with staff on New York City programs in 1993 reveals a demographic profile little changed from that portrayed in the same city in 1985, with the exception of some increases in percentages of African-American and Afro-Caribbean staff (from 15% to 20.8%) and Hispanic staff (from 9.8% to 11.7%). Ethnicity of paid staff in programs was constant across job titles in the 1993 survey; however, the representation of people of color in counseling positions was higher than in other jobs. Although the sample of 360 paid staff and 303 volunteers was not representative, the fact that the proportions were roughly similar to those among staff of New York City public schools and full-time employees of City University strengthen its credibility. Table 2.5 compares the demographic profiles of staff, volunteers, and learners (D’Amico, 1995).

Taken together, the national survey of programs and the data on New York City suggest that staff of ABE programs—perhaps especially paid staff—do not fully reflect the diversity of learners. Staff tend to be predominantly White; but in large urban centers like New York City, learner populations may be primarily people of color. However, these data do not account for current staff demography nationally, and there are at least some states where African Americans hold high leadership positions.

In New York City, the gender of teachers and learners is more evenly matched, with 62% female students and 70% female teachers. The national sample suggests that although, overall, women make up a higher percentage of teachers than learners, they are a clear majority in both cases. Nonesuch (2001) noted the association of women with teaching at the lower levels of education and with nurturing. As Garber et al. (cited in

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Staff</th>
<th>Volunteers</th>
<th>Learners</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian/Alaskan Native</td>
<td>7 (1.9%)</td>
<td>4 (1.3%)</td>
<td>139 (0.3%)</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>17 (4.7%)</td>
<td>11 (3.6%)</td>
<td>5,992 (11.6%)</td>
</tr>
<tr>
<td>African American/Afro-Caribbean</td>
<td>75 (20.8%)</td>
<td>89 (29.4%)</td>
<td>15,025 (29%)</td>
</tr>
<tr>
<td>Latino</td>
<td>42 (11.7%)</td>
<td>10 (3.3%)</td>
<td>23,809 (46%)</td>
</tr>
<tr>
<td>White</td>
<td>208 (57.7%)</td>
<td>177 (58.4%)</td>
<td>6,798 (13.1%)</td>
</tr>
</tbody>
</table>

Note. From Staffing Patterns in New York City Adult Literacy Initiative Programs: Data and Directions, by D. D’Amico, 1995, New York: Literacy Assistance Center.
Horsman, 2001a) noted, “the majority of literacy workers, by far, are women. Perhaps this is not surprising, as literacy work is part of the field of education and a ‘caring’ profession, areas of work which have traditionally been seen as women’s work. Literacy work has traditionally been volunteer or part time and is frequently poorly paid and low status” (p. 20).

It can be said that the marginalization of the field has its source not only in the low status of learners (as seen by mainstream society) but also in the low status of most practitioners. As noted in Horsman (2001a), practitioners often take on the struggle of dealing with funding limitations, poor working conditions, and long hours because they are aware of how well off they are in comparison with learners.

Bailey, Tisdell, and Cervero (1994) examined the professionalization process in adult education for racism and sexism, and although their work encompasses forms of education other than ABE, including higher education, the implications for ABE are sobering. At the time of their research, 91% of full-time faculty at institutions offering doctorates in adult education in general were White; only 1.8% were African American. Similarly, 95% of the members of the Commission of Professors of Adult Education were White, and only 32% were women. The authors concluded, “Clearly, those who have the power to create and disseminate knowledge are members of white hegemonic culture” (p. 67). Moreover, these individuals act as gatekeepers for those seeking entry into the profession of adult education.

The issues arising from differences of class, gender, race, and sexual orientation between teachers and learners are complex. Relatively speaking, teachers are in a position of power in the classroom, and the layering of this advantage with White or male privilege, as well as with the higher educational status of the teacher, in most cases can affect learner comfort, participation, and outcomes. In a study of multicultural issues in New York City programs, Askins (1996) reported the following:

Students indicated that even subtle feelings of being different from teachers could be painful. They spoke of teachers who assumed cultural knowledge which they did not have, often in classes where teachers did not encourage students to ask for clarification. Some students extended this criticism to teachers they genuinely liked and respected. Several said that even “good” teachers sometimes made them feel very uncomfortable. Even small things, like a teacher laughing at something they did not understand, highlighted differences in cultural understandings for students. For several, these small injuries were as difficult to accept as more overt sensitivities. (p. 40)
In discussions and focus groups with students, the attitudes of teachers were the most important cultural issue for students. Students expected teachers to respect them, to try to understand their backgrounds, and to make them feel welcome and at ease. Although resolving the issues stemming from differences of race, gender, class, and sexual orientation is not simply a matter of matching teachers and learners according to these experiences and characteristics, educational research supports the importance of teachers and leaders of color to the recruitment and persistence of students of color (Richardson & de los Santos, 1988). A recent study conducted by Texas A&M University and the University of Texas examined 350 multiracial school districts in Texas from 1991 to 1996. Students from schools with a higher percentage of minority teachers were compared with those at schools with fewer teachers of color. The study used test scores to measure student performance and controlled for such factors as poverty level, expenditures, and teacher qualifications (online at nifl-povracelit, doc. 444, March 24, 2001). Other studies have also found that students of color fare better with teachers of color (see, e.g., The Dreamkeepers by Gloria Ladson-Billings, 1994), but the positive association between White student scores and higher numbers of minority teachers was a new finding, supporting the idea that a multiethnic faculty is of value to all students.

Tisdell (2001) defined the power differential between teachers and learners in terms of “positionality: how aspects of one’s identity, such as race, gender, class, sexual orientation or ableness affect how one is positioned relative to the dominant culture” (p. 148). Attention to these kinds of social structural references reminds teachers that “adult education is not practiced on a neutral stage” (Cervero & Wilson, 2001, p. 6). Cunningham questioned the validity of approaches that “center on the learner as if learners are disembodied creatures and as if the social context, the social structures, the social class in which we all exist do not affect the process” (cited in Cervero & Wilson, 2001, p. 5). More political approaches, such as those advocated by Paolo Freire, Myles Horton, Septima Clark, and others, not only make these connections between learners, teachers, and their social contexts, but also see education as part of the struggle to redistribute power more equitably.

In her analysis of why racism and sexism persist in adult education, Amstutz (1994) listed three major reasons:

1. A discrepancy between language and behavior, such that politically correct attitudes and use of words such as *empowerment*
substitute for positive action that changes practice and inequalities in the classroom and elsewhere.

2. A lack of experience with and sensitivity to other cultures. If adult educators have little contact with people of color outside of the classroom and have not examined sexism in their own lives, then they will likely reflect only the white middle-class culture from which most come. As members of the group considered the norm, it is natural to assume this experience is universal.

3. Faith in institutional practice. Many educators unwittingly place great faith in institutional practices and do not see racism or sexism unless it is overt and intentional.

Amstutz (1994) suggested that staff development strategies should help educators admit to and examine their own biases and frame questions that help them see beyond accepted relationships. Informal staff development, or activities that take place outside formal workshops and seminars, might include mentoring and peer coaching that enable teachers to experience a consciously antiracist and antisexist approach, cultural settings other than their own, and guided critical self-reflection. The role of staff developers regarding these less formal kinds of activities is to identify resources and options for staff who want to pursue these opportunities to learn and change. Responses to a survey of participants in a National Institute for Literacy (NIFL) online discussion group about poverty and race indicate the interest in such issues among adult educators (online at nifl-povracelit, doc. 483, May 13, 2001). Participants indicated a desire to learn about effective and innovative program practices, resources, and reading materials and about examples of teaching, community building, and organizing around issues of poverty and race in adult literacy.

As the content of this online discussion group demonstrates, teachers are thinking about issues of inequality not only between themselves and learners but also among their colleagues. Drennon’s (2002) work with practitioner inquiry groups documents the way in which unresolved and unacknowledged issues of power affect practitioner inquiry groups, whose model for operating parallels that of participatory practice with learners. The extent to which teachers could function as a learning community was affected by the race, class, gender, and sexual orientation of participants as well as by their responsibilities within the group and to larger institutions. Descriptions of either teacher or learner inquiry groups that are constructed as if they are not part of a structured social reality suggest “a balance of power not typically reflected in groups” (Drennon, 2002a, p. 63).
Likewise, although the literature of ABE subscribes to an ethos of treating adults as equals in the classroom, it fails to acknowledge that educators, by treating the distribution of power in the classroom uncritically or as a given, reproduce unequal power structures. If all learners are to thrive, educators must go beyond their role as facilitators to negotiate the power dynamics of the classroom (Johnson-Bailey & Cervero, 1998, cited in Drennon, 2002a).

**PROGRAM PRACTICES AND PEDAGOGICAL MODELS**

As Taylor (cited in Imel, 1995) noted, “I just changed completely from when I first entered school. I used to take this little African body and force it into this European square peg. And you know, it didn’t work. I kept trying to do it and trying to change who I was and tried to fit in. . . . When I finally decided to be the person that I am, I started feeling more comfortable” (p. 1). Taylor began by expressing the connection between race, structural inequality, and school failure; she could not squeeze herself into the one-size-fits-all concept of education because that one size was based on the dominant White European norm. In concluding, she expressed a level of comfort with herself that many ABE programs hope to inspire in learners. Although Knowles (1980) introduced the concept of the learning environment and the work of Quigley and others established the importance of learners’ first impressions of programs, writers more recently have emphasized attention to the dynamics of race, class, gender, and sexual orientation. This section reviews this literature and focuses on what programs and providers can do to address issues of power.

**Race- and Gender-Conscious Teaching: Insights From Feminist Pedagogy**

Because the majority of adult learners in the United States are women, the insights of feminist pedagogy are useful to adult educators. Tisdell (1993) summarized the major concerns of feminist pedagogy as follows: (a) to teach women more effectively, so that they develop a sense of their ability to effect change in their lives; (b) to emphasize connection and relationship to, rather than separation from, the knowledge learned, the facilitator, and other learners; and (c) to encourage women’s emerging sense of personal power. Feminist pedagogy is thus, by definition, emancipatory. It empha-
sizes the value of daily experience and of situating knowledge in the context of learners’ lives. It attempts to accomplish this by making use of instructional materials that foreground the experiences of women and people of color, as well as curricula that deal with the unequal use of and access to power in the larger society. Feminist pedagogy also pays attention to the ways power is enacted in the classroom—both between the teacher–facilitator and learners and among learners.

Hayes and Flannery (2000) pointed to the lack of work focusing on women as adult learners and the few studies of curricula in adult education. However, they noted that Quigley and Holsinger (1993) found evidence of sexism, racism, and classism in adult literacy instructional materials: Women were represented less frequently than men, fewer than half had stated occupations, and those who did work were found in stereotypically female jobs. Hayes and Flannery, who stressed the importance of female instructors and the presence of other women as learners in creating a comfortable climate for women, nevertheless pointed out that in the case of literacy instruction, where women predominate both as teachers and learners, female instructors often differ from learners in racial, cultural, and class backgrounds.

An example of how these differences between teachers and students can affect learning is found in the workplace literacy class described by Gowen and Bartlett (1997). As emancipatory education approaches emphasize voice and participatory pedagogy, Gowen and Bartlett developed their class along the lines of what the literature suggested were the preferred learning styles of women and African Americans. However, the assumptions about personal disclosure embedded in such techniques as having learners work in groups, develop critical literacy by examining political aspects of their lives, and engage in writing and sharing these writings did not take into account the constraints on the lives of women experiencing domestic violence. Citing two stories of the intersection of literacy and abuse among women in literacy programs, one of which resulted in a woman shooting a man who was abusing her and the other in the rape of a woman who had formed a support group within her GED class, the authors concluded that “working with women survivors requires special skill, sensitivity, and an awareness of the sometimes fatal consequences of literacy and empowerment” (p. 150). They reminded us that “change is never easy, and true power is dangerous as well as liberating” (p. 153).

Pointing out that low literacy, economic dependence, and abuse intersect in the lives of many women, Gowen and Bartlett (1997) learned that the trust and comfort necessary for abused women to participate more
openly in learning take time. They cited the example of a woman who wrote in her journal for many months before sharing and ultimately publishing her story anonymously. This learner moved from private writing and revision to sharing with the teacher. She explained her previous lack of participation in goal setting and other activities as follows: “Before, I didn’t have any goals. The secret [of being abused] took up all my space for goals. Now, I don’t have a secret, and I have goals” (p. 147).

As Gowen and Bartlett’s (1997) work makes clear, although the traditional model for education is based on a male cognitive style and reproduces socially constructed gender roles, alternative and emancipatory forms can present problems for female learners as well. The emphasis in critical literacy pedagogy is on actively engaging the world, and the world can put female learners “at odds with the culture’s very narrow prescriptions about femininity” (p. 152). The point is not to revert to business as usual in the classroom but rather to add the awareness that critical pedagogy may present conflicts for women, particularly women in abusive situations. The latter were sobered by their realization of how many of the things common to women’s lives are constructed very differently by race, class, and gender, and how this affected their best-laid plans for combining liberation and learning.

Gowen and Bartlett’s (1997) experience shows how important it is to be aware of surrounding circumstances in learners’ lives, lives that may be very different from those of instructors. For example, female learners must often negotiate with their family for the time they devote to education, sometimes sacrificing their limited free time, sleep, and health to acquire education while still meeting the demands of their household and their work.

Horsman (2001b) did extensive work on how the trauma of abuse and violence affect women learners in Canada. She noted the way in which women’s dependence on men, rooted in low wages and the restrictions of public assistance, leads to violence, echoing the work of researchers who see the combined effects of gender, race, and class on poor women’s lives as a kind of “structural violence.” Horsman noted the contradiction of the promise of literacy, which is unlikely to be fulfilled given the lives of poor women and the ways in which training programs designed for them instead “embed them more firmly in their current lives” (p. 13). American women on public assistance voiced a similar realization when they argued for community college education over training programs that they knew from experience would lead only to low-wage jobs with unstable working conditions (Churchill, 1995).
Research conducted by the Canadian Congress for Learning Opportunities for Women confirms that violence acts as a barrier to women’s literacy learning. Yet, violence is surrounded by silence in North American culture. The impact of violence on learning is largely unacknowledged and rarely discussed. Horsman’s (2001b) experiences, and those of the literacy workers with whom she has discussed the issue, resonate with Gowen and Barlett’s (1997) conflicts over how to teach effectively around issues of violence. Some women do not want to talk about or acknowledge violence in their lives, and others need to talk. Horsman (2001b) noted that creating space for naming violence may mean focusing on joy, healing, and learning, which builds strength that supports students in resisting violence and control. “Yet literacy teachers still question how to most usefully open a recognition of the presence of violence without pushing women to speak when they would prefer not to and without becoming complicit in silences that leave women isolated and ashamed” (p. 15). The assumption that not speaking or doing anything to resist abuse is the safer, wiser course should be challenged. Horsman asked literacy teachers to take this into account in their own responses, questioning what message is conveyed if a woman’s bruises are met with silence. She asked that literacy programs reconsider the relationship between healing and learning.

As Horsman (2001b) and Gowen and Barlett (1997) pointed out, thoughtful adult educators do not merely encourage student voice or participation; rather, they give thought to the idea of “voice” as talk in the classroom. They want to provide women with multiple avenues to voice uncertainty and understanding, including opportunities for private talk and private writing. They give thoughtful attention to when and why and among whom to foster group work, as well as to setting ground rules for discussion that open space for everyone to talk but do not make anyone feel forced to talk. The literature on feminist pedagogy is a rich resource for understanding the nuances and complexities of classroom behavior that make practicing critical pedagogy problematic (Hugo, 2000).

This literature also points out the dissonance between conventional theories of adult learning and the findings of research on how women learn. Likewise, Colin (1994) noted that in adult learning and development courses, models of African American development in the context of a racist society are ignored. Instead, life cycle and life span models are taught as if everyone experiences them in the same way. Flannery (1994) noted that andragogy and theories of self-directed learning emphasize individual autonomy and assume that all people can, should, or want to achieve this kind of freedom as learners. Like some other critics of these
theories, Flannery pointed out that they reflect Western, White, middle-class, and male values and are culturally based in the idea of achieving status through individual achievement.

Flannery (1994) quoted Gilligan and other theorists who assert that women have fundamentally different ways of knowing and learning that are rooted in their relationships with others. She urged adult educators to move toward a “multilayered and comparative construction of social realities” (p. 22), arguing that current theories are not based on the experiences of women and people of color. She offered the following questions as ways to interrogate classroom practice and content: Did I create a text that considers the experiences of people of different gender, race, class, and sexual orientation, or did I clearly acknowledge the fact that a text represents one kind of experience only? Have I allowed differences to exist, rather than placing them in competition with each other? Have I included knowledge different from my own? Have I had people with different experiences review my work for bias? What do I do when opposing viewpoints challenge me? Do I ask people different from me how they perceive me, and do I have what it takes to hear what is said, rather than dismissing their feedback? Does my work multiply political spaces and prevent the concentration of power? What has been muted, repressed, or unheard? Have I confronted my own evasions and raised doubts about any illusions? Do I assume universals in what I teach without checking them out? What is written and said about women and people of color with regard to the beliefs that guide my practice (pp. 23–24)?

Flannery also advocated looking at one’s own behaviors in and out of the teaching or learning environment. She cited the following comment by an ABE teacher: “Oh, I don’t pay any attention to the Hispanics in the class . . . they don’t want to learn. They just come here to be together and socialize” (p. 24). This reflects a near universal belief that learners who want to learn listen to the instructor and do not interact, dismissing the possibility that there may be other ways of learning. Adult educators are encouraged to broaden their knowledge base by learning about diverse experiences and theories and by listening for the missing voices in their classes and curricula.

Sheared (1994) offered a model of instruction that combines attention to gender and race. Noting that to give students a voice means acknowledging different realities and understanding that there are different interpretations of realities, she introduced the notion of polyrhythmic voice. This multidimensional idea of voice allows individuals the full expression of their class, race, and gender identities. The two assumptions in which
Sheared’s “womanist” perspective is rooted as follows: Concrete experience is used as a criterion of meaning, and dialogue is the basis for assessing knowledge claims. The latter has much in common with feminist pedagogy in its reliance on connectedness rather than separation in the process of creating and validating knowledge. A manifestation of this connectedness is a call and response environment (analogous to what happens in Black churches when the congregation participates in a kind of dialogue with the preacher) that expresses both understanding and an emotional response, joining cognitive and affective dimensions of classroom discourse. This perspective reflects gender awareness as it enhances the instructional process, embedding sensitivity to gender in patterns of relations in the classroom rather than in dialogue about it (p. 35).

**Class Bias in Workplace Literacy: Insights From Worker and Union Education**

Class bias is perhaps most evident in the notions surrounding workplace literacy. In most discussions of workplace literacy, the perspective of employers is paramount and unquestioned. Employers’ assessments of worker literacy, their standards for literacy regarding particular jobs, and their definitions of the soft skills workers need are accepted uncritically (Darrah, 1997; Hull, 1997; Shultz, 1997). Most of the goals, curricula, and assumptions of workplace literacy programs never take account of worker perspectives on jobs and workplaces, and they are not based on research. (For a complete discussion of why companies provide workplace literacy programs, see chap. 3.) As Hull (1997) noted,

> Despite an increasing interest in preparing people well for the jobs of the future, and an ever-present concern about workers’ skills—or the lack thereof—the public discourse on skills and work is rarely informed by research that attempts to describe the knowledge and know-how required in today’s workplaces, including the ways in which language- and literacy-related activities are embedded in work. Nor do we often document in helpful detail the successes and failures of education and training programs designed to prepare or repair workers, or explore the intersection of the desire to acquire skills with the opportunity to acquire and use them in the workplace. (p. xiv)

With the exception of joint labor–management programs funded by collective bargaining agreements that take into account the needs and goals of workers as well as those of employers, much worker education in the 1990s fits Mojab’s (2001) description:
The political and economic upheavals of the 1990s have left their mark on the field of adult education. A major source of change is the globalization and restructuring of the capitalist economy, which make extraordinary demands on education in general and on adult education in particular. The changing economy calls for the reorganization of adult education into a training enterprise fully responsive to the needs of the market. (p. 23)

The distinctions between education and training are important ones; the former is defined as development of knowledge, skills, mind, and character, and the latter is associated with narrower learning, such as making the learner proficient in particular tasks defined by the trainer. Training has been associated with animals, whereas education generally refers to humans (Rich, cited in D’Amico, 1999). Butler (2001) noted the blurring of lines between work and learning, including the now common use of business terms, such as outcomes, in education. She cited Deleuze’s idea that although the corporation has replaced the factory, perpetual training—framed discursively as lifelong learning—has replaced education. Deleuze saw the regime of performance indicators and measurement in education, the shift from learner assessment to system accountability, the ever-increasing insertion of vocational education into schools (as in school-to-work programs), and the primacy of competency-based forms of knowing as evidence of growing corporate hegemony in education. Butler concluded the following:

Adult education, and especially work-related education, offers limitless potentialities and dangerous opportunities. There are many ways of remembering histories and shaping futures, none of them impervious to acts of power and freedom. How do we think and talk and learn and teach about work? Are we learning workers? Do we consider our worker–learner–students to be knowledge workers, humanware, generic workers, or human terminals? (p. 79)

Such theorists raise the question of whether adult educators will accept the corporate or market-driven reframing of our work—and the extent to which we have already done so unwittingly. When and if we do, we take on a class interest radically different from that of our learners, who are for the most part low-wage workers who increasingly go without any shield or intermediary who represents their interests over those of their employers. The demise of unions over the past few decades has put workers largely at the mercy of global corporations that move jobs to locations with the lowest wages and poorest working conditions. It was this race to the bottom that America’s Choice: High Skills or Low Wages, the report of the
Commission on the Skills of the American Workforce (1990) sought to reverse. Yet, as Grubb (1995) noted, many community colleges have designed training curricula around the needs of local employers only to have graduates become employed by companies that do not compensate them for their training. We can educate adults to develop their literacy skills, but can we explain why it is that increasing numbers of full-time workers earn wages below the poverty level? Adult educators need to be aware of the class-based realities learners encounter in the workplace. If we present an unambiguous or unrealistic picture of the rewards that literacy education delivers in the workplace, then we will again be introducing dissonance between our words and our learners’ lives.

Such dissonance violates what Bruno and Jordan (1999) saw as a fundamental principle of adult education: To be effective with people who have real-world experiences, educators must narrow the distance between student as object and student as subject. Central to the effective teaching of working-class adults is seeing them as active creators of meaning in the context of their own experiences. The job of the teacher is to connect the life experiences of students to the larger social, political, and cultural context, using student knowledge as the starting point.

“A way of teaching is never innocent. Every pedagogy is implicated in ideology, in a set of tacit assumptions about what is real, what is good, what is possible, and how power ought to be distributed” (Berlin, cited in Bruno & Jordan, 1999, p. 153). Accordingly, Bruno and Jordan noted that when teaching working-class students, educators should approach them not only as individuals who function in society but also as people with the power to recreate their society. This is a far cry from the functional content of much workplace literacy, as well as from curricula on soft skills that teach uncritical compliance with behavior and dress codes of employer and corporate culture. The next section offers practitioners concrete examples of literacy learning that support the power of learners to challenge the contemporary distribution of power.

**CURRICULA AND CLASSROOM: PRACTICAL SUGGESTIONS**

As Horsman (2001b) noted, “The promise of literacy is the promise of access to a different life” (p. 14). This promise is a difficult one to keep, and the presence of racist, sexist, corporate, and heterosexist hegemony in curricula or the classroom makes it even more elusive. Following are some
suggestions for classroom work and curricula designed to challenge that hegemony. All of the sources cited here agree that the use of participatory approaches relevant to learners’ lives, be it their lives as women, as people of color, or as workers attempting to rethink their position in the workplace, is essential in teaching literacy. As Mev Miller pointed out in the NIFL’s discussion group on poverty and race (online at niff-povracelit, doc. 487, May 15, 2001), participatory learning addresses dispositional barriers identified in the literature on resistance to schooling: “‘I won’t learn’ becomes a way (conscious or not) of resisting what [learners] perceive as enlistment into their continued subjugated place in the status quo.” What would be the effect on women learners, she asked, if they were given access to materials at the appropriate reading level that addressed the concerns of their daily lives? Miller lamented the fact that female learners in ABE and GED classes are reading assignments that correspond to educational and political mandates to make learners responsible citizens and compliant workers. She noted that when she brings easy-to-read books on women’s issues into the classroom, female learners react as if she had “dropped a bag of candy on the table.”

Similarly, most of the contributors to the volume Teaching Working Class (Linkon, 1999) advocated the use of films, books, role playing, and theater exercises that make use of stories with which learners can identify. Learners of the same gender, class, or race as the protagonists are drawn into such materials, and the materials also become a means of sharing such experiences with fellow learners.

A special issue of Change Agent (1999)5 includes many suggestions for resources and classroom activities around issues of race, class, gender, sexual orientation, and disabilities. In one article, two GED learners in a Boston program were asked whether materials having to do with gender and race were welcome or a distraction from the focus on test questions and materials. They concurred that such materials ultimately serve learners’ goals, inspire them, and prepare them for entry into a diverse and conflict-ridden world (Kallenbach, 1999).

In the same issue, Richard Goldberg (1999) described activities he uses with all-Asian classes, beginning with discussions of stereotypes and brainstorming lists of stereotypes of Asians and other groups. He follows this activity with a one-page story about a Chinese teenager who dresses in

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5The September 2000 issue of Change Agent contains a similar wealth of material on immigration, including topics such as globalization, immigrants and class, immigrant female workers, and immigrant workers’ rights.
a style associated with African Americans. Learners discuss the ways in which people make statements about who they are. Students are asked to write about how someone they know makes a statement through his or her appearance and to describe the reactions of peers. Students share stories and discuss what it means to cross cultural boundaries. The class then proceeds to a consideration of how the media stereotypes Asian women, using a video that examines the portrayal of Asian women in American films. Goldberg’s class is 80% female, and he conducts carefully planned pre- and postviewing activities around the film. Finally, he shows *The Shadow of Hate*, a film produced by the Southern Poverty Law Center about various forms of racism and ethnic hatred in U.S. history. He shows small segments as he builds background knowledge and uses the guide that comes with the film.

Also in the same issue of *Change Agent*, Anson Green (1999), a practitioner working in San Antonio, Texas, discussed using the novel *Push*, written by Sapphire (1996). (Her birth name was Ramona Lofton). It is the story of an adolescent African American who struggles with poverty, abuse, literacy, and HIV-positive status. Green noted that some learners opted not to read the book because of its strong language, but the novel encouraged others to become active readers and writers and to make important changes in their lives.

Galluzzo (1999) cited the usefulness of Linda Stout’s (1999) contribution to the issue, “Bridging the Class Divide and Other Lessons for Grassroots Organizing.” She reported that much of what Stout said about her experience organizing in rural North Carolina is applicable to the ABE learners in Maine with whom she works. Sharon Lee Tetrault contributed an exercise on exploring classism that takes place over two class sessions. The issue also contains articles that help teachers think about their own “positionality;” including Marie Horchler’s (1999) interview with two Massachusetts adult educators about “freezing moments.” The latter are classroom encounters in which issues of inequality and difference are raised in ways that made the teachers uncomfortable; the teachers who are interviewed analyze these as “teachable moments” (p. 2). In “Learning to Walk the Walk,” Rob Woronooff (1999) explored her experiences as a trainer in New York City public schools around issues of sexual orientation and includes an exercise in self-reflection intended to help teachers prepare to work across differences of culture, class, ethnicity, and sexual orientation.

In her story of a curriculum that went on the road, Lisa White Smith (1999) recounted what happened when Tennessee adult learners—diverse
by race, gender, and age—acted on their determination to visit the Holocaust Museum in Washington, DC. Their interest grew out of a curriculum on the Holocaust created by the Center for Literacy Studies in Tennessee. Learners raised money for the trip from organizations and through their own efforts, determined to see close-up the impact of this horrifying historic event. Their visit included a talk with a Holocaust survivor who earned a GED in the United States. The words of one adult learner—the member of a church that had been burned as part of a wave of burnings of Black churches in the South—make the connection between learning about and changing the conditions of inequality: “As a member of the Friendship M.B. church that was burned down in 1995, I have experienced the hatred of people who do not know me as a person. . . . My visit to the Holocaust Museum would give me the chance to teach my children, family, and congregation members how to build a bridge between the races here in Columbia, Tennessee” (Janice Shipp, cited in Smith, 1999, p. 8).

The literacy programs described in Change Agent all work to bolster learners’ power to change the conditions of their lives, but they function first as literacy programs. Popular education models address literacy issues only as they occur within the context of their main function, which is social change or community development work. In the history of ABE, as described earlier in the chapter, voter registration work involved the latter kind of popular education; the primary purpose was gaining the right to vote, and literacy was a means to that end. In the popular education model, the goal of social change provides the motivation to seek literacy. Since 1932, the Highlander Center has worked “to overcome poverty, bigotry, and economic injustice in Appalachia and the South.” In support of this agenda, Highlander practices a “special kind of teaching—helping people discover within themselves the courage and ability to confront reality and to change it” (Bill Moyers, quoted in the home page at www.highlandercenter.org).

Project South, Institute for the Elimination of Poverty and Genocide, is an Atlanta-based organization that defines popular education as a learning process that is inclusive and accessible to people at a variety of education levels. The institute helps people deal with problems they face in their own communities, moving them toward action and helping to develop new grassroots leadership. Project South makes use of nontraditional, multisensory learning, drawing from poetry, music, and visual arts to address the literacy issues that emerge as they work with each individual or organization.
Literacy South, an organization in Durham, North Carolina, acts as a bridge between community organizations and individuals who need literacy. It describes itself as inspired by the belief that illiteracy and poverty go hand in hand. The experienced, committed literacy practitioners serving Literacy South train representatives from other organizations dedicated to fighting poverty as literacy instructors, showing them how to set up reading classes as part of their work. Literacy South, currently not an active organization, has also produced reading materials appropriate to its mission and available from Peppercorn Press.

In their article on education and action research in Magnolia County, adult educators Reybold and Herren (1999) provided an example of a community project in rural southwest Georgia based on a participatory development model: “Put simply, action research is the way groups of people organize the conditions under which they can learn from their experience and make this experience accessible to others” (McTaggart, cited in Reybold & Herren, 1999, p. 3).

The project was designed to serve the traditionally underrepresented African-American farmers and youth in the area. The 10 educational modules developed for the project focused on communication skills, problem-solving techniques, goal setting, and long-range planning, all for the purpose of supporting the group processes necessary to community leadership. All community members who participated were African American; some were illiterate or semiliterate, two thirds had high school diplomas, and one individual had a bachelor’s degree. As with the popular education model, the goal was to make the project inclusive of all literacy levels. According to the authors, the project met its goals of “authentic participation” (“sharing in the way research is conceptualized, practiced, and brought to bear on the life world” of participants) and ownership (“responsible agency in the production of knowledge and the improvement of practice”; McTaggart, cited in Reybold & Herren, 1999, p. 10). Program participants established the Magnolia Youth and Community Coalition to lead community improvement efforts. One of the coalition’s achievements was writing and attaining a grant for a tutorial program for community members. Another was addressing the need for an African-American counselor in the local school system. Because the focus was on community change and development, the article does not detail how literacy needs were met in this context. Nevertheless, the example offers a popular education model implemented by a community with varying literacy among its members, under the direction of adult educators. Literacy is part of the strategy for community empowerment but not the prime focus of the work.
Presumably, the project addressed literacy by seeking and securing funding for ongoing tutoring and by ensuring that the needs of African Americans are better served in local schools.

As the work cited thus far illustrates, there are important differences between multiculturalism and antiracism, between helping students prepare for employment and questioning power in the workplace, between reading about women’s lives and taking action to change lives, and between teaching tolerance for differences of sexual orientation and questioning heterosexual hegemony in one’s own life. Doing the more critical kind of teaching and learning, which requires an awareness and critique of one’s own relationship to various forms of inequality, is harder. But it may be what is required to overcome the dispositional barriers to learning found among adult learners. Because this kind of education is difficult, I include three extensive examples in the sections that follow.

A Community-Based Approach to Critical Pedagogy

This example is taken from an article by Klaudia Rivera (1999), in which she described the approach to teaching and learning in the El Barrio Popular Education Program in New York City. Participants in the program, which Rivera administered between 1990 and 1996, were women primarily from the Dominican Republic and Puerto Rico who enrolled to learn to read and speak English, to improve their basic education, and/or to prepare for the GED. Most were mothers receiving Aid to Families with Dependent Children. Many were displaced workers from the garment industry. These commonalities shaped the curriculum in that it questioned and challenged the social and economic forces in the women’s lives and built on their strengths.

The El Barrio staff practiced a Freirian pedagogy that linked the development of literacy among participants with community organizing to address their immediate problems. The program employed both Spanish-language and ESOL teachers, and most were Latina and bilingual. Several former students worked in the program as teachers. In fact, by 1995, almost half of the program staff consisted of teachers who had experienced the participatory education philosophy as learners.

The curriculum was intentionally bilingual and biliterate, incorporating dialogue, reading, and writing in both English and Spanish with critical thinking, research, technology, and social action. It was organized around popular research units in which participants conducted investigations in
their own communities on topics that they considered important. The women decided on the research questions, methods of data collection and analysis, and presentation of results, which were documented on videos edited by the students and shown in the community and on public access television.

Video and computer technology were important elements of the program and were used by participants regardless of literacy level; they were trained to film, edit, and produce videotapes through grants and collaboration with public access television. Program participants chose topics for the videos. One, for example, addressed the experience of Latinas in the garment industry. Rivera noted that the videos became a transformative tool: “The women who made videos were no longer students learning to read and write and to speak English or exploited and displaced workers of the garment industry; they became informants on their own experience, researchers, and video producers” (p. 493).

Videos became the tool through which participants together contested and reclaimed reality, reappropriating their individual knowledge about working in sweatshops and collectively creating an empowering experience. Research units such as the one focusing on the garment industry connected the program and the community; members of the community educated participants about the issues affecting them, and the learners examined, researched, and then reflected and acted on these issues. The methodology thus broke down divisions between the community and the traditional classroom.

Perhaps the culmination of this work was the program’s participation in a class action suit against the City of New York for failure to offer literacy and ESOL services appropriate to Latinas with literacy skills below the 9th-grade level. This occurred as a result of the social services department’s attempt to remove a woman from the program because she was enrolled in both Spanish-language and ESOL classes. Thus, liberatory pedagogy led to an active challenge of the discriminatory practices that had perpetuated the association between working-class Latina women and lack of literacy.

Rivera (1999) noted that most students initially resisted the participatory methodology, expecting to be educated in traditional ways, so that pedagogy had to be negotiated. Eventually, teachers who had experienced the methodology themselves became effective advocates of it. To foster solidarity, both participants and staff were represented on all of the program’s decision-making bodies, and they contributed to hiring, funding, and programmatic decisions. In the process, teachers and learners
subverted the traditional dichotomy between subject and object in education.

**Sexual Identities in ESOL:**
**Queer Theory and Classroom Inquiry**

Cynthia Nelson (1999), a practitioner from Australia, described an attempt to use queer theory to generate inquiry-based learning in an ESOL class in an unidentified U.S. community college. Nelson defined *queer theory* as an emerging body of work that draws on poststructuralist theories of identity to shift the focus from advocating for civil rights on the basis of sexual orientation to analyzing mainstream cultural and discursive practices and from affirming minority sexual identities to problematizing all sexual identities. In other words, rather than merely adding curriculum about gay people and stirring it into instruction, queer theory proposes that the process of learning should question the meaning of all assumptions about sexuality and behavior; “Pedagogies of inclusion thus become pedagogies of inquiry” (p. 373).

Nelson’s (1999) questioning of pedagogies of inclusion has relevance to attempts to include any underrepresented group in mainstream educational practice and materials. She wrote the following:

> How is a lesbian to be represented in curricula and materials? Which characters or characteristics will be included, which excluded? If these representations come only from the target culture, are they sufficiently inclusive? Will teachers, teacher educators, and material developers have the knowledge to include sexual minorities? Will students consider such inclusions relevant to their needs as language learners? After inclusive references are made, what happens next? Who decides? (p. 376)

Nelson (1999) pointed to another issue related to inclusion: Aiming for tolerance or legitimizing the identity included is problematic because it presupposes intolerance and can serve to reinforce minority status. In contrast, she said, pedagogies of inquiry might involve:

> acknowledging that the domain of sexual identity may be important to a range of people for a range of reasons; examining not only subordinate sexual identities but also the dominant ones; looking at divergent ways of producing and reading sexual identities in various cultural contexts and discourses; identifying prevailing, competing, and changing cultural norms that pertain to sexual identities; exploring problematic and positive aspects of this identity domain; considering sexual identity in relation to other acts of identity and vice versa. (p. 377)
When presenting sexual identity within a pedagogy of inquiry, teachers are not expected to have all the answers but, rather, to frame questions and invite explorations. A focus on analysis rather than advocacy may more fully engage diverse learners and teachers as well. This approach encourages learners to question the apparently factual and elicits multiple perspectives and divergent knowledges. The posing of identities as acts, not facts, transforms the concept of sexual identity into something people do rather than something they are. Moreover, queer theory asserts that all people are implicated in producing and interpreting such identities, opening up the relevance of the topic for classroom discussion.

Analyzing the ways in which sexual identities are created through observable behavior encourages demystification of unfamiliar aspects of culture without reducing cultures to homogeneous or static traditions. Considering sexual behavior in more than one cultural context helps to specify rather than universalize what it means to identify sexually in particular ways.

As part of a research project on sexual identities as topics in ESOL classes, Nelson (1999) observed several teachers trying to address their concern about the impact of sexual orientation in their classes. Their aim was to make classroom work more relevant to learners who identify themselves as lesbian, bisexual, transgender, or gay; learners who interact with gay-identified people in their lives outside the classroom; and learners who encounter lesbian or gay issues through popular culture.

In the case described in her article, Nelson (1999) presented her classroom observation in three voices: those of the students, the instructor, and the observer—Nelson herself. The teacher facilitates a discussion based on a picture of two women walking arm in arm that was part of a student worksheet on modal verbs. The students discuss whether continuous tense is appropriate, as in “They could be lesbians.” The teacher then poses the question, “What about two men, 30 years old, holding hands. They’re brothers, holding hands, yes or no?” When students respond, “No, no,” the teacher’s question, illustrating the inquiry approach, is “How did you learn that?” A discussion ensues that raises questions about the same holding behavior in learners’ native countries.

Throughout, we are privy to Nelson’s (1999) thoughts on the discussion. In her analysis, she noted that the task was developed in a way that makes it potentially interesting to anyone, no matter what their views on sexual identities. Anyone in the room could speculate on the meaning of same-sex affection in the picture, and the task encourages multiple interpretations. The latter underscores the uncertainty associated with reading
sexual identities, and this is reinforced by having students discuss their interpretations in small groups and then compare them to those of the class at large.

By presenting the scenario as ordinary, the exercise makes it possible to introduce differences in sexual identity without marginalizing, defending, or valorizing them. The task frames the interpretive process, rather than the behavior itself, as problematic. Nelson (1999) concluded that an inquiry-based framework is useful because it theorizes sexual identities as culturally contextualized, readable acts rather than inner essences with universal meanings; as positionings (relational) rather than possessions (individual); and as relevant to everyone rather than only to gay people. In taking this approach, Nelson echoed Fine’s (1997) assertion that exploration of race is not possible without critically examining Whiteness.

Power, Literacy, and Motivation

In an article in Focus on Basics, Greg Hart (1998) described the experience of the Pima County Adult Education program in Tucson, Arizona, which sees literacy as a means to power and personal freedom and considers their achievement to be the strongest motivation for literacy learning. When practitioners in this program decided they wanted to do something to address the 50% dropout rate among learners, they held a series of discussions and retreats and concluded that they would invest their time, energy, and money in introducing power and civic engagement to the curriculum. The purpose was to acknowledge what learners know—that literacy in itself is not likely to effect great change in their lives—and then introduce them to tools of action that when used in concert with literacy could help them effect meaningful change.

Program staff turned to a local activist organization for help and began to convene meetings and forums with students to identify issues affecting their lives. Concerns that emerged included low wages, gangs and crime in neighborhoods, and alienation from schools in which their children were enrolled. Small groups of learners began to research these issues, analyze public documents, develop effective questions for public officials, and prepare speeches and position papers. As happened at El Barrio Popular Education Program, all of these investigative, analytic, and presentation activities developed students’ literacy skills.

Six student leaders took paid positions with the program as student advocates and mentors. Eventually, a core group of about 40 students and staff formed a group called Friends and Students of Adult Education.
Participation was through self-selection. Although many staff doubted the wisdom of proceeding in this direction, some of the most skeptical eventually became proponents.

The action approach has generated a number of successes. Student challenges to public officials to support literacy resulted in a statewide family literacy initiative, and their role in the development of citywide after-school programs nearly doubled the number of such programs. Students confronted officials over the decision to build a swimming pool at a local community center instead of building a long-promised adult education facility; they got both.

These and other successes have fueled students’ enthusiasm and boosted their skills. Hart (1998) cautioned that the program’s activism has made it some enemies and that attrition and student goal achievement statistics have not yet changed. Still, he concluded:

We have shown ourselves that linking literacy education with the notion of power transforms the perspectives and motivations of educators and students alike. We have seen people’s lives change and the lives of their families change. When GED student Lina Prieto, who questioned city and county officials, speaks powerfully to a room of 2,000 people, she knows she has the ability to influence the direction of her community; she has power. Her seven-year-old son, sitting in the audience, sees it too. When teachers see students involved in the civic process, they recognize that they themselves are engaged in meaningful work: they have power. When government officials see that the community they serve has a voice, they see that power belongs rightfully to the people. For the people at the Pima County Adult Education Program involved in this process, adult literacy education and power will never be separated from one another again. (p. 5)

CONCLUSIONS AND RECOMMENDATIONS

The International Conference on Adult Educators sponsored by the United Nations Educational, Scientific, and Cultural Organization (UNESCO, cited in Mojab, 2001) in 1997 outlined the following vision for adult education:

1. Only human-centered development and a participatory society based on the full respect of human rights will lead to sustainable and equitable development. The informed and effective participation of men and women in every sphere of life is needed if humanity is to survive and meet the challenges of the future.
2. Adult education thus becomes more than a right; it is a key to the 21st century. It is both a consequence of active citizenship and a condition for full participation in society. It is a powerful concept for fostering ecologically sustainable development, for promoting democracy, gender equity, and scientific, social and economic development, and for building a world in which violent conflict is replaced by dialogue and a culture of peace based on justice. (p. 38)

The impact of gender, race, class, and sexual orientation on ABE, as described in this chapter, is intertwined with the promise of ABE as a partner in the creation of a more just society, as stated in the UNESCO vision. How can ABE practitioners teach toward the creation of a world in which the literacy of adult learners will be politically valued and economically rewarded? How can we address the distance between our own experiences and those of learners? How can programs respond to policy and funding mandates and still practice holistic, humanistic, and emancipatory teaching and learning? What kinds of research and policy would support a form of ABE that would reduce the dissonance between the daily lives of adult learners and the world of literacy programs? The recommendations that follow point in the direction of answers, addressing the creation of a learning climate in which learners themselves take up these and other questions vital to their survival, success, and power.

Administrators and policymakers should ensure that literacy program staff reflect the community of learners and include current and former learners as part of paid staff in a range of positions. This means taking a new approach to the processes of recruiting, hiring, training, and more. It means providing national, state, and local opportunities for learner leadership. VALUE, the national organization of adult learners, aims to develop the leadership skills of learners ready to assume such positions. Programs and state adult education staff should support VALUE by joining the organization and facilitating access to membership for learners. VALUE should have a voice in every body of the field, from the board of the National Institute for Literacy to state adult education offices and local ABE programs. The board of VALUE itself is perhaps the only organization in the field that truly reflects learner diversity. On this issue, VALUE is already a leader, and the rest of us are only beginning learners.

Hayes (1994) outlined the components of a personal and professional agenda for change among practitioners, both of which are necessary to this vision of adult education. Her personal agenda includes increasing awareness of racism and sexism and making a commitment to change, increasing self-awareness and reflection; increasing affective learning, and devel-
oping and evaluating new behaviors that reflect these personal changes. Her professional agenda asks adult educators to make the subjects of racism and sexism an overt part of the curriculum, challenging institutional practices that foster White privilege; to form groups and networks as change agents and to collaborate with community groups; and to request and engage in long-term professional development for change.

With regard to pedagogy and curriculum materials, program directors need to seek out approaches and resources that will facilitate a questioning of the ideologies, institutions, and behaviors that perpetuate oppression on the basis of class, race, gender, and sexual orientation. Educators in the field need to understand that part of the reason for the dissonance that creates resistance to program participation on the part of students is related to recent research findings that classes are teacher dominated (Beder & Medina, 2000; Purcell-Gates, Degener, Jacobsen, & Soler, 2000).

Horsman (2001b) advocated developing separate classes for women as part of creating safe space for women who have been or are victims of domestic violence, and some of the women interviewed in a study of access to literacy for African Americans suggest that creating separate men’s groups would help men overcome their shame about needing literacy instruction. Beder and Medina (2000) noted that a class of women welfare recipients “were able to discuss gender issues on a personal level, something that probably would not have been possible had men been present” (p. 4). Although separate classes are probably neither fundable nor feasible, support groups, project-specific groups, or small-group work within classes might help to meet some of this need.

In ABE research, there is scant focus on issues of inequality in practice. More ABE journals should focus on class, race, gender, and sexual orientation in a way that speaks directly to what happens in the ABE or ESOL classroom; most of the journals consulted for this chapter concern adult education in the broader sense. The special issue of Change Agent (1999) that was discussed is an exception. Based on the classroom experiences of practitioners committed to critical examination of their work, the issue is a model of the kind of research and writing needed in ABE. Research on issues of inequality should include learner action research projects and foreground the voices of learners. Such work should attend to how White privilege operates in the field to reserve the best positions and highest degrees for those least like our students, and it should propose remedies that can change the existing hierarchy. Finally, research about and with adults who have literacy needs should examine the relationships between education, race, class, gender, and sexual orientation and clarify the role of
education in overcoming inequality. Too often, education is offered as a panacea without attention to other areas of policy or to features of the global economy that sustain inequality.

The lack of adequate funding and support of ABE in general and the reduction in access to education among prisoners (which affects poor men and men of color disproportionately) and public assistance recipients (which affects poor women and women of color disproportionately) aggravate the inequality in access to education among adults already disadvantaged by race, class, and gender. These political trends of the 1990s persist in part because of an underlying ideology that denies the impacts of oppression on people of color, women, and the poor and working class. Thus, education policy regarding adults and the marginalization of ABE can be seen as reflecting a conservative ideology that prefers to emphasize the role of the individual rather than recognize the structured inequality individuals may face by virtue of their race, gender, class, or sexual orientation. Similarly, the welfare reform policies of the 1990s reflect the view that failure to achieve economic self-sufficiency is primarily the result of a lack of will and effort rather than of structural barriers to overcoming poverty (D’Amico, 1999). Such beliefs reduce popular support for ABE and support the notion that individuals who have failed to achieve in school and the workplace have done so because of some lack of initiative on their part. It follows that to spend more public dollars on those who have already failed to take advantage of public schooling is to throw good money after bad. Adult learners, ABE practitioners, and policymakers must challenge this ideology with more than heartwarming stories of learners who have made it. Rather, we need to identify what stands in the way of those who do not come to or stay in programs and what hinders those who do. As we illuminate the sources of poverty in learners’ lives, we will need to make common a political cause with those who share this perspective.

Adult educators, who always seem to be fighting for the life of ABE programs, must consider joining forces, both nationally and locally, with other organizations that serve those disadvantaged by race, class, gender, and sexual orientation. The article by Greg Hart (1998) that was discussed offers a local model for such work, one that incorporates community activist work into instruction. In Philadelphia, the onset of welfare reform sparked such a local coalition. Unions, as well as civil, women’s, and gay rights organizations and other groups that address the inequalities learners face, can help the field in its struggle to fund and implement the services learners need. Historically, ABE has its roots at least partially in such
movements, and adult learners have a vital role to play in such struggles today.

Through such changes in our political strategies, classroom practice, and administrative hiring and decisions, ABE can begin to address the issues of class, race, gender, and sexual orientation that shape our work. If our programs position learners as world creators, history makers, architects of knowledge, and readers of the world and the word, we can create a pedagogy that fulfills the global vision of UNESCO for adult basic education in the 21st century.

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In recent years, increasing attention has been drawn to the plight of people with low levels of education. Since the 1970s, lower skilled workers have borne the brunt of economic changes that have left them worse off in both relative and absolute terms (Levy & Murnane, 1992). On this conclusion there is scant debate. There is, however, considerable debate over the proposed solutions. A perennial candidate is increased basic skills. For the adult population, this means continuing education provided outside of the K–12 school system. A key component of that education delivery system is workplace-based education and training programs.

It is the purpose of the chapter to sort through what is and is not known about company-provided training and to identify the implications for future practice and research. Specifically, I address the following:

- The extent to which companies provide basic skills training and their reasons for doing so.
- The distinction between basic skills training, broadly construed, and more narrowly defined workplace education programs.
The ways companies finance workplace education programs.

The impact of workplace education programs on companies and their workers.

The ways in which policymakers and practitioners can support more basic skills training by companies.

The ways in which research can build a foundation for effective basic skills training.

The overarching objective is to better understand the feasibility of engaging employers as part of a comprehensive system of lifelong learning for adults in need of skills beyond what they learned in primary and secondary school. My intent is not to focus on employers to the exclusion of traditional education providers. Indeed, companies often partner with education specialists, such as school or college teachers or independent consultants, to provide workplace-based instruction. Rather, the focus is on how workplace-based programs can expand the range of options available to adult learners, in terms of both location and funding.

DEFINITIONS FOR DISCUSSION

Many disciplines have perspectives that are relevant to this discussion, including but not limited to education, economics, management, and sociology. Unfortunately, each field has its own jargon that is not readily understood by outsiders. To try to minimize confusion, here are the terms I use in this chapter and their intended meaning:

- **Workplace basic skills**: The skills that are required for effective functioning in most jobs.
- **Workplace education**: The teaching of workplace basic skills.
- **Workplace education program**: Any program providing instruction in at least some basic skills that is located on-site at the workplace or is sponsored by the employer off-site.

One common definition of basic skills is provided by the National Adult Literacy Survey (NALS): “Using printed and written information to function in society, to achieve one’s goals, and to develop one’s knowledge and potential” (Kirsch, Jungeblut, Jenkins, & Kolstad, 1993, p. 2). The NALS definition in practice covers both basic literacy and numeracy skills as well as English-language comprehension; together these are often referred to as workplace literacy. Because the audience for this chapter is presumed to
be familiar with the NALS, I will use education, literacy, and basic skills interchangeably. For those unfamiliar with the NALS, its literacy levels are described briefly in Table 3.1.

Note, however, that the NALS does not include the soft skills (e.g., interpersonal and problem solving) and the computer skills needed for effective functioning in most jobs today. These are described in detail by Murnane and Levy (1996) in their book, *Teaching the New Basic Skills*, and I include them in the definition of basic skills used in this chapter. When needed, I draw a distinction, calling the former *foundation* basic skills (literacy, numeracy, and English-language comprehension) and the latter *advanced* basic skills (interpersonal, problem solving, and computer).

It is also important to make the distinction between training and education. *Education* traditionally refers to school-based learning that focuses on broad skill development. *Training* traditionally refers to nonschool-based learning that focuses on narrowly defined tasks.¹

The lines between education and training are blurred in practice. This becomes clear as soon as one tries to classify vocational education (school-based, job-focused curricula) and workplace education programs into one or the other category. The distinction between these two terms is partly semantic; it also does not necessarily coincide with companies’ behavior toward skill development. Most companies are averse to providing education, broadly construed, because it is perceived as having no immediate impact on job performance. Consequently, even activities that might be defined as educational are referred to as training. U.S. companies spend billions of dollars on training yearly (Frazis, Gittleman, Horrigan, & Joyce, 1998), yet only 2% of all firms provide basic skills training, compared with 71% that provide some type of training (Frazis, Hertz, & Horrigan, 1995). Definitions aside, there are many examples of training programs that cover a broad range of basic skills, only some of which are directly related to job tasks (Bassi, 1994; Levenson, 2001). In other cases, tuition reimbursement programs encourage employees to obtain skills that may have scant relevance to their jobs. Whether the company acknowledges it or not, such programs appear to be more like education than training.

¹Corporate-based practitioners often make a further distinction between training and development, with the former referring to short-term, job-related skills and the latter referring to long-term, broadly applicable skills. For our purposes, I make no such distinction and refer to all such skills under the umbrella of training.
<table>
<thead>
<tr>
<th>Literacy Level</th>
<th>Technical Requirements</th>
<th>Examples</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Extracting a single piece of information from a relatively short text or document</td>
<td>Signing your name</td>
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<tr>
<td></td>
<td>Entering personal information on a document</td>
<td>Locating the expiration date on a driver’s license</td>
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<tr>
<td></td>
<td>Performing specified single arithmetic operations</td>
<td>Totaling a bank deposit entry</td>
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<tr>
<td>2</td>
<td>Matching, integrating, and contrasting information when minor distractors are present</td>
<td>Interpreting instructions from an appliance warranty</td>
</tr>
<tr>
<td></td>
<td>Making low-level inferences</td>
<td>Locating an intersection on a street map</td>
</tr>
<tr>
<td></td>
<td>Performing single arithmetic operations when the operation and numbers to be used are stated or easily determined</td>
<td>Calculating the total costs of a purchase from an order form</td>
</tr>
<tr>
<td>3</td>
<td>Locating and/or integrating information from a lengthy text or from one or more documents when irrelevant information and distracters may be present</td>
<td>Using a bus schedule to determine the appropriate bus for a given set of conditions</td>
</tr>
<tr>
<td></td>
<td>Interpreting graphs and schedules</td>
<td>Using a calculator to find the difference between regular and sale price from an advertisement</td>
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<tr>
<td></td>
<td>Performing arithmetic operations that must be determined from the terms used in the directive and that require using numbers that must be found in the material</td>
<td>Using a calculator to determine the discount from an oil bill if paid within 10 days</td>
</tr>
<tr>
<td>Level</td>
<td>Task Description</td>
<td>Example</td>
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<tr>
<td>4</td>
<td>Making multiple-feature matches and integrating or synthesizing information in</td>
<td>Determining the correct change using information in a menu</td>
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<tr>
<td></td>
<td>complex or lengthy passages</td>
<td>Using an eligibility pamphlet, calculating the yearly amount a couple</td>
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<tr>
<td></td>
<td>Making high-level inferences and considering conditional information</td>
<td>would receive for basic supplemental security income</td>
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<tr>
<td></td>
<td>Performing tasks that require numerous responses</td>
<td>Explaining the difference between two different types of employee</td>
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<tr>
<td></td>
<td>Performing two or more sequential mathematical operations where the operations</td>
<td>benefits</td>
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<td></td>
<td>to be used must be inferred or drawn from prior knowledge</td>
<td></td>
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<tr>
<td>5</td>
<td>Searching for and/or contrasting complex information drawn from dense text</td>
<td>Determining shipping and totaling costs on an order form for items in</td>
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<tr>
<td></td>
<td>Searching through complex displays that contain multiple distracters</td>
<td>a catalog</td>
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<tr>
<td></td>
<td>Making high-level, text-based inferences</td>
<td>Using a calculator to determine the total cost of carpet to cover a</td>
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<tr>
<td></td>
<td>Using background or specialized knowledge to interpret information or determine</td>
<td>room</td>
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<tr>
<td></td>
<td>the features of a multiple-operation mathematical problem</td>
<td>Interpreting a brief phrase from a lengthy news article</td>
</tr>
</tbody>
</table>

*Note.* From *Adult Literacy in America: A First Look at the Results of the National Adult Literacy Survey*, by I. S. Kirsch et al., 1993, a report prepared by the Educational Testing Service under contract with the National Center for Statistics, Office of Educational Research and Improvement, Washington, DC: U.S. Department of Education.

*A distracter is a plausible but incorrect piece of information.*
WHY COMPANIES TRAIN OR
THE THEORY OF HUMAN CAPITAL

To put the economics approach to company-provided training into perspective for those outside the field, it is useful to make a distinction between the theory behind it and the evidence on it. The discussion in this section is geared toward those readers who are interested in human capital theory and its predictions vis-à-vis basic skills training. Readers more interested in the practical issues surrounding workplace education (the evidence) may prefer to skip to the next section.

Any such discussion of the theory of why companies train would be remiss if it did not address the statement, “Companies will not pay for basic skills training.” Articulated often by academics and policy analysts and sometimes by practitioners and company representatives, this conventional wisdom is derived from economic reasoning that is rooted in Nobel Laureate Gary Becker’s (1964) theory of human capital. The confusion surrounding this observation is twofold. First, it turns out that the theoretical conditions under which companies will not pay for basic skills training do not always exist. Thus, the statement itself cannot and should not be viewed as irrefutable. Second, even though companies might not pay for basic skills training, many provide it.

Becker’s (1964) work on human capital is viewed as seminal, in part because it provides a systematic way of differentiating those skills for which companies provide training from those skills that employees are expected to acquire on their own. Human capital simply refers to the skills embodied in people that can be viewed as assets of the firm in the same way that machines (physical capital) and money (financial capital) are viewed. In addressing the issue of who is responsible for the provision of general versus specific skills, Becker provided a framework for identifying who receives the benefits of the skill acquisition. General human capital is any skill that raises productivity at more than one firm; specific human capital is any skill that raises productivity at only one firm.

However, the impact on productivity is only one part of the story. Becker’s (1964) theory also assumes that all companies pay the same price for each type of skill. This assumption is based on the idea that everyone shares the same information and perspective about how much the skills are worth in the labor market. The theory further assumes that as soon as workers learn a new skill, they can credibly and accurately communicate that information to prospective employers. With these assumptions in
place, the implication is that companies will be willing to finance investments in specific human capital but not general human capital.

**Specific Human Capital**

A number of problems attend the attempt to use the human capital model to explain all aspects of skill acquisition and its impact on the labor market. One of the biggest problems concerns the definition of specific human capital. In reality, only a miniscule set of skills can be said to have a positive impact on one firm and only that firm. Understanding who wields ultimate budget authority for spending decisions in the organization is one example. Knowing how to get things done without going through formal channels is another skill that is organization specific.

At first blush, some skills necessary to an organization’s production process might appear to be specific human capital. Examples include the details of how to create very specialized items, such as the software for the federal government’s air traffic control system. Although it may be true that only a handful of companies have such expertise, there is always more than one. In this case, then, the technical definition of specific human capital is violated. More important, the more highly specialized the skills, the easier it is for the workers to know where their alternative job prospects lie, which facilitates wage comparisons. For skills to qualify as specific human capital in the strictest sense, they must be unique to the organization and not to a product or production process that is also used by other organizations.²

**Dynamic Adjustments**

Another problem with the theory of human capital lies in the dynamic adjustments that industries and labor markets make in response to emerging skill demands. When a new technology is introduced, at least some new skills are typically needed. Take the case of the Internet. When the Web made its debut, companies that wanted to build Web sites had to find people who already knew how to program in Hypertext Mark-Up Language (HTML), or they had to encourage employees to develop those

²Stevens (1996) defined *transferable skills* as those that are neither firm specific nor entirely general. She provided a theoretical argument as to why firms would share at least some of the costs of training in transferable skills that are valued by some, but not all, other employers.
skills. I know of no study documenting how much of that skill development was financed by employers. But in the early days it was not clear that the Web would amount to anything like the ubiquitous resource it is today. Thus, it is safe to assume that most workers would have insisted that companies share the cost of HTML training so that they would not have to bear all the financial risks of learning a skill that might have little positive impact on their careers.

Today, in contrast, a presence on the Web is necessary for doing business. The demand for HTML programmers is many orders of magnitude greater than it was when the Web was launched. This has created a large enough critical mass of job opportunities that community colleges and technical schools across the country offer courses in Web design. Companies can now require such expertise before hiring someone, and this represents a shift of the financial burden for acquiring the skills onto the employee. It is an example of a highly specialized skill, the acquisition of which once was financed by companies but is now financed by workers.3 Becker’s (1964) model may thus be a good predictor of general patterns of skill acquisition financing, but it is hardly universal enough to be considered a law.

Competitive Skill Pricing

Are skills priced competitively in the labor market? The answer would appear to be yes, at least on average and in the long run. Workers with skills that are difficult to acquire and are in relatively high demand, such as doctors and computer programmers, get paid more. The extent of their wage premiums fluctuates over time, depending on supply and demand factors, but in the long run those wage premiums persist.

Yet, countering this argument, people with the same level of a particular skill in a given local labor market may be paid widely different wages. Two likely reasons for this are differences in job design and skill bundling (see

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3 Economists explain this phenomenon in more general terms by noting that firms are risk neutral, whereas workers are risk averse. Thus, firms would be more willing to pay for the financing of general skills when there is some uncertainty surrounding the full extent of their marketability (or generality). A separate, although related, argument is that firms may have better information about the marketability of any given set of general skills. Such information asymmetries allow them to train workers in general skills and recoup at least some of the benefit because workers do not realize the full extent to which such training improves their outside job opportunities. Bishop (1997) discussed both of these points in detail.
the definitions that follow) across individuals, and time delays in wage adjustment. Factors such as these reduce the extent to which there is a uniform price for any given skill, thereby undermining the foundations of human capital theory.

**Job Design and Skill Bundling**

No two jobs have the same skill requirements. No two people have the same skill set. The fit between the person and the job is unique. Yet, there is only one wage that compensates for all the skills in a job. Thus, people performing similar tasks along some dimensions (skills) are often paid different wages because the wages reflect all of the dimensions of their job, including how it fits into the organizational framework. This is a perspective that comes from the management and personnel economics literatures.4

If a worker possesses many of the basic skills required for a job but needs improvement in one or a few literacy skills, the company may view the benefit gained from paying to help this worker gain those skills as exceeding its cost. The complementarities between basic skills and other required skills means that some basic skills might be worth more on one job than on another. For example, the ability to understand units of measurement is important for manufacturing jobs that involve machines that produce products of variable width; such a skill is less relevant for an office job that involves filing. Moreover, another job that required a comparably high level of the same basic skills might not pay as much. For example, sanitation jobs often require an ability to understand units of measurement (for mixing the cleaning solutions), yet they typically pay less than manufacturing jobs that use heavy equipment. Thus, even if the firm bears the cost for improving the worker’s basic skills, the worker’s alternative wage might not rise sufficiently to make leaving for a different job financially attractive.

**Delayed Wage Adjustment**

Even when wages adjust fully to reflect differential skill pricing, those adjustments typically do not happen instantaneously. Most workers are on

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4For a more in-depth discussion of job design and other related topics, see Gibbs and Levenson (2002). Bishop (1997, p. 73) made a similar point about different jobs requiring different mixes of general skills.
review cycles that preclude wage adjustments or promotions more often than once per year, except in unusual circumstances. These types of dynamics are ignored in many models of the labor market, such as Becker’s (1964). The implication of delayed wage adjustment is that firms can capture some of the benefit from employees’ improved skills before having to increase the employees’ compensation. For example, if reviews take place in December for raises that are implemented in January, and a worker takes courses to boost basic skills in the first quarter of the year, the firm will benefit from the employee’s increased productivity for three quarters, until the time of this person’s review.

The implication is that delayed wage adjustment generates transitory benefits for the firm. Such dynamics can justify financing small skill acquisition costs.

**Imperfect Information About Skills**

It is difficult for workers to credibly signal to other employers the full extent of any new general skills they have learned (Bishop, 1997). And the company that financed such skill acquisition certainly will not seek to advertise that fact to other employers who might want to poach those workers. This effectively makes some general human capital acquisition look like firm-specific human capital acquisition because wages do not have to grow as fast as productivity for the firm to prevent the employee from leaving for a new job.

**Motivation and Loyalty: Money Is Not Everything**

One problem with the standard economic view of the employment relationship is that it is too simplistic. Workers are offered a wage and a set of working conditions. They can either accept the wage and working conditions or they can express their dissatisfaction by leaving the job; there is no in-between. The amount of effort a worker puts into the job may vary with wages. But this concept is not well developed beyond the vague notion that productivity may vary with the wages paid. More sophisticated economic models recognize the dynamic nature of employment relationships, but here, too, much of what happens in real jobs is left unexplained because the emphasis is almost exclusively on monetary compensation.

The management literature offers a much broader perspective than the economic literature in assuming that monetary compensation is one way to
motivate good job performance, but it is not the only way. Other motivators are thought to include the intrinsic satisfaction workers get from performing job tasks. Intrinsic motivation can be related both to the job tasks and the way they are structured—scheduling, repetitiveness, and interpersonal contacts with coworkers and supervisors—as well as to the work environment (physical layout; Hackman & Lawler, 1971; Hackman & Oldham, 1980). These are other routes by which skills get rewarded differentially across jobs.

In contrast with the economics literature, the management literature has a rich set of measures of employee attitudes such as job satisfaction, loyalty, and organizational citizenship behaviors (volunteering to do more than is required). These have been linked to both productivity-related job outcomes and turnover.5

Most important to the discussion here is the management literature’s view of training. Instead of predicting that training will increase turnover (Becker, 1964), the management literature predicts that training will decrease turnover. Benson (2001) suggested a way to integrate these apparently contradictory perspectives.

The management literature views training as a benefit and so expects employees to respond to it the way in which they respond to other benefits, with a positive attitude (called commitment to the current employer) and reduced turnover. But the management literature typically fails to acknowledge the general versus specific nature of skills and the impact of rewards on attitudes and turnover. Benson (2001) argued that the impact of training on commitment and turnover depends on the type of training (general vs. specific) and on whether the employee is rewarded for gaining the new skills. If the training is specific, then the employee’s only hope for increased reward lies with his or her current employer, and turnover will decrease because of the positive effect of increased commitment. With general training, there exists the prospect of increased rewards at a different firm, which counteracts the positive commitment effect. Benson argued that the alternative employment rewards effect dominates; thus, if the training is general, turnover should increase.

Benson (2001) tested these predictions using evidence on participation in both on-the-job training and a company-funded tuition reimbursement program at one firm. Building on previous research (including, among

5The literature is replete with examples and evidence, including Whyte et al. (1955); Mobley (1982); Steers and Porter (1991); Hom, Caranikas-Walker, Prussia, and Giffeth (1992); and Rousseau (1995).
others, Birdi, Allan, & Warr, 1997, and Lynch, 1991), he called on-the-job training specific training and the tuition reimbursement program general training. The argument is that it is difficult for workers to signal the value of skills learned on the job to other firms; in contrast, it is easy to signal the value of courses taken at an educational institution. He found evidence in favor of this merged perspective on economics and management, notably:

- On-the-job training was positively related to organizational commitment and negatively related to intention to leave the company (i.e., turnover), which is consistent with the management literature.
- Participation in the tuition reimbursement program was positively related to intention to leave the company but negatively related to turnover while the employee was taking classes toward earning a degree.
- Upon earning a degree, a positive relationship with turnover developed, which is consistent with the economics literature. But receiving a promotion or merit award introduced a mitigating factor that negated the tendency to leave (relative to employees who did not participate in the program).

Training in general human capital is thus less likely to lead to turnover if the employee is rewarded for the increased skills.

Benson’s (2001) results have interesting implications for the potential impact of workplace education programs on turnover. On the one hand, basic skills are general if they increase a worker’s ability to function well in a wide range of jobs. On the other hand, if the basic skills are taught in a job-specific context with no degree attainment (e.g., a high school diploma) or other educational certification (e.g., the GED), it may be difficult for the worker to signal the value of the increased skills to other prospective employers. The problem with generalizing Benson’s results to workplace education programs, however, is that he analyzed the experiences of highly educated engineers, not the high school dropouts who are typical candidates for basic skills. Further research is needed to investigate the implications of his results in the context of workplace education programs.

COMPANY PROVISION OF BASIC SKILLS TRAINING

The statement “Companies will not pay for basic skills training” notwithstanding, the preceding section shows that there are theoretical arguments in favor of the idea that they will pay for it. We now turn to the evidence.
A strong correlation exists between company-provided training and worker characteristics (Bishop, 1997). All else being equal, those workers who have higher levels of education (high school diploma or college degree); score well on aptitude tests; have received vocational training relevant to their job; or are men, White, or married are all more likely than other workers to receive company-provided training. In other words, it is precisely those employees who already have a relatively high level of skill and access to good labor market opportunities who receive a disproportionate amount of training.

There clearly is a distinction between general and basic skills. Companies readily provide training for supervisors and executives: A full two thirds of all establishments provide training that likely is general but almost certainly is not basic (Frazis et al., 1995; Lynch & Black, 1995). Simultaneously, many companies provide only rudimentary training (safety or orientation), if they offer any training at all, for their frontline employees. The origins of this tendency can be traced back to the first part of the 20th century.

In the early stages of the Industrial Revolution, companies were faced with an abundant supply of unskilled labor and new manufacturing technologies that promised to improve productivity dramatically if they could be applied successfully on a large scale. Frederick Taylor (1923/1998), the father of scientific management, supplied the intellectual foundation on which much of that success would be based. His solution was to subdivide the work into discrete units that were simple enough to be performed with minimal training by workers with low levels of education. Thus, the modern assembly line was born.6

In the first half of the 20th century, Taylor’s (1923/1998) principles were applied almost universally in countries with a growing manufacturing sector. The large gains in productivity provided the foundation for the economic growth that transformed what had been agrarian societies into today’s industrial economies. These gains also made the case that companies need not worry about basic skills training to achieve high levels of productivity and profits. Rather, having a steady supply of low-skilled workers ensured that companies would not have to raise wages, which could diminish profits.

This was the dominant paradigm, particularly within manufacturing, until sometime around the 1970s. By then, a number of countervailing

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6For historical purposes, it is worth noting that the productivity gains from such task specialization were noted almost 2 centuries earlier by Adam Smith (1776/1994) in the context of a pin factory.
trends that undermined Taylorism had started to take hold. For example, most advanced industrialized nations have had large declines in the fraction of jobs in manufacturing in recent decades, to the point where it is no longer the leading source of employment; services have taken on that mantle. Although some service functions lend themselves well to Taylor’s (1923/1998) industrial engineering principles (e.g., data processing), many others do not. Of course, saying that service sector firms might benefit from non-Tayloristic approaches to job design is not the same as saying that they will benefit from providing basic skills training for the people in those jobs.

One argument in favor of basic skills training is the greater degree of customer contact in service sector jobs and an increased focus on customer service as a source of competitive advantage. These points argue for greater aptitude with communication and interpersonal skills for frontline service employees.

Another argument favoring basic skills training is the large numbers of firms in manufacturing and other industries that have moved away from narrowly defined jobs toward jobs that involve more complex tasks, greater problem-solving and communication skills, and teamwork. For details on the diffusion of these high-performance or high-involvement work practices, see Lawler (1986), Osterman (1994, 2000); Frazis, Gittleman, and Joyce (2000); and Lawler, Mohrman, and Benson (2001). This move has been fueled by evidence that under the right circumstances such changes can lead to better outcomes for the firm in terms of productivity and competitive advantage. Such work redesign typically requires a much greater emphasis on training of frontline employees, especially new hires and incumbent workers when the shift is made to the new organizational form.

The total quality management (TQM) movement is one notable example. More recent variants of TQM include continuous improvement and Six Sigma; the latter term was coined by Motorola and popularized by General Electric. The basic thrust is the same: The firm looks for ways to increase quality and decrease errors and waste in production processes, thereby reducing costs and increasing productivity. Because frontline workers are often the workers best suited to providing management with accurate and up-to-the-minute information, quality initiatives have provided the impetus for workplace education efforts that boost communication, comprehension, and problem-solving skills.

As part of these efforts to improve attention to detail and quality, and to align workers’ focus with companies’ overall objectives and financial health, many firms have set up channels for direct communication with
frontline employees. Such communication includes financial and other numerical information that formerly was shared only by top and middle management. This shift increases the demand for mathematical aptitude. In addition, International Organization for Standardization (ISO) and other certifications of quality processes call for workers to document what they do in written form, increasing the need for writing skills. The move toward statistical process control has also increased the demand for basic mathematical skills (Abelmann, 1996; Bassi, 1994). Finally, the trend among large organizations in the 1980s and 1990s to remove layers of middle management placed more responsibility for planning and quality control on lower level employees (Lawler et al., 2001).

All of these points suggest that there is reason to believe that companies today may demand higher levels of basic skills from their frontline employees than ever before. The extent to which they do and to which that demand translates into company-provided education programs are the questions to which we now turn.

Evidence on Changes in Skill Demands

Little systematic evidence is available to evaluate whether skill upgrading is occurring in jobs throughout the economy. Howell and Wolff (1991) looked at how shifts of employment between industries and between occupations within an industry have affected the overall demand for skills. They found an increase in the demand for cognitive and interactive skills with a concurrent decrease in demand for motor skills.

Although Howell and Wolff’s (1991) evidence supports skill upgrading at a national level, their analysis is based on linking U.S. Census data, which is a survey of households, to occupational skill requirements from the Dictionary of Occupational Titles. Thus, they were not able to say whether the skill upgrading took place within individual firms. This is a real limitation because some of the arguments just mentioned in favor of companies providing basic skills training assume that it is easier to train an incumbent worker deficient in certain basic skills than to replace that worker with a new hire. If all skill upgrading at the national level has taken place entirely because establishments with low-skill requirements are going out of business and are being replaced by establishments with high-skill requirements, businesses may be less inclined—and rightly so—to provide basic skills training.

Cappelli (1993) provided the only systematic evidence on skill upgrading within individual companies. He examined changes in skill require-
ments for production jobs in 93 manufacturing establishments between 1978 and 1986 and for clerical jobs in 211 firms between 1978 and 1988. He found significant skill upgrading in most production jobs, which is consistent with the voluminous stories about the shift toward high-performance work practices in manufacturing. However, the evidence on skill upgrading in clerical jobs was much more mixed, with an even split between jobs that were skilled upwards and jobs that were de-skilled (i.e., jobs in which it became easier for a worker with a lower level of basic skills to carry out performance requirements). Cappelli suggested that the development of new office equipment appears to be associated with the de-skilling of certain clerical jobs.

**Incidence and Characteristics of Company-Provided Workplace Education**

The data available on the incidence of company-provided workplace education are limited to a handful of studies, including the following:

- Frazis et al.’s (1995) survey of a national random sample of all establishments found that only 2.2% of establishments provided basic skills training. There were big differences by establishment size: Only 1.7% of establishments with fewer than 50 employees did so, in contrast to 7.2% of establishments with 50 to 249 employees and 19.3% of establishments with 250 or more employees. The rates by industry varied: less than 1% in construction, 2% in wholesale and retail trade, more than 3% in transportation/communication/public utilities and finance/insurance/real estate, and more than 5% in manufacturing.

- Bassi’s (1995) national survey found that 6% to 7% of firms had a workplace education program. There were significant differences by size: Only 3% of firms with fewer than 20 employees had a program, in contrast to 15.3% of manufacturing firms and 23.6% of nonmanufacturing firms with 200 to 499 employees.

- According to Lynch and Black’s (1995) national survey, 27% of establishments with 20 or more employees provided some type of basic education training. The rates varied significantly between industries, with less than 20% of companies in the business service, retail, and construction sectors offering it and more than 50% of companies in the utilities, finance, insurance, and primary metals sectors offering it. Lynch and Black did not indicate how basic education training differed by firm size.
The largest conflict between the numbers reported by Bassi (1995) and by Frazis et al. (1995) lies in the overall incidence rates: 2.2% for the former versus three times that level for the latter. But the sample sizes used for the two studies differ dramatically: Bassi surveyed 714 firms, in contrast to 8,467 establishments in the much larger study. Thus, the overall incidence numbers provided by Frazis et al. (1995) most certainly are more representative. The fact that both studies’ incidence numbers by firm size are consistent with each other suggests that they measured similar phenomena.

The biggest apparent conflict appears to be between these two studies and the Lynch and Black (1995) study. Unlike the Bassi (1995) study, Lynch and Black’s was similar to Frazis et al.’s (1995) in terms of scale: They surveyed 2,945 establishments. Once again, however, the likely source of the discrepancy is differences in how the samples were drawn. Lynch and Black intentionally oversampled manufacturing firms (55% of their sample) and large firms (47% had 250 or more employees), both of which are more likely to offer basic skills training. Although it is difficult to determine whether this is the full source of their much larger incidence results, it likely accounts for a significant portion.

Another potential conflict lies in the definition of basic skills used in each study. All three appear to focus on foundation basic skills (literacy and numeracy), but it is difficult to discern how they treat advanced basic skills (problem solving and interpersonal). Only Bassi’s (1995) study makes that distinction explicit (further details follow).

According to the NALS, about 40% of all U.S. employees operate at the two lowest levels of literacy. It is these workers who are the leading candidates for basic skills training. An important question to ask, then, is whether all of these workers have access to workplace education programs. Unfortunately, we do not know how these workers are distributed across companies because the NALS sampled people, not organizations. Yet, given the prevalence of some type of low-skill job at virtually all companies (janitor or maid, mail room clerk, laborer, etc.) and given the low overall rate of provision of workplace education programs, it is safe to assume that not all low-skill workers have access to a company-sponsored workplace education program. It is even harder to determine the percentage of workers in need who do not have access.

In addition to variations in access based on where a person works, another consideration is the type of job the person has. Temporary workers

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7This information is based on Table 1.1 (p. 7), Figure 1.1 (p. 17), and Figure 2.7 (p. 63) from Kirsch et al. (1993).
hired through an agency are often excluded from formal training opportunities because of legal concerns regarding coemployment. Other types of contingent workers (day laborers, direct-hire temps, and independent contractors) and regular part-time workers face no such legal barriers to participating in company-provided training. However, companies often restrict training access to their core full-time employees (not contingent and not part-time), thus excluding low-skill workers in noncore jobs.

As for the characteristics of firms with workplace education programs, the results of Bassi’s (1995) survey provide some insights:

- Manufacturing firms with programs pay higher wages on average than manufacturing firms without programs. She found no statistically significant difference in the wages between nonmanufacturing firms with and without programs, although this finding may result from the imprecision that can follow from a small sample size.
- Firms with programs are larger and employ greater fractions of hourly employees (vis-à-vis salaried employees). They are slightly less likely to have their employees covered by collective bargaining agreements.
- Firms with programs are more likely to promote from within than hire from outside the firm to fill job openings. They also are slightly less likely to report problems with turnover.
- Firms with programs also report profit growth that, on average, is as great as or greater than that for firms without workplace education programs.

As for the nature of the programs, Bassi (1995) found that:

- The vast majority provide release time, including 78% of manufacturing firms and 94% of nonmanufacturing firms.
- A full three quarters of all programs were located on site at the workplace, with the remainder at community colleges, other companies, local high schools, and technical or proprietary schools.
- About one quarter (manufacturing) to one half (nonmanufacturing) of classes were not regularly scheduled. When regularly scheduled, the most likely frequency was once per week or less.
- Companies were much more likely to hire a teacher for the program from within or on a contract basis than they were to rely on community college teachers or in-house volunteers.
- The skills most frequently taught by a majority of programs involve (a) the ability to identify and solve problems, (b) interpersonal (team-building) skills, and (c) mathematics. The skills taught less fre-
quently are (a) reading and writing, (b) English for speakers of other languages, and (c) standard high school equivalency curriculum.

**Reasons for Providing Workplace Education Programs**

In addition to Frazis et al.’s (1995) large national sample, a handful of researchers have conducted small-scale surveys of companies’ motivations for providing workplace education programs, including Bassi (1994); Moore, Myers, and Silva (1997); and Abelmann (1996). Although the samples are drawn from different populations and the range of allowable responses varies significantly across the studies, a number of consistencies can be found.

The responses from each study are summarized in Table 3.2. Even among the National Workplace Literacy Program (NWLP) initiatives analyzed by Moore et al. (1997), all of which were federally funded, the top three objectives focused on achieving outcomes beneficial to the business. The nonmanufacturing firms in Bassi’s (1994) sample listed providing a benefit to employees as their top reason (75%), which might be viewed as a type of altruism. Yet, a long line of reasoning within the management community also views the provision of employee benefits as a means of increasing employee commitment, loyalty, and productivity and reducing turnover, all of which can have a beneficial impact on the bottom line.

One interesting note is the role—or lack thereof—that organized labor appears to play in driving the adoption of workplace education programs. Among the reasons provided in Table 3.2, an agreement with labor is one of the least frequently cited. I believe there are two reasons for this. First, union representation in the private sector stands at less than 10% (Bureau of Labor Statistics, 2003), which is the lowest it has been in a generation. So most employees do not have a union behind them to bargain directly for workplace education programs. Moreover, although support for workplace education programs is undoubtedly much higher among union leaders than among management, workplace education programs traditionally have not been at the top of unions’ priority lists. These issues notwithstanding,
Table 3.2  
Surveys of Reasons for Providing Workplace Education Programs

<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>National Random Sample</td>
<td>Manufacturing, National Sample</td>
<td>Nonmanufacturing, National Sample</td>
<td>National Sample of Federally Funded Programs</td>
</tr>
<tr>
<td>To reduce errors and waste and low productivity</td>
<td>56%</td>
<td>54%</td>
<td>33%</td>
<td>61%</td>
</tr>
<tr>
<td>To meet an increased emphasis on quality</td>
<td></td>
<td></td>
<td></td>
<td>98%</td>
</tr>
<tr>
<td>Because of organizational innovations</td>
<td></td>
<td></td>
<td>54%</td>
<td></td>
</tr>
<tr>
<td>As a benefit to workers</td>
<td>46%</td>
<td>75%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Because a subsidy became available</td>
<td>46%</td>
<td>50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Because of pressure from customers</td>
<td>43%</td>
<td>25%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Because it was needed as a result of changes in production</td>
<td>40%</td>
<td>25%</td>
<td>48%</td>
<td></td>
</tr>
<tr>
<td>As a part of a transformation of corporate culture</td>
<td>29%</td>
<td>17%</td>
<td></td>
<td></td>
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<tr>
<td>To deal with increased competition</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Because it was required by customers</td>
<td>29%</td>
<td>17%</td>
<td></td>
<td>61%</td>
</tr>
<tr>
<td>Because of low revenues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Because training became available</td>
<td>26%</td>
<td>33%</td>
<td></td>
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</tr>
</tbody>
</table>
Basic skills are critical to technology and/or production methods 52%
Because it was needed as a result of new technology 29% 33% 41% 89%
Because of employee job dissatisfaction 29%
Unable to hire employees with adequate skills 15%
To attract new workers 23% 42% 8%
To attract new customers 23% 17%
To meet new certifications 20% 33%
To meet new health and safety requirements 24% 23% 33% 11%
To meet new health and safety requirements 24%
To meet new health and safety requirements 23% 33% 11%
To improve the skills of limited English proficiency speakers 45%
Because of changes in the available workforce 26% 17% 25%
To meet increased competition 20% 17%
Because workers identified the need and to meet worker requests 17% 17% 25%
Because of an agreement with labor and a collective bargaining agreement 5% 20% 8% 5%

\( n \) 99 72 318 47
unions have been at the forefront of advocating for some of the more comprehensive approaches to workplace education (see, e.g., AFL–CIO, 1999; and Service Employees International Union [SEIU], 1992). Moreover, it likely is the case that management started some programs at nonunionized sites as part of a larger strategy to keep workers happy and avoid union-organizing drives.

Along a similar vein, there are a number of examples of industry sector-based workplace education initiatives. These efforts bring together employers in a region from the same or similar industry groups to focus on workforce development issues. Examples include the setting of skill standards for jobs in the California banking industry; the New York Local 1199 union-led multiemployer training fund for healthcare workers; and the manufacturing-focused Wisconsin Regional Training Partnership, a joint employer–union effort (Parker & Rogers, 1998). In each case, basic skills were an important part of the foundational knowledge the program emphasized.

As for reasons why companies do not provide workplace education programs, evidence from Bassi’s (1994) case studies provides some insights:

- 52% said they did not feel there was a need for the program.
- 41% said the program would cost too much.
- 33% said they did not have the personnel infrastructure to deal with it.
- 22% said they were too busy to deal with training.
- 22% said they did not know what skills their employees needed or how to arrange for those skills to be taught.
- 19% were philosophically opposed to providing a program, believing this is not the employer’s responsibility.
- 11% believed that turnover was too high to enable the firm to recoup its investment in such a program.

Note that of the top five reasons, three are related to the cost and resources needed to establish a program or keep it running, the issue to which we now turn.

**Financing of Workplace Education Programs**

In her survey, Bassi (1995) reported that more than 90% of firms with workplace education programs provide some type of financial support. The vast majority (78% of manufacturing and 94% of nonmanufacturing
firms) do so indirectly by giving workers release time to attend the program. About one half also provide direct financial support by paying for the program’s teacher. In a separate analysis of about 50 case studies, Bassi (1994) found that two thirds received some type of outside financial assistance in terms of curriculum design or direct provision of instruction. The average direct cost per worker was about $600, but that did not include the implicit costs of participant release time or the implicit costs of time spent by other employees in designing and implementing the program. She also concluded, based on limited evidence, that the programs do not appear to be financed through wage or benefit reductions for participants (contrary to the predictions of human capital theory).

Abelmann (1996), in his survey of a matched sample of manufacturing firms in Mississippi, compared sites that used state funding with others that did not. Among plants taking advantage of government funding, 40% had provided some workplace education on their own before receiving state assistance. Among plants not using government funding, 20% provided workplace education on their own. It can be concluded, therefore, that although public subsidies are not required for program implementation, they may play an important role.

Moore, Myers, and Silva’s (1997) study of NWLP-funded programs provides more insight into this point. They found a positive correlation between institutionalization (going from public subsidy to full company financing) and employers seeking to gain international certifications of quality (e.g., ISO, as mentioned earlier). But they also found that it was difficult to sustain employer support for many NWLP-funded programs. Moreover, institutionalized programs were likely to change after the grant expired, and the programs no longer had to adhere to strict federal requirements on program design. The implication is that the origin and evolution of programs funded by public subsidies are often different from the origin and evolution of programs initiated solely by the company.

My research (Levenson, 2001) provides further insight. I focused on programs that were exclusively privately funded to determine the conditions under which companies would pay for workplace education. The sample included programs that had never received public subsidies as well as programs that had. Similar to Bassi (1994), I saw no evidence that programs were funded by wage or benefit reductions; typical workplace norms precluded this because employees deficient in basic skills worked side by side in the same jobs with employees not in need of the program services. Because wages and benefits are typically based on job requirements and performance, a lack of basic skills can keep an employee from
performing well, thereby limiting any performance-based bonus pay or, in extreme cases, leading to termination. But the institution of a program does not seem to be accompanied by reductions in base pay or benefits.

Moreover, there is an argument that by paying for workplace education programs, companies might actually save money. By hiring workers with low basic skills, a firm can realize large savings in wages. Targeted workplace education programs can then be used to fill the most critical skill gaps that endanger job performance. If Bassi’s (1994) figure of $600 in direct program costs per worker is at all representative, this translates into higher costs of only 29¢ per hour for a full-time employee over the course of 1 year. This likely is much less than the costs the firm would incur by hiring workers with advanced levels of basic skills. Thus, at least for some companies, paying the out-of-pocket costs for a workplace education program might be a profit-maximizing strategy.

This conclusion is consistent with the evidence from my (Levenson, 2001) case studies, although an important caveat is in order. Although companies might benefit from paying for workplace education programs, as with any investment in training, the payoff is uncertain. Because many companies traditionally have not paid to train their frontline workers in basic skills, they often have to be convinced of the bottom-line benefits before agreeing to do so. Examples that document such an impact do exist (see the discussion that follows), and they can be used to help win top management over to the idea of paying for workplace education.

Yet, deciding to set up a program and doing so successfully are two very different things. For one, each company’s context and employee pool is different, so the program has to be tailored to individual needs. For another, certain internal processes, such as the policy concerning release time and supervisor approval, must be overcome. Moreover, it is important to show early successes to get management to continue or expand the program. Public subsidies can play a role in helping to establish workplace education programs that are eventually funded entirely by the company (Levenson, 2001). This is discussed in greater detail in the following section.

**Impact of Workplace Education Programs**

The impact of workplace education programs can be measured in a number of ways, as the different stakeholders involved have different outcomes of interest, including:

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9Of course, it is likely that Bassi’s (1994) figure is not representative. So the conjectures about costs per worker and per hour should be viewed with a healthy degree of skepticism.
- From the individual’s perspective: continued employment, skill building, wage growth, and promotion.
- From the company’s perspective: individual productivity/job performance, teamwork, retention/reduced turnover, attitudes/commitment/loyalty, and reduced recruitment costs via internal promotions.
- From society’s perspective: reduced welfare and unemployment costs if the program keeps people employed who otherwise might lose their jobs and possibly greater tax payments and lower health care costs that may occur because of increased skills.

This list covers many of the impacts, but it is far from exhaustive.

As already discussed, companies typically do not provide workplace education programs for altruistic reasons. Thus, programs need to show some positive impact on companies to elicit their support. Many of the individual impacts are directly related to company impact; the one major exception is when skill building leads the employee to find a job at a different company. In contrast, there is often little overlap between the societal and company-specific impacts because most of the societal impacts are true externalities—benefits that accrue to the community at large, not to the company providing the training. If it can be shown that the societal and/or individual impacts significantly outweigh the company impacts, then there is an argument for subsidies to support workplace education on an ongoing basis.

There are, however, notable exceptions to the lack of overlap between societal and company-specific outcomes. For example, English-language skills that enable immigrant employees to get preventive health care services may reduce both sick time (a company-specific benefit) and emergency room and other health care costs that are publicly subsidized (a societal benefit). As another example, employees who have positive experiences in workplace education programs may subsequently continue their education in community- or college-based classes; in this way the program may encourage additional educational attainment that would not otherwise have occurred. Such greater educational attainment often benefits all three: the individual, the company, and society.

Before reviewing the evidence, it is crucial to first acknowledge the limitations of most studies that evaluate program impacts. Without random assignment and other carefully designed elements (which are rarely used), it is very difficult to conclude that the apparent positive impacts that

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10 I thank David Rosen for suggesting these examples.
coincide with introducing a program are entirely a result of that program. Other changes in the workplace may influence any of the impacts of interest, and self-selection of higher or lower ability individuals into the program may also influence measured outcomes. Moreover, a program might be successful at building skills but fail to deliver in terms of economic impacts because of limitations on advancement for lower skilled workers imposed by the organization design. Finally, given individual differences in needs and ability, it is undoubtedly the case that one type of program is not ideal for all workers; thus, it may be difficult to generalize about program impacts outside a given setting.

The limitations of program evaluation are discussed in depth by Beder (1999), who reviewed more than 100 case studies of adult literacy education programs (both in the workplace and off-site) and provided detailed analyses of the 23 most credible studies. His basic conclusion was that the studies provide evidence that adult literacy programs can lead to positive impacts for individuals, although the evidence falls short of proving there is an impact. (He focused only on individual, not company or societal, impacts.)

The following list contains examples of the available information on program impact:

- Krueger and Rouse (1998) conducted one of the most comprehensive evaluations, looking at the economic impacts of a workplace education program at a manufacturing company and a service company. They found positive though small program impacts, including wage growth, job upgrades, and performance awards. Krueger and Rouse did not conduct a controlled experiment, but they used advanced statistical techniques to minimize the biases created by nonrandom self-selection into the program.

- Moore et al. (1999) also conducted a comprehensive evaluation of five NWLP programs. Perhaps the strongest element of their evaluation was an experimental design that randomly assigned course applicants to a treatment or control group at three of the sites. They found positive impacts on both skill building (enhanced basic skills) and employment-related outcomes such as teamwork, absenteeism, and supervisor performance ratings.

- Sperazi, Jurmo, and Rosen (1991) analyzed eight state-promoted programs in a variety of workplace settings in Massachusetts. They found positive impacts on the ability to read production tickets, safety-related behavior, interaction between nursing home residents and staff, identification of quality defects, and the ability to comprehend and follow directions.
Mikulecky and Lloyd (1993) found positive impacts on skill building and supervisor ratings at two sites.

Hart-Landsberg and Reder (1993) found no positive program impacts at an automotive parts manufacturing company.

Lazar, Bean, and Van Horn (1998) found positive impacts in terms of both skill building and job performance at a hospital.

Analyzing data from two national surveys, Hollenbeck (1993) found fairly large payoffs in terms of increased earnings to individuals participating in workplace education efforts. Although he presumed that the increased earnings are due to increased productivity, he had no direct evidence because the data did not include program- and company-specific information. He found that the impacts varied significantly across the two data sets in ways that could not be explained by individual characteristics. This strongly suggests that the impacts depend heavily on program and employer characteristics—that is, on the specific context.

Ford (1992) found that a Magnavox program at one of its manufacturing sites led to significant gains in reading and math skills and in job performance. For the duration of the program, the site realized $336,000 in savings from reduced scrap and rework; of this total savings, about 10%, or $3,300 per month, was viewed as most likely arising from the basic skills training. Ford was quick to point out that the latter is an imprecise number. Yet, it suggests a fairly high return on investment (ROI) for this particular program, which involved only 30 to 60 employees, because the company paid nothing for the training. Had the company paid for the training, the ROI would have been lower but likely still positive.

The positive findings by Moore et al. (1999) should not be underemphasized. A perennial problem in social science research is showing causation of program impacts. With the exception of Moore et al. (1999), all of these studies suffer from that problem. The fact that Moore et al. were able to demonstrate positive impacts using an experimental design and random assignment lends credence to the positive findings of all the other

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11 Magnavox did, however, have to finance a literacy audit to ensure that the program addressed workplace literacy issues, although no details were given on the cost of that audit. In exchange, the firm received up to $13,000 in literacy-training funds from a federal grant. Not included are the implicit costs of 2 hours per week of worker release time. Countering that, the employees volunteered 2 hours per week to attend the classes, a significant contribution to their own skill development that benefited the firm. Although it is impossible to say for sure, it is reasonable to consider these offsetting time costs as a wash, offering zero net cost to the firm.
studies, and it calls into question the lack of positive findings in cases such as Hart-Landsberg and Reder (1993). This is not to say that the results of the study by Moore et al. should be taken entirely at face value; it is necessary to analyze them in context. But the strong implication is that workplace education programs can indeed have positive impacts.

Ford’s (1992) description of the Magnavox program highlights an important distinction between what society sees versus what a company sees as the important impacts of workplace education programs. Companies typically care less about the average impact on a worker (which, from their perspective, is an intermediate outcome) and more about the program’s net impact on the bottom line. Most notably, a consideration that is totally missing from the individual worker-focused analyses just discussed (with the exception of the Magnavox case) is a recognition that the company could realize a very high ROI even if the average impact per worker in terms of productivity is very small.

A case from my research on privately funded programs (Levenson, 2001) reflects this outcome. A senior manager in a large manufacturing company succeeded in instituting a workplace education program without any public subsidy by appealing to the operations and plant managers’ concerns about manufacturing problems on their highly capital-intensive line. The plant had a large, mostly low-skilled workforce responsible for working with multimillion dollar machines that had to operate 24 hours a day, 7 days a week to achieve optimal profitability. A simple mistake by just one worker unable to comprehend the complexities of the machinery and the production process could easily create problems that would shut down the line for extended periods; such mistakes included getting measurements wrong and using the wrong chemicals. According to the senior manager, this concern was sufficient to get the company to pay for the program to boost the workers’ basic skills. The low cost of the program relative to the potential savings from greater production time more than justified its existence.

This example shows that program impacts do not have to and should not always be measured in terms of average impact per worker. Whenever there is a low-probability, high-value outcome of relevance to the firm’s bottom line that may be influenced by improving workers’ basic skills, that outcome should be considered in any impact analysis. All of the studies that ignored such potential benefits may have understated the full economic impact of those workplace education programs.

In addition to the evaluations just described, surveys of companies’ self-reported impacts of workplace education programs have been conducted.
These include Bassi (1994) and the Conference Board report (Bloom & Lafleur, 1999), the results of which are reported in Table 3.3. These studies show that workplace education programs can and do have positive impacts on both workers and companies, although the impacts may be context-specific. How policymakers, practitioners, and researchers can
help promote more numerous and effective workplace education interventions is the final subject of the chapter.

**HOW POLICY CAN SUPPORT MORE WORKPLACE EDUCATION**

Even if public subsidies of workplace education were extremely effective, the limited public dollars available relative to the size of the need (upward of 40% of all employees, according to the NALS) ensures that not all workers in need can be reached by publicly subsidized programs. Still, policymakers have much leeway when it comes to deciding how to spend the public dollars that are available.

One of the largest debates concerns the question of whether public dollars have the effect of initiating programs that would not have otherwise taken place. The issue is whether there is a need to spend public money on workplace education programs, especially to “seed” the programs. Very little evidence is available on this matter. On the one hand, authors such as Osterman and Batt (1993) and Abelmann (1996) reported anecdotal evidence of programs that apparently used public dollars to support training activities that would have happened anyway. On the other hand, Holzer, Block, Cheatham, and Knott (1993) found evidence of a one-time grant in Michigan that appeared to stimulate training activity that would not have taken place otherwise.

Although additional research on this topic is clearly needed (see the section that follows), enough is known today to make some recommendations on how to structure policy to promote workplace education:

- The cost of getting a program off the ground may be a more significant barrier to company funding than the ongoing costs of program maintenance (Bassi, 1994; Levenson, 2001). My research revealed that, in many cases, demonstrating initial successes was key to winning over middle and upper management, thereby ensuring ongoing financial support from the company. Subsidies that focus on defraying the costs of program design and setup and on providing technical assistance may be the best means of leveraging limited public dollars for maximum impact. Programs in some states, including Massachusetts and Wisconsin, are now structured in this way.
  - Because large firms are much more likely to provide training anyway, public dollars are best targeted toward small- and medium-sized firms.
  - The research that supports the potential effectiveness of job-related pedagogical approaches also demonstrates that the same basic skills cur-
riculum cannot be taught to workers in very different kinds of jobs; that is, there is no “one size fits all” (Murnane & Levy, 1994). Thus “a system-oriented approach that encourages consortia of smaller firms to contract cooperatively with training providers to develop tailored curricula can dramatically reduce the average cost” (p. 77). Public support may be useful in helping to jump-start such efforts.

- The steepness of the learning curve for practitioners who are new to workplace education should not be underestimated. Focusing public dollars on a workplace education infrastructure designed to maximize knowledge sharing among and professional development of practitioners would be money well spent. A number of state programs in recent years include the Commonwealth Corporation efforts in Massachusetts and the Workforce Improvement Networks in Virginia and Pennsylvania. Start-up grants to companies that offset program out-of-pocket expenses could still be targeted toward smaller firms, but the dollars spent on improving practitioners’ technical competency would not have to be restricted based on company size.

- No matter how successful or pervasive workplace-based programs may become, there will always be a need for other outlets of adult learning. Invariably, some companies will be unwilling to participate. In other cases, it may not be feasible to locate the program on-site for logistical reasons. Moreover, of necessity there will always be a limit to the depth and variety of curricula provided by workplace-based programs, which need to respond first and foremost to the needs of the business and most of the workers in need. Workers not fully served by on-site programs require additional learning options in the community. Public funding has a large role to play here, ensuring a seamless system of lifelong learning that bridges workplace and community.

### HOW PRACTITIONERS CAN SUPPORT MORE WORKPLACE EDUCATION


My (Levenson, 2001) own case study research on companies’ reasons for funding workplace education programs was not focused primarily on
program design. Despite this, a number of aspects of program design that appear to be correlated with successful efforts emerged, many of which build on the findings from the studies just listed. These include:

- In each case, the workplace education program was viewed as either complementing or part of the company’s broader training initiatives.
- Administering the program on-site (at the workplace) can lead to more effective skill development because of the ease of access that proximity affords.
- Starting small and showing early successes with a pilot group of participants was often key to building support for release time and ongoing financial outlays for the program.
- Similarly, having the support of upper management to provide release time was not sufficient to guarantee it: The middle managers who ultimately are held accountable for their employees’ efforts and productivity have to be won over to the benefits of the program. When the benefits accrue more to the organization at large and less to the manager’s department (a type of externality), adjustments to the criteria by which the managers are evaluated might be needed (e.g., not charging their budgets for the release time).
- Scheduling classes to take place at the end of one shift and the beginning of the next can maximize participation while minimizing work disruption.
- The learning center model seemed a particularly effective vehicle for delivering basic skills instruction. In this model, basic skills are typically just one part of the curriculum. Other parts include computer-keyboarding skills, supervisor training, communication, stress management, mandated safety training, and so forth.

Because the learning center’s diverse array of offerings is used by many more employees throughout the company than just those in need of basic skills remediation, the result is a broader and more committed set of stakeholders among both management and employees. In spreading the costs of the program over more activities than just workplace basic skills, it is much easier to justify the dollars spent on basic skills. The learning center also builds the capacity to address basic skills issues on an ongoing basis as needed. This capacity is critical for serving those incumbent workers whose skills deficits are not addressed immediately when the program is established and for serving the new hires who come on board at later dates. Moreover, it is easier to preserve confidentiality if the basic skills curricu-
lum is delivered one-on-one or via computer in the same facility where modules on higher level skills are offered.

Most of what other authors and I have documented appears simply to validate practitioners’ personal experiences. The rich body of knowledge that exists in the minds of successful practitioners is much more extensive than what has been put down in writing. As with any pedagogical discipline, much of the knowledge is tacit, experiential, and context specific, lending itself to learning most effectively through personal contact. Thus, classroom learning, structured training sessions, and mentoring may be among the best practices through which information about effective implementation of workplace education programs can be shared by practitioners.

Such professional development activities are already in place in many states and appear to be gaining popularity and support. The proliferation of the Internet has facilitated knowledge sharing among practitioners who might otherwise be isolated in their local communities. Yet, these activities are far from universal, reflecting the need for continued support and increased funding.

One significant challenge for practitioners is often not companies’ unwillingness to create a program but the determination of just what sort of program is best for a given company. The key is to be flexible and not try to put in place a one-size-fits-all type of program at all companies. I have had numerous conversations with experienced practitioners who recount the steep learning curve they faced in understanding the limits of what companies are willing to support. Each engagement with a company is context specific and requires mutual exploration of the company’s needs and capacity to support on-site learning, along with the practitioner’s ability to design and deliver the right curriculum. This engagement-specific learning curve is much less steep for the experienced practitioner, but it exists nonetheless.

HOW RESEARCH CAN PROMOTE MORE EFFECTIVE WORKPLACE EDUCATION

Research should investigate the following questions:

- What is the true cost–benefit tradeoff of workplace literacy programs? What are the full costs, both out-of-pocket and implicit (release time and time volunteered by the employee)? What is the complete range of impacts on both the workers and the company?
• What spillover societal effects (called *externalities* in the economics lingo) are realized that are not accounted for by the cost–benefit analysis for individuals and companies?

• How effective are grant and subsidy programs at promoting workplace education? Are some forms better than others for promoting training that would not otherwise take place?

• What are the limitations of viable on-site programs? For example, is there a minimum establishment size or a minimum number of participants? Can a curriculum be too narrow or too broad? How are on-site programs best integrated with other methods of delivering literacy services? How can they be best integrated with other on-site training efforts, such as learning centers?

• What is the role played by individual decision makers within companies (and unions) in starting and maintaining workplace education programs? Is there a pattern in the kinds of individuals involved in decision making that might account for why some companies have programs and others do not?

Not all of these questions can be answered in any one study. But through persistent, well-funded efforts, it should be possible to obtain most of the relevant answers over time.

**CONCLUSION**

What are the prospects for continuing and expanding workplace education programs? It all depends on the evolution of both the supply of and the demand for such programs. It would be premature to assume that the forces leading to the current state of skill demands for jobs filled by lower skilled workers will continue unchanged. Employers will learn from their current efforts, and this learning will affect their future choices of where to locate jobs and how to design jobs within a given geography. This in turn will influence individuals’ educational acquisition choices, thereby altering the need for workplace education programs.12 These dynamics notwithstanding, there are good reasons to believe that workplace education will continue to be a viable option for skills and workforce development. The issue, both empirical and theoretical, is the limits of that potential.

12 See Cappelli (1993) for a related discussion.
REFERENCES


3. WHY COMPANIES PROVIDE EDUCATION


The spread of both personal computers and access to the Internet during the late 20th and early 21st centuries has profoundly changed the ways in which we create, store, distribute, and retrieve information and has thereby also changed the ways we work, live, and learn. Especially widespread is the use of e-mail and the World Wide Web in American homes, schools, workplaces, and communities. Likewise in adult literacy and learning, computers connected to the Internet and other new learning technologies are being used in a variety of ways to support educational activities.

1One indication of the newness of the new educational technology (and the inability of our language to keep pace with the changes it is fomenting) is the mutability of terms used to describe technology and its applications. Terms like online learning and e-learning (or electronic learning), computer-mediated communications, and computationally mediated communications are used interchangeably. This array of terms bespeaks a fragmented discourse even among those who specialize in the field. In the interest of simplicity, but recognizing the likelihood of changes in terminology in the near future, I use the term new
In some respects, the new learning technologies of the early 21st century are not all that new. Multimedia instructional tools have been around for a long time. What is new about the new learning technologies is the widespread access to them (making possible learning anytime, anywhere, as one U.S. Department of Education funding program put it). Telephones, computers, and televisions are gradually merging into a single information and communication technology (ICT) system. For adult learners, the pervasiveness of this technology represents not just an opportunity but a challenge. Keeping up with the technological skills demanded in entry-level jobs is increasingly difficult for adults with low levels of formal education, low-level literacy skills, and/or limited proficiency in English. At the same time, the ability to use information and communication technology is required for an increasing variety of occupations (Bruce, 2002; Murnane & Levy, 1996). Although ICT has spread rapidly, it has not spread evenly throughout society (the so-called digital divide is growing, with disparities in access across lines defined by income, educational attainment, and ethnicity), and within educational systems it has spread more slowly than elsewhere. Nonetheless, by the end of the 1990s, personal computing and the Internet had become standard tools in formal schooling (Becker, Ravitz, & Wong, 1999) and to a lesser extent in adult literacy education (Hopey, Harvey-Morgan, & Rethemeyer, 1996; Rosen, 2000).

Current theory and research provide guidance for designing learning technologies that are effective for adult literacy and learning. Theory and research can also be applied to the problem of overcoming barriers to access to learning technologies. The multimedia capabilities of computers connected to the Internet can give adult learners choices between text, audio, and visual presentation modes for new information. The options to customize information and to search and retrieve information in electronic databases allow learners and instructors great latitude in directing learning toward individual goals and interests. Access to online communications can provide opportunities for learning through social interaction both locally and globally. Finally, learning how to use computers and the Internet and learning how to learn with computers and the Internet are important basic skills for life in the 21st century. In these ways, the new learning technologies are well suited to learner-centered, goal-driven, socially interactive, and authentic applications in support of adult literacy and lifelong learning (Hopey, 1998; Stites, Hopey, & Ginsburg, 1998).

*learning technologies* throughout this chapter. Although the term *learning technology* can be interpreted broadly, when used in the context of this chapter it refers primarily to applications of personal computers connected to the Internet.
This review of the research literature on new learning technologies summarizes findings from theory and research in the following areas:

1. **Effectiveness**: What does research tell us about the effectiveness of learning with computers and the Internet?
2. **Access**: What patterns of societal access to computers and the Internet are revealed by research?
3. **Barriers to effectiveness and access**: What can research tell us about the barriers to effective application of and expanded access to new learning technologies?

The chapter concludes with a summary of the implications from the research for designing effective applications and expanding access to new learning technologies for the purposes of adult literacy and lifelong learning.

**Effectiveness of Learning Technologies**

In an essay that appeared in volume 1 of *The Annual Review of Adult Learning and Literacy*, David Rosen (2000) concluded that there was “almost no research on the effectiveness of technology in adult literacy education” (p. 312). This is still true, especially with respect to research findings that bear directly on questions of the effectiveness of new learning technologies in adult literacy education. In fact, the research that is available is primarily about the efficacy of computers (not computers connected to the Internet) for learning in formal educational settings. Research on the effectiveness of using computers and the Internet in support of informal learning and for learning by adults is still in its infancy.

To get an idea of how quickly the world of educational technology applications for adult literacy has changed, one need only look back at the state of the art in research-based knowledge contained in the 1993 Office of Technology Assessment (OTA) publication *Adult Literacy and New Technologies: Tools for a Lifetime*. Compiled little more than a decade ago, this otherwise excellent synthesis of contemporary theory, research, policy, and practice on technology for adult literacy contains scant mention of e-mail and no mention of the Web. This absence is quite natural

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2The OTA report does feature a description of the Outreach and Technical Assistance Network (OTAN), the Sacramento County Office of Education’s path-breaking electronic support network for adult basic education (see [http://www.otan.us/login/login.cfm](http://www.otan.us/login/login.cfm)).
given that early in the 1990s the Internet was being used by a relatively small number of university-based researchers for e-mail and that it was not until 1991 that Tim Berners-Lee developed the World Wide Web.

Since the mid-1990s, the proliferation of personal computers and rapidly expanding access to the Internet and the Web have created a tremendous interest in understanding how to harness these new technologies most effectively in support of learning at all levels. Researchers and policymakers have made concerted efforts in recent years to synthesize knowledge from theory, research, and practice; as a result, there is an emerging consensus about effective applications of new learning technologies (see International Society for Technology in Education, 2001; President’s Committee of Advisors on Science and Technology, 1997; Software and Information Industry Association, 2000; and the discussion in the concluding section of this chapter). This consensus is informed by a growing body of research on the use of computers and the Internet in K–12 settings. Although results are mixed, overall, this research has shown that the use of computers can have positive effects on learning outcomes (see J. A. Kulik, 1994; Means & Olson, 1995; Roschelle, Pea, Hoadley, Gordin, & Means, 2000; and the discussion that follows; for a dissenting interpretation of the research, see Parr, 2000). In addition, an emerging body of research has looked at how computers and the Internet can be used most effectively for educational purposes. Although little of this research has been on uses of learning technology for informal learning, the findings from recent research on effective designs for new learning technologies in formal educational settings are likely to apply to adult literacy and lifelong learning as well. This is so because the designs for learning with new learning technologies that have been shown to be the most effective are consistent with the goals and principles of adult learning theory and the desires of the adult education community for change and improvement in adult basic education (ABE).

Effects of Computer Use on Achievement

Personal computers have been used long enough in education to allow for a sizeable accumulation of research studies on their effectiveness. In the 1980s and 1990s, researchers conducted many studies to address the question of whether the use of computers in classrooms led to higher levels of achievement. By the early 1990s, hundreds of such studies had been completed, making it possible to conduct meta-analyses (quantitative comparisons and syntheses of results across multiple studies) to synthesize the
findings of this body of research on the overall effectiveness of the computer as a tool for learning. Using statistical techniques to synthesize the results of several hundred individual research studies on computer-based instruction with students ranging from kindergarten to higher education, the most comprehensive of these meta-analyses (C. C. Kulik & J. A. Kulik, 1991) shows that, on average, such instruction had a significant positive effect on achievement. A second meta-analysis of 120 studies of computer-assisted instruction in settings from kindergarten through higher education (Fletcher-Flinn & Gravatt, 1995) looked at the impact of a range of factors on achievement and concluded that of the factors considered (including educational level, course content, and same or different teacher), only the quality of computer-assisted instructional materials was linked to higher learning gains. (Note that quality was operationalized as designed with clear instructional objectives, sequenced with individual feedback, and encouraging participation and activity, p. 230.) A third meta-analysis (Bangert-Drowns, 1993) synthesized results from 32 research studies on the impact of word processing as a tool for writing instruction and concluded that incorporating word processing in writing instruction (in settings ranging from elementary school to higher education) had a significant positive effect on improvement of writing skills. Finally, J. A. Kulik (1994) aggregated the results from 12 meta-analytic studies covering more than 500 individual research studies on computer-based instruction. He concluded that students in the computer-based instruction groups on average scored higher on achievement tests than control groups whose members did not use computers, learned more in less time, and had more positive attitudes toward their classes.\(^3\)

**Effective Applications of New Learning Technologies**

Beginning in the mid-1990s and continuing to the present, the Internet has grown from a tool for e-mail that was available to a select few to a tool for

\(^3\)Further summary of the large research literature on the effectiveness of computer-assisted instruction and integrated learning systems is beyond the scope of this chapter. The majority of these studies look at effects of neobehaviorist (programmed instruction) instructional applications on achievement in K–12 subject areas. The relevance of this research to adult literacy applications is questionable. It has been argued (see Millar, 1996; Thomas & Buck, 1994) that neobehaviorist instructional designs are incompatible with adult learning theory and best practices in adult basic education. Those interested in a comprehensive review of impact studies of computer-assisted instruction and integrated learning systems in K–12 settings should see Parr (2000).
multimedia information exchange that is available to almost anyone, anywhere, and anytime. The effects of the Internet on learning are only partly related to the quantity (massive) and quality (both good and bad) of the information it so readily provides. A new wave of educational technology research is being conducted to consider questions beyond that of whether Internet experience is associated with higher scores on traditional measures of achievement. Instead, the focus has been on changes in how learning takes place as well as on changes in what is learned. Early research and development often focused on drill-and-practice applications of computers (as in integrated learning systems) to support basic skills and discrete knowledge development, but researchers now see potential for computers and the Internet as tools to support higher order thinking, problem solving, creativity, and integrated skills development. Roschelle et al. (2000) reviewed this emerging body of research and concluded that the overall impact of new learning technologies in improving learning is mixed and that the most effective applications of learning technology are those that adhere to four fundamental characteristics of learning:

1. Active engagement of learners.
2. Participation in groups.
3. Frequent interaction and feedback.
4. Connection to real-world contexts.

These characteristics should look familiar to adult educators. They are, in fact, quite similar to the characteristics of effective adult learning that have long held sway in adult learning theory (see, e.g., Knowles, 1990). They are also grounded in recent advances in cognitive science theory and research (see National Research Council, 1999b). Cognitive science-based principles for effective designs of learning technologies are congruent with adult learning theory principles that take into account the characteristics of adults as learners, the goals of adult learning, and the contexts of adult learning (Bingman & Stein, 2001; Stites, 1998). Thus, research showing the effectiveness of learning technologies in support of active engagement of children and social interaction in K–12 settings is strong evidence of the potential for technology to support learner-centered and social interactive approaches to adult education. Likewise, research showing the effectiveness of new learning technologies in support of K–12 approaches to learning that include frequent feedback and are connected to real-world contexts are sound evidence of the potential for new learning technologies to support purposeful and authentic approaches to adult learning.
Active Engagement. Much of the recent theory and research in cognitive science has been guided by the assumption that learning is a social interactive process that involves active (and most often cooperative) construction of new knowledge and skills. Researchers have shown that knowledge that is acquired in passive learning activities (in which students are simply told new information as opposed to engaging in argumentation and reflection to solve problems) may remain inert knowledge (knowledge that is not easily retrieved and applied to new learning and problem-solving situations; see Bransford, Franks, Vye, & Sherwood, 1989). A number of studies have shown a positive effect from properly designed use of new learning technologies in supporting the active construction of knowledge in the context of math and science education. For example, studies of the impacts of the technology-based mathematics problem-solving program called The Adventures of Jasper Woodbury (Cognition and Technology Group at Vanderbilt, 1992; Pellegrino, Hickey, Heath, Rewey, & Vye, 1992) conducted in 11 school districts in 9 southeastern states have shown positive results in student acquisition of basic math concepts, student abilities to solve word problems, student planning (in terms of generation of subgoals), student attitudes toward mathematics and problem solving, and teachers’ and parents’ responses to the program. Roschelle et al. (2000, p. 79, and footnotes 20, 21, 22 on p. 94) cite nearly 2 decades of studies on incorporating computers into active, constructive learning in math and science (under a design called the Microcomputer-Based Laboratory [MBL]). This research has shown that the MBL has resulted in significant gains in students’ motivation and in their abilities to interpret graphs and understand scientific concepts.

Participation in Groups. The knowledge that the Internet can facilitate social interaction has been used to design learning technologies that support collaborative learning. Wartella, O’Keefe, and Scantlin (2000) reviewed current research on what is known about the use of interactive media by children and adolescents in a report prepared for the Markle Foundation. Wartella et al. focused their review on media socialization—a framework for understanding how and what children learn from interactive media that is grounded in views of language socialization (Schiefflin & Ochs, 1986), social cognitive development (Vygotsky, 1962), and the role of communications in learning (Scribner & Cole, 1981). They cited research showing that use of computers and the Internet outside of classroom-like settings (in unstructured learning environments, e.g., the home, a recreation center, or a museum) offers more varied learning opportunities.
and more risk taking and experimentation, thus facilitating development of creativity and other forms of higher order thinking skills (Kirkman, 1993; Schalle & Skeele, 1995, cited in Wartella et al., 2000). Use of computers to support social interaction has also been shown to be an effective support for teaching and learning higher order thinking skills in school. One of the most extensively researched applications of learning technologies employing an active, collaborative, and intentional learning design is the Computer Supported Intentional Learning Environment (CSILE). CSILE is designed to support “intentional learning as progressive problem solving” by facilitating classification (student’s classify their notes as “problem,” “what I already know,” “new learning,” and “my theory”), storage, and sharing of knowledge representations as texts or graphics in a database (Oshima, Scardamalia, & Bereiter, 1996, p. 126). The CSILE database is public (available to all students) and so facilitates interpersonal problem-solving activities. Research studies have shown that students in K–12 classes using CSILE for science, history, and social studies outperform control group classes not using the technology on standardized tests and on measures of deep understanding of the subject matter (Scardamalia, Bereiter, & Brett, 1992). CSILE has also been shown to have positive effects on students’ self-concept, self-regulatory behavior, and critical-thinking abilities (Ryser, Beeler, & McKenzie, 1995).

Frequent Interaction and Feedback. Another potential benefit of the new learning technologies is related to the adaptive and interactive capacities of computers and the Internet. Computers and the Internet can be used to search and manipulate information in real time. In traditional classroom modes of learning and instruction, feedback on learner performance is often slow in coming, if available at all. Learning technologies can be a tool to provide more frequent and immediate feedback on learning. According to research summarized by Roschelle et al. (2000; also see National Research Council, 1999b, chap. 9), learning technologies can support effective learning designs that give students frequent opportunities to apply the ideas they are learning and to get almost immediate feedback on the success or failure of the application of their ideas in the following three ways:

1. Computer tools can respond immediately to student input— for example, in interactive graphing of a mathematical model.

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2. Computer tools can engage students for extended periods of time on their own or in small groups.

3. Computer tools can assess individual learner performance and provide timely and targeted feedback.

The last of these three points—the application of learning technologies for adaptive testing and assessment—is of particular interest in today’s policy climate of standards and assessment-driven educational improvement and accountability. Two recent advances in cognitive science have set the stage for the development of new forms of automated (computer-based) testing systems. The first of these advances is the development of detailed models of student learning, cognition, and performance. The second is an advance in measurement theory and methodology that makes it possible to create assessment methods and statistical models that combine multiple and varied data inputs in the evaluation of complex performance. Together, these advances are enabling development of testing technologies that can be closely aligned with instructional activities and can provide learners and instructors with feedback that can be directly applied to further learning, instruction, and performance improvement (see Baker, 1998; Baker & Mayer, 1999; Bennett et al., 1999; Lin, Hmelo, Kinzer, & Secules, 1999; National Research Council, 2001).

One such cognitive model-based and technology-supported assessment and instructional guidance system has been developed by the Berkeley Evaluation and Assessment Research (BEAR) Center (Wilson & Sloane, 2000; also see National Research Council, 2001, pp. 108–111). The BEAR Center system was developed for use in a middle-school science curriculum called Issues, Evidence, and You (IEY). The system is organized around five progress variables (designing and conducting investigations, gathering evidence and making tradeoffs, understanding concepts, communicating scientific information, and taking part in group interaction). Assessment takes place by means of tasks embedded in instructional activities, short-answer tests linked to the progress variables, scoring guides used to assess student progress on the variables, and exemplars (samples of actual student work). Scores in these tasks are then used to produce progress maps using GradeMap software developed for this purpose (Wilson, Draney, & Kennedy, 2001). The progress maps provide an ongoing graphic representation of student progress on the five progress variables in the IEY curriculum.

**Connection to Real-World Contexts.** New learning technologies have the capacity to simulate activities in a wide range of contexts. In
addition, computers and the Internet are themselves tools that must be mastered for effective performance in an increasingly broad spectrum of everyday life and work contexts. From the perspective of effective learning, connecting learning activities to real-world contexts is important, as research has shown that transferring learning from one context to another is especially difficult. The research suggests that an authentic context for learning is critical for transfer and retention of knowledge and competence (Bransford & Schwartz, 1999; also see National Research Council, 1999b, chap. 3). New learning technologies make it possible to bring real-world problem solving into educational settings in a number of ways. The use of video- and computer-based programs such as The Adventures of Jasper Woodbury (see Cognition and Technology Group at Vanderbilt, 1992) is one example of how this can be done effectively. Real-world problems can also be brought into the classroom by making use of the communications capacities of new learning technologies. For example, the Global Lab project\(^5\) (developed by TERC, in Cambridge, Massachusetts, with funding from the National Science Foundation) makes use of the Internet to connect student researchers (in Grades 7 through 9) from more than 200 schools in 30 countries with working scientists. By collecting, sharing, and, with the help of the scientists, analyzing local data on environmental conditions, students contribute to the society’s understanding of global environmental phenomena (Berenfield, 1993).

### ACCESS TO LEARNING TECHNOLOGIES

According to a 1999 survey conducted by National Public Radio (NPR), the Kaiser Family Foundation, and the Kennedy School of Government,\(^6\) more than two thirds (68%) of working Americans were using a computer at work, and 84% of these people said that using a computer was essential to their work. The same survey found that more than one third of working Americans (34%) had access to the Internet on the job, and 63% of these respondents said the Internet was essential to their work. Using census data, the National Telecommunications and Information Administration (NTIA, 2002) reported that as of September 2001, 65 million of the...


\(^6\)The NPR/Kaiser/Kennedy School Poll is a nationally representative telephone survey (see National Public Radio/Kaiser/Kennedy School of Government, 1999).
115 million employed Americans over the age of 25 (56.7%) were using a computer at work, and 48 million (41.5%) were using the Internet at work. The rise in use of the Internet at work has been rapid. According to the NTIA (2002), just 17.6% of working adults over age 25 were using the Internet at work in 1997. The rise in the use of computers and the Internet in homes, schools, and communities has also been rapid. As more Americans make use of the Internet, the amount and variety of content available have grown at an explosive pace.7

Among the population served by the ABE system, many of whom do not have jobs or work in low-wage jobs, technology is not nearly as pervasive as it is among the population at large. The digital divide poses important challenges for all levels of education, but it is particularly salient to ABE. The widespread use of information technology in the workplace presents a challenge to ABE on two fronts. First is the gateway challenge. Acquiring skills in the use of information technology and acquiring the attitudes and strategies that enable continual learning of new technology skills are critical to employability. Second is the challenge of keeping up with changes in technology. Educational systems in general lag far behind the workplace in terms of access to the latest technology. Although many employed adults have the advantage of access to the latest technology in the workplace, recent surveys by the NTIA (1995, 1998, 1999, 2000, 2002) in the U.S. Department of Commerce show this is less likely to be true for the target ABE population, whose access to computers and the Internet is limited at home, in the community, and in the workplace.

**Household and Individual Access**

Surveys by the NTIA (1995, 1998, 1999, 2000, 2002) have tracked patterns of access to computers and the Internet in the U.S. population in an effort to depict and begin to address the digital divide. These surveys have revealed markedly uneven patterns of access to computers and the Internet across geographic, economic, educational, ethnic, and age divisions in American society. The October 2000 report (NTIA, 2000), titled *Falling Through the Net: Toward Digital Inclusion*, found access to the Internet

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7Figures compiled by the Internet Software Consortium (ISC; see www.isc.org) show that the Web has grown from just under 5 million hosts (a host is a computer that makes information available on the Internet—e.g., the content of a site on the Web) in January 1995 to just under 150 million hosts in January 2002. See the ISC Domain Survey results at http://www.isc.org/ds/WWW-200201/index.html. See in References Internet Software Consortium (n.d. and 2002).
and computers had increased for all Americans in the 20-month period between December 1998 and August 2000 but that some groups of Americans lagged in access to technology. By August 2000, 116.5 million Americans (and 41.5% of households) were online, an increase of 31.9 million individuals (and up from 26% of households) over the December 1998 figure. The percentage of homes with computers had also increased, from 42.1% in December 1998 to 51% in August 2000. The February 2002 report (NTIA, 2002), titled *A Nation Online: How Americans Are Expanding Their Use of the Internet*, reporting figures for September 2001, showed further increases, with 56.5% of U.S. households having a computer (see Table 4.1) and 50.5% of households having access to the Internet (see Table 4.2). The February 2002 NTIA report also tracked changes in individual use of computers and the Internet. Although growth in use of computers and access to the Internet has been rapid and steady across all demographic categories, disparities remain, and the digital “have nots” — individuals from low-income households and with low levels of education, minority groups (particularly Blacks and Hispanics), and older people (especially those not in the workforce) — continue to lag far behind national trends in computer and Internet use.

As shown in Tables 4.1 and 4.2, the growth in the percentage of households with a computer and with Internet access has been relatively even across rural, urban, and central city areas of the United States. The most persistent gaps in computer and Internet access are across income (see Table 4.3), educational level (see Table 4.4), and race (see Table 4.5). As shown in Tables 4.3 and 4.4, household income and educational level are closely correlated with access to computers and the Internet. Although computers are nearly ubiquitous and Internet access has become the norm in households with middle- to high-income levels and with high levels of educational attainment, in low-income households with lower levels of educational attainment, Internet access is rare. Only 4% of households earning less than $15,000 annually and with the most educated member possessing less than a high school education had Internet access in August 2000 (NTIA, 2000).

Looking at patterns of individual use of the Internet clearly reveals persistent gaps in use across race–origin (see Table 4.5) and age (see Table 4.6). According to the September 2001 figures, for Blacks, computer use (55.7%), and Internet use (39.8%) remain well below the national averages. For Hispanics, rates of computer use (48.8%) and Internet use (31.6%) are even further below the national averages. At the same time, computer and Internet use by Whites (70% and 59.9%, respectively) and
by Asian American/Pacific Islanders (71.2% and 60%, respectively) are well above the national averages. Furthermore, these gaps widened between the October 1997 and the September 2001 surveys. Rates of Internet use by Blacks were 9 percentage points below the national average in 1997 and 14.1 percentage points below the average in 2001. For Hispanics, the gap widened from 11.2 percentage points below the average in 1997 to 22.3 percentage points below in 2001. These gaps in computer and Internet use by race and Hispanic origin reflect language differences as well as educational attainment and income differences. For example, for persons of Hispanic origin living in households in which Spanish was the only language spoken, the rate of Internet use was 14.1%, whereas the rate for the same group living in households in which Spanish was not the only language spoken was 37.6%. This difference may be partially explained by

### TABLE 4.1

<table>
<thead>
<tr>
<th>Year</th>
<th>U.S.</th>
<th>Rural</th>
<th>Urban</th>
<th>Central Cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>56.5%</td>
<td>55.6%</td>
<td>56.7%</td>
<td>51.5%</td>
</tr>
<tr>
<td>2000</td>
<td>51.0%</td>
<td>49.6%</td>
<td>51.5%</td>
<td>46.3%</td>
</tr>
<tr>
<td>1998</td>
<td>42.1%</td>
<td>39.9%</td>
<td>42.9%</td>
<td>38.5%</td>
</tr>
<tr>
<td>1997</td>
<td>36.6%</td>
<td>34.9%</td>
<td>37.2%</td>
<td>32.8%</td>
</tr>
<tr>
<td>1994</td>
<td>24.1%</td>
<td>22.1%</td>
<td>24.8%</td>
<td>22.0%</td>
</tr>
</tbody>
</table>


### TABLE 4.2

<table>
<thead>
<tr>
<th>Year</th>
<th>U.S.</th>
<th>Rural</th>
<th>Urban</th>
<th>Central Cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>50.5%</td>
<td>48.7%</td>
<td>51.1%</td>
<td>45.7%</td>
</tr>
<tr>
<td>2000</td>
<td>41.5%</td>
<td>38.9%</td>
<td>42.3%</td>
<td>37.7%</td>
</tr>
<tr>
<td>1998</td>
<td>26.2%</td>
<td>22.2%</td>
<td>27.5%</td>
<td>24.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annual Income</th>
<th>Under $5,000</th>
<th>$5,000–$9,999</th>
<th>$10,000–$14,999</th>
<th>$15,000–$19,999</th>
<th>$20,000–$24,999</th>
<th>$25,000–$34,999</th>
<th>$35,000–$49,999</th>
<th>$50,000–$74,999</th>
<th>$75,000+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homes with computer</td>
<td>25.9%</td>
<td>19.2%</td>
<td>25.7%</td>
<td>31.8%</td>
<td>40.1%</td>
<td>49.7%</td>
<td>64.3%</td>
<td>77.7%</td>
<td>89.0%</td>
</tr>
<tr>
<td>Homes with Internet</td>
<td>20.5%</td>
<td>14.4%</td>
<td>19.4%</td>
<td>23.6%</td>
<td>31.8%</td>
<td>42.2%</td>
<td>56.4%</td>
<td>71.4%</td>
<td>85.4%</td>
</tr>
</tbody>
</table>

**4. IMPLICATIONS OF NEW TECHNOLOGIES**

TABLE 4.4

Household Internet Access by Education Level, 1998–2000

<table>
<thead>
<tr>
<th>Year</th>
<th>Less Than High School</th>
<th>High School</th>
<th>Some College</th>
<th>Bachelor’s Degree</th>
<th>Postgraduate Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>11.7%</td>
<td>29.9%</td>
<td>49.0%</td>
<td>64.0%</td>
<td>69.9%</td>
</tr>
<tr>
<td>1998</td>
<td>5.0%</td>
<td>16.3%</td>
<td>30.2%</td>
<td>46.8%</td>
<td>53.0%</td>
</tr>
</tbody>
</table>


TABLE 4.5

Internet Use by Race and Hispanic Origin, 1997–2001

<table>
<thead>
<tr>
<th>Year</th>
<th>U.S. Total</th>
<th>White</th>
<th>Black</th>
<th>Asian–Pacific</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>53.9%</td>
<td>59.9%</td>
<td>39.8%</td>
<td>60.4%</td>
<td>31.6%</td>
</tr>
<tr>
<td>2000</td>
<td>44.4%</td>
<td>50.3%</td>
<td>29.3%</td>
<td>49.4%</td>
<td>23.7%</td>
</tr>
<tr>
<td>1998</td>
<td>32.7%</td>
<td>37.6%</td>
<td>19.0%</td>
<td>35.8%</td>
<td>16.6%</td>
</tr>
<tr>
<td>1997</td>
<td>22.2%</td>
<td>25.3%</td>
<td>13.2%</td>
<td>26.4%</td>
<td>11.0%</td>
</tr>
</tbody>
</table>


TABLE 4.6

Computer and Internet Use by Age Group, 1997–2001

<table>
<thead>
<tr>
<th>Year</th>
<th>All Ages 3+</th>
<th>3–8</th>
<th>9–17</th>
<th>18–24</th>
<th>25–49</th>
<th>50+</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>Computer</td>
<td>65.6%</td>
<td>71.0%</td>
<td>92.6%</td>
<td>71.3%</td>
<td>70.2%</td>
</tr>
<tr>
<td></td>
<td>Internet</td>
<td>53.9%</td>
<td>27.9%</td>
<td>68.6%</td>
<td>65.0%</td>
<td>63.9%</td>
</tr>
<tr>
<td>2000</td>
<td>Internet</td>
<td>44.4%</td>
<td>15.3%</td>
<td>53.4%</td>
<td>56.8%</td>
<td>55.4%</td>
</tr>
<tr>
<td>1998</td>
<td>Internet</td>
<td>32.7%</td>
<td>11.0%</td>
<td>43.0%</td>
<td>44.3%</td>
<td>40.9%</td>
</tr>
<tr>
<td>1997</td>
<td>Computer</td>
<td>53.5%</td>
<td>59.0%</td>
<td>85.1%</td>
<td>58.2%</td>
<td>57.7%</td>
</tr>
<tr>
<td></td>
<td>Internet</td>
<td>22.2%</td>
<td>7.2%</td>
<td>33.2%</td>
<td>31.6%</td>
<td>27.1%</td>
</tr>
</tbody>
</table>

the fact that there is little Spanish-language content on the Internet, but it is also related to differences in income and education (NTIA, 2002, p. 23).

As shown in Table 4.6, age is highly correlated with computer and Internet use. A majority of Americans over the age of 3 (65.6%) and nearly everyone in the 9 to 17 age group (92.6%) was using a computer in 2001. The majority of Americans over age 3 are also using the Internet, with the highest rates of use among the 9 to 27 (68.6%), 18 to 24 (65%), and 25 to 49 (63.9%) age groups. Persons over age 50 are still much less likely to use computers (42.5%) and the Internet (37.1%; NTIA, 2002).

**Adult Learner Access**

The patterns revealed by the NTIA analyses of census data show that the target population for ABE (adults who have low levels of educational attainment and are unemployed or have low incomes) lags the population at large in access to and use of computers and the Internet. As just noted, the majority of Americans with jobs use computers at work (and more than one third also use the Internet at work). It seems reasonable to assume that a good number of the working Americans who do not have access to computers at work occupy low-wage, low-skill positions. Recent surveys have shown that using a computer and the Internet at work is a strong predictor of having a computer and Internet access at home, independent of income and educational level (Becker, 2000; Turow, 1999). So where do adults who do not have access to computers and the Internet at work (or are unemployed) find such access? According to the 2000 NTIA report, public libraries were the most important place for Internet use for the unemployed. Far more unemployed (4.2%) than employed persons (1.8%) reported using the Internet in a public library. Not surprising, an important reason cited for using the Internet in the library was searching for a job.

Although it is not surprising that the population of adults in most need of ABE services is among the least likely to have access to computers and the Internet, new learning technologies have good potential to play an important role in extending learning opportunities to these adults. Community access to computers and the Internet (in public libraries, community centers, and elsewhere) has been shown to be an effective way of extending access to learning technology to adults who lack such access in the home. The 1998 Community Technology Centers Network (CTCNet) technology center national survey (Chow, Ellis, Mark, & Wise, 1998), an analysis of 817 survey responses from 44 community technology centers in 14 states and the District of Columbia, revealed some interesting pat-
terns in the demographics of those using the centers. Among these findings were the following:

- About two thirds of the sample were women.
- About two thirds were people of color.
- About one half were between the ages of 20 and 49.
- About three fourths had household incomes below the U.S. average.
- About two fifths had not completed high school.
- About one fifth had a high school diploma or equivalent.
- Almost half of the adults were either unemployed or retired.

The CTCNet survey also found that a large majority of participants had taken classes to improve their job, literacy, and language skills; received help with homework; or participated in programs to obtain their credential of general educational development or other ABE programs (Chow et al., 1998). Studies have shown that community technology centers are perceived as safe, supportive environments that provide community members with valuable resources (Ba, Culp, Green, Henriquez, & Honey, 2001; Kim & Penuel, 2000). These studies and others reviewed in the next section of this chapter also reveal some of the remaining barriers to expanding access to and improving the effectiveness of learning technologies for adult literacy and English-language learners.

**OVERCOMING BARRIERS TO EFFECTIVENESS AND ACCESS**

As computers and the Internet become more commonplace features of our homes, schools, and workplaces, the question of whether as opposed to how these new learning technologies are effective as learning tools seems increasingly irrelevant. Like paper and pencils, computers and the Internet are simply a part of our lives. The central questions are how we might provide all adults with the skills and access they need to use these tools and how we might design and best use these tools for information creation and exchange. Research has highlighted a number of the challenges involved in providing adults who are learning basic literacy and English-language skills with opportunities to benefit from the new learning technologies. These challenges are related to (a) the limitations of the Internet and Web as an educational infrastructure, (b) issues of teacher professional development and integration of technology into the ABE system, (c) issues in
designing technology and delivery systems to fit the needs of adults learning basic literacy and English-language skills, and (d) broader issues of systemic change and improvement.

Limitations of the Internet and the Web

Although declining costs for computers and efforts to make computers and the Internet available to all in public libraries and community technology centers are helping to reduce the digital divide, several characteristics of the new learning technologies may limit their value as tools for adult literacy and learning. The standard argument for the value of the Internet and the Web as learning tools often consists of three points: first, that these new technologies can make learning more accessible; second, that they can improve learning; and, third, that they can reduce costs (see, e.g., Owston, 1997). In May 1998, the Center for Innovative Learning Technology (CILT)\(^8\) hosted a workshop for more than 100 researchers, educators, and technology developers to discuss the current status of the Internet and the Web as an educational infrastructure. In a summary of the workshop discussions, Roschelle and Pea (1999) pointed out problems raised by workshop participants related to the degree to which the Internet and the Web can make learning more accessible, improve learning, and reduce costs.

1. Problems with making learning more accessible. CILT workshop participants (Roschelle & Pea, 1999) pointed out that the barriers of distance and time are not the most important to overcome in making learning accessible. Offering information that is at the right level for students and that fits learning goals and objectives is far more important; in this regard, the Internet and Web often fall short. Furthermore, workshop participants noted that searching for and retrieving information on the Internet and the Web is overly text-dependent. To learn effectively using the Internet too often requires high-level and specialized reading competence. The multimedia capabilities of the Web (allowing for presentation of information in visual and auditory formats) are underutilized. Finally, the Internet and Web may offer too much access to information of the wrong kind. The Web contains a great deal of erroneous and misleading information as well as information that most people would find offensive, so there is little doubt that some of the information on the Internet will be offensive to or

\(^8\) The CILT is a virtual center funded by the National Science Foundation and led by researchers from SRI International; Vanderbilt University; the Concord Consortium; and the University of California, Berkeley (see http://www.cilt.org). See in References, CILT (n.d.).
inappropriate for some adult learners. Many adult learners will have difficulty coping with the information overload that comes from the amount and chaotic organization of information on the Web. Needed information is also often accompanied by distracting and unwelcome commercial advertising.

2. Problems with improving learning. The CILT workshop participants (Roschelle & Pea, 1999) also noted problems with the capacity of the Internet and the Web to improve learning. These problems included a general lack of organization of information and loose connections between information on the Internet and curriculum content. Workshop participants also felt that the Internet’s capacity to support collaboration had been overrated. In fact, most Internet applications and Web pages are not designed to support interaction between groups of learners effectively. Finally, workshop participants concluded that the Web by itself does not necessarily foster higher order skills such as problem solving, critical thinking, or teamwork.

3. Problems with cost reduction. CILT workshop participants (Roschelle & Pea, 1999) responded to the argument that the Internet and Web can help to reduce educational costs by noting two cost factors beyond expenses related to purchase of hardware and software. The first is the weakness of the educational market for software. The market for educational technology has not been strong enough to support development of new companies and products that would serve the needs of the education community. Second, the fact that the Internet and the Web, as well as most software, have not been developed for applications in particular educational markets means that teachers have been forced to expend considerable time and effort to make effective use of learning technologies not specifically designed to meet their needs.

The issues raised by the CILT workshop participants have been echoed by others concerned with applications of new learning technologies for adult literacy and lifelong learning (see Hopey et al., 1996; National Center on Adult Literacy, 1999; Wagner & Hopey, 1998). For the ABE target population and the ABE system, the limitations of the Internet and the Web are amplified. The costs of developing appropriate content (that does not currently exist) and accessible applications (that do not currently exist) are thus greater because they must be built from the ground up.

The problems of accessibility and appropriateness of content are particularly thorny ones for adult literacy and English-language learners. According to a report from the Children’s Partnership (Lazarus & Mora,
most of the content on the Web cannot be understood by readers with limited literacy skills. The Web also contains very little community-specific information. The Children’s Partnership undertook a study of what underserved Internet users want and could find on the Web (underserved was defined as Americans who have low incomes, live in rural communities, have limited education, and are members of racial or ethnic minorities). Interviews were conducted with 12 groups of low-income technology users as well as with directors of community technology centers and other experts, and the content of roughly 1,000 Web sites was analyzed. From interviews, the Children’s Partnership researchers (Lazarus & Mora, 2000) found that low-income and underserved adults wanted the following kinds of content on the Web:

- Practical community-related information (e.g., local job listings with entry-level skill requirements, listings of affordable housing options, and information about local schools and neighborhood events).
- Information at a basic literacy level (e.g., guidance on preparation for high school equivalency, low-literacy reading materials, and technology tutorials).
- Content for non-English speakers (e.g., instructional materials, translation programs, and information in native languages).
- Cultural information (e.g., information related to ethnic interests and health information targeted toward specific ethnic groups).

Lazarus and Mora (2000) found very few sites that provided such content. The little low-literacy-level content they did find was mostly designed to meet the needs and interests of children, listings for local jobs with entry-level skills were rare, and the small amount of content available in a language other than English was almost entirely in Spanish. Table 4.7 shows the number and percentage of sites the researchers found that had content devoted to areas of interest to underserved Americans.

Despite the dearth of appropriate content for adult literacy and English-language learners on the Web, there is evidence of a demand for access to computers and the Internet among the ABE target population (see community technology center user profiles in the CTCNet survey by Chow et al., 1998). The findings of the Children’s Partnership research and the CTCNet survey suggest that adult literacy and English-language learners would make good use of new learning technologies if these technologies were accessible in terms of both physical access and accessible content. Effective learning for adult literacy and English-language learners using
new learning technologies will also require effective teacher training and integration of technology into educational programs as well as effective designs for adult learning and instruction.

**Teacher Change and Technology Integration**

The amount of research on teacher change and development in the context of technology integration is substantial. This research has shown that teachers pass through a series of stages when learning to integrate technology into their classrooms. One of the earliest formulations of these stages of change came out of the Apple Classrooms of Tomorrow (ACOT) project. Based on more than 10 years of research, ACOT project workers developed a five-phase framework for describing the instructional evolution through which teachers typically progress: entry, adoption, adaptation, appropriation, and invention (Apple Computer, 2001). Another group, the Milken Family Foundation, constructed a three-stage framework (see Table 4.8) based on the concepts developed by the ACOT team (Coughlin & Lemke, 1999). The Milken Exchange’s Professional Competency Continuum (PCC) not only describes the stages of instructional evolution but does so in detail for five target areas of skill: core technology skills; curriculum, learning, and assessment; professional practice; classroom and instructional management; and administrative competencies. It is designed to provide advice, recommendations, and resources for improvement. The Milken Family Foundation also sponsors a Web
site\textsuperscript{9} where teachers can conduct an online assessment of their professional skills (see Coughlin & Lemke, 1999).

Using various change models, researchers studying professional development in technology programs have found that as a result of training, teachers shift their focus away from the technology itself and toward concerns about maximizing its effects and modifying its use on the basis of students’ experiences. These studies have also found that teachers with different levels of technology skills need different types of support and training. Teachers with little or no prior knowledge of and experience with technology need a slower pace and more instruction in basics than teachers who need to improve existing technology skills. The two types of teachers will be frustrated if they are grouped together in one training course. In addition, support after initial training has proven to be essential to professional development that leads to changes in teaching practices (Dooley, 1999; Gunn, 1998; Hope, 1997; Means & Olson, 1995; Wentworth, 1998).

Given the large number of part-time positions and the scarce opportunities for professional development among teachers of ABE and English for

\textsuperscript{9}The PCC assessment tool can be downloaded from the Milken Family Foundation Web site (see http://www.mff.org/publications. See in References, Milken Family Foundation (2000).
speakers of other languages (ESOL), these teachers will need substantial support to acquire the skills they need to integrate new learning technologies effectively into their teaching practice. Johnston, Young, and Petty (2001) found that a major new Internet-based innovation for adult learners had very low levels of use in a nationwide test of its efficacy despite extensive efforts to prepare the teachers years ahead for the new curriculum. In response to a recent national survey of professional adult educators (selected to represent the most committed and most stable group of ABE instructors), only 45% of respondents said they felt prepared to integrate technology into their teaching (Sabatini et al., 2000).

Program Design

Although there is still not much research on the effectiveness of new learning technologies in support of ABE, an emerging body of formative evaluation literature can be drawn from to provide guidance in designing effective applications of learning technologies for adult learners (see Sabatini, 2001). In their evaluation of the LiteracyLink/Workplace Essential Skills (WES)10 materials, Johnston and colleagues (Johnston & Petty, 2001; Johnston & Young, 1999; Johnston et al., 2001) identified a number of issues related to the quality of the instructional design and use of multimedia components. The WES materials consist of a video series of 26 programs, workbooks, and a Web site designed to address the learning of work-related basic skills in reading, writing, communication, and mathematics, as well as job search, career planning, and workplace orientation issues. Johnston and Young (1999) investigated the design of the WES videos, workbooks, and online resources and drew conclusions on whether any of these products should be adjusted to enhance their acceptance by and usefulness to the target audience of adult learners. In general, they found that both teachers and students were pleased with the materials (especially the online materials). In looking at the question of potential improvements, Johnston and Young called attention to the following features of the WES product design:

10The LiteracyLink WES learning system, launched in September 1999 (see http://www.pbs.org/literacy/wes/view_wes.html), is a joint venture of the Public Broadcasting System, Kentucky Educational Television, the National Center on Adult Literacy at the University of Pennsylvania, and the Kentucky Department of Education. The LiteracyLink project is funded through the U.S. Department of Education Star Schools grants program, and it combines text, video, and Web-based learning materials in a multimedia learning system (see http://www.pbs.org/literacy/). See in References, PBS LiteracyLink (1998, 2001).
• Redundancy among the components: There appeared to be more duplication of content in the print and online materials than was needed.

• Reading level of the print and online components: The reading level was seen as being above the target level (fifth to eighth grade).

• Instructional design issues and value of the video, print, and online components as stand-alone products.

• Navigation of the online materials: Learners sometimes had difficulty knowing where they were and what they should do on the Web site.

In a later pilot study of a nonclassroom (without the benefit of an instructor or other students) implementation of the LiteracyLink WES curriculum in Pennsylvania, Johnston and Petty (2001) found that successful implementation required attention to learner recruitment strategies, orientation of learners, computer access, computer training of learners, and support for learners who are not in a class and do not have an instructor. Among their key findings were the following:

• Face-to-face orientation sessions prior to beginning distance work are essential.

• Most adults need computer training before they can handle online learning.

• Adults need motivation and feedback on performance to persist in distance learning.

Issues in the design of multimedia learning resources for use by adult literacy and English-language learners are also being addressed by the Cyberstep Project.11 Among the recent products of the Cyberstep development team is a list of principles and indicators for multimedia development in adult literacy (Wrigley, 2001). The online version of this list has numerous links to adult literacy multimedia products online to illustrate the 12 principles and indicators (see Fig. 4.1 for a list of the 12 principles and indicators as well as Web locations for sites that exemplify some of the principles and indicators).

Issues in designing learning supported by new learning technologies for English-language learners such as those listed in Fig. 4.1 and elsewhere

11Cyberstep is a partnership of the Sacramento County Office of Education, the Los Angeles Unified School District, the Adult Literacy Media Alliance, and Aguirre International (see http://www.cyberstep.org).
1. **Adult learning requires a clear focus.**  
   Indicators:  
   - Objectives and/or potential outcomes are clearly explained.  
   - There are various paths for students to follow.  
   - Activities appear as part of skill bundles or are connected to themes.  
   - Student work culminates in projects or products.  
   Example on the Web:  
   - TV411 (Web site for the Adult Literacy Media Alliance’s Video Series): http://www.tv411.org

2. **Adult learning requires that learners take ownership of what is to be learned.**  
   Indicators:  
   - Learners can explore their own interests and set goals.  
   - Learners can design their own learning plans and follow a path that leads them to success.  
   - Learners can choose from a set of skills, an array of themes and/or various modes of learning (inductive, deductive, controlled, and exploratory).  
   - Group projects are offered as a possibility.  
   Example on the Web:  

3. **The goal of adult learning is to help adults apply knowledge, skills, and strategies in real-life contexts.**  
   Indicators:  
   - Knowledge, skills, and strategies are contextualized and connected to learners’ lives.  
   - Application activities encourage learners to use skills beyond the course and report back (e.g., planning a trip and making a budget).  
   - Learners see how things work (through photographs, animation, or streaming video) without having to get mired in print.  
   Example on the Web:  
   - Maricopa Center for Learning and Instruction, “Ubuyacar” problem-based learning Web page: http://www.mcli.dist.maricopa.edu/pbl/ubuystudent/

(Figure continues)
4. Language and literacy development require fluency and accuracy (but not at the same time).

Indicators:
Learners get the opportunity to write what is on their mind, using their own language.
Learners have access to resources such as spell checks, dictionaries, thesauruses, and encyclopedias.
Learners get a chance to edit and correct earlier drafts.

Examples on the Web:
SCALE Health Action Team Project, Inquiry Map Example: http://www2.wgbh.org/mbcweis/ltc/scce/Nutrlmap/example.html

5. Language and literacy development are social processes that depend on interaction with others.

Indicators:
Learners get to know each other and are part of a community.
Learners can communicate with each other via e-mail or through developed projects.
Learners tell their stories and listen to or read the stories of others.
Surveys and polls allow learners to see what others think.

Example on the Web:
Susan Gaer’s e-mail Projects:
http://www.otan.us/webfarm/emailproject/email.htm

6. Language and literacy development require hypothesis testing and risk taking.

Indicators:
Students are invited to discover principles of writing, grammar rules, or spelling conventions by looking for patterns (task-based learning).
Students get a chance to move from a zone where they are relatively comfortable to new areas that are a bit scary (posting an e-mail, sending an electronic postcard, posting a story, and creating a video).

Example on the Web:
Blue Mountain Interactive Birthday Cards:
http://free.bluemountain.com/eng3/interbrth/

(Figure continues)

FIG. 4.1. (Continued)
7. **Language and literacy processes are nonlinear and develop in fits and spurts.**
   Indicators:
   - Texts are highly engaging and propel students forward.
   - Information is recycled and instruction is layered so that knowledge, skills, and strategies are reinforced through various themes.
   Examples on the Web:

8. **Language and literacy are multidimensional.**
   Indicators:
   - Materials offer various modalities (visual, musical, analytic, naturalistic, interpersonal, and intrapersonal)
   - Learners are encouraged to move beyond print in their work.
   Example on the Web:
   - Poetry Society of America, Favorite Poem Project (site combines print, sound, and video): http://www.favoritepoem.org/

9. **Language and literacy grow through both serendipitous learning and explicit learning.**
   Indicators:
   - Learners get a chance to immerse themselves in interesting work (reading, writing, and problem solving).
   - Demonstrations illustrate how things work.
   - Learners have access to information on an as-needed basis.
   Examples on the Web:
   - The Evil Landlady Action Maze (problem solving for English learners): http://www.uefap.co.uk/landlady/llady1.htm

(Figure continues)

FIG. 4.1. *(Continued)*
10. Language and literacy learning require both success and challenges.

Indicators:
- Learners get a chance to see what others have done (models) before attempting their own work.
- Learners are invited to use learning strategies with material that becomes progressively more complex.
- Learners see or read about the ways in which others process or create texts (cognitive apprenticeship).

Example on the Web:
TV411 Writing Page (Web site for the Adult Literacy Media Alliance’s Video Series): http://www.tv411.org

11. Language and literacy develop more deeply if ideas are situated in a specific context or theme.

Indicators:
- Skills and strategies are contextualized.
- Learners are invited to explore a theme from various angles.
- Learning materials can be accessed by skill area or by theme.

Examples on the Web:
The Farmworkers Web Site: http://www.farmworkers.org/
National Institutes of Health, National Institute of Allergy and Infectious Diseases, Fact Sheet on HIV/AIDS Statistics:
http://www.niaid.nih.gov/factsheets/aidsstat.htm

12. Language and literacy grow through both emotional engagement and cognitive involvement.

Indicators:
- Needs assessment seeks to determine themes that matter to learners (parenting, health, and money).
- Some themes address controversial topics that a teacher may not want to address (AIDS, cancer, and domestic violence).
- Learners have opportunities to discuss issues, share information, and ask questions.

Examples on the Web:
Safe Horizon Domestic Violence Shelter Tour and Information Site:
http://www.dvsheltertour.org/
Talking With Kids, Talk With Your Kids About Tough Issues Site:
http://www.talkingwithkids.org/

(see Bermudez & Palumbo, 1994) are currently being addressed in a number of research and development projects, including Cyberstep’s English for All multimedia learning system (see California State University Institute, 1999; Cyberstep, 1999; and the English for All Web site12) and the LiteracyLink Project CONNECT (Comprehensive Offerings Now for the New English Communicators using Technology). The final results of these projects were not available at the time of this writing, but they promise to be fruitful for guiding the design of new learning technologies for adult literacy and learning.

Effective learning designs for the use of computers and the Internet by ABE students must also address issues of instructional program quality. A review of the available research on technology use in low-income communities conducted at the Center for Children and Technology (Ba et al., 2001) indicates that community technology centers can serve as a good base from which to expand access. They offer a number of benefits to underserved communities, including the following:

- A meaningful and challenging learning environment.
- A sense of community among center users.
- Help finding new employment opportunities.
- Increased job skills and access to employment.
- Improved outlooks on learning and educational goals.
- Use of technological literacy as a means of achieving personal goals.
- Increase in civic participation.
- Increase in social and community connections beyond the center.

Further case studies of community technology centers being conducted by the vStreets Research Group at SRI International (Kim & Penuel, 2000) are also beginning to reveal promising program practices. Intensive case studies of six effective community technology programs in the California Bay Area revealed that these programs shared the following practices:

- Coordination of youth and adult services.
- Ongoing reflection and program improvement through regular involvement of stakeholders in discussions of program practices.
- Development of new part-time staff through hiring and training of program participants.

12The English for All Web site can be found at http://www.myefa.org. See in References, English for All (2002).
• Use of project-based, informal, and extended approaches to learning (e.g., group compilation and desktop publication of a cookbook as opposed to basic skills instruction).

In its analysis of effective program practices and learning in the community technology centers, the vStreets Research Group has adopted a multiliteracies framework (see New London Group, 1996) that includes an expanded set of literacy skills that are important to consuming and producing information using digital media (see also National Research Council, 1999a). This multiliteracies framework emphasizes the following four modes of effective learning in community technology centers:

• Meaningful practice: Because participants often have little prior experience with technology, it is important to give them opportunities to practice on the computer in meaningful ways that are tied to their goals and interests.

• Direct instruction: Many of the technical skills associated with effective use of new learning technologies (e.g., using e-mail) are best learned through specific guidance in performing difficult tasks.

• Critical reflection: Participants benefit from opportunities to think critically about what they are learning and about the ways in which their lives are influenced by new technologies. Participants thus become producers of digital information as well as critical consumers.

• Social connection: Community technology centers are most effective when they see their mission as being broader than promoting individual learning and when they use technology to help build a sense of community and to empower participants (Penuel, 2001).

Systemic Change and Improvement

Barriers to effectiveness and expanded access to new learning technologies for adult literacy and lifelong learning cannot be overcome in a piecemeal fashion. Roschelle et al. (2000) argued that new learning technologies can become effective only when they are embedded in a broader context of educational reforms that include changes in teacher training, changes in curriculum and assessment, and an enlarged capacity for institutional change. This broader context of change is as salient to consideration of the effectiveness of learning technologies for adult literacy and lifelong learning as it is to considerations of technology effectiveness in the context of K–12 schooling. Ultimately, the effectiveness of learning technologies
depends on the quality of the educational contexts for which they are
designed and in which they are applied. This is not a technology design
issue but a learning design issue. A comprehensive model of program
quality (e.g., that laid out in Results That Matter: An Approach to Program
Quality Using Equipped for the Future by Bingman & Stein, 2001) or a
model of effective informal learning (e.g., that described by the vStreets
group in Penuel, 2001) is necessary to the effective application of new
learning technologies.

**IMPLICATIONS FOR RESEARCH, PRACTICE, AND POLICY**

It is clear from the research review that developing effective designs for
new learning technologies to support learning by adults with low-level lit-
eracy skills and limited English-language ability is a complex and multi-
faceted endeavor. Developing such designs to enable access and effective
use of new learning technologies for adult literacy and English-language
learners is nonetheless imperative. Without such designs, the digital divide
—which is, in fact, not so much a distinction of access to hardware and
software as it is of educational, employment, personal growth, and com-
munity development opportunities—will continue to widen. The following
discussion highlights key implications for research, practice, and policy.

**Research**

The research reviewed in this chapter has shown that computers and the
Internet can be effective learning tools. Meta-analyses of hundreds of indi-
vidual research studies have shown that computers can have a positive
impact on achievement when used in classroom settings. The key ques-
tions facing researchers now have to do with how computers and the Inter-
net can most effectively be used to support learning in classrooms and in
informal learning environments, for both children and adults.

To support effective development and applications of new learning tech-
nologies for adult literacy and learning, researchers will need to design
studies to address two areas. The first area involves investigating the
impacts of applications of new learning technologies that incorporate prin-
ciples of good adult learning design, including:

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13 This report can be downloaded at http://www.nifl.gov/lincs/collections/eff/eff_publications.html.
• Active engagement of learners.
• Participation in groups.
• Frequent interaction and feedback.
• Connection to real-world contexts.

Developing appropriate measures of learning outcomes will be an important task in this research. These measures should permit the assessment of integrated knowledge and skills and complex performance under conditions that closely mirror real-world performance. Only by developing such measures will researchers be able to assess fully the value of new designs for learning technologies for adult literacy and learning.

A second critical area of investigation involves strategies for overcoming barriers to broader access to learning technology for adults. Survey research and analyses of census data continue to show persistent societal gaps in access to and use of computers and the Internet. Although access and use have been increasing steadily for all segments of American society, some gaps in access and use are widening. The unemployed and persons with low-wage jobs; persons with low levels of educational attainment; members of racial, ethnic, and/or linguistic minority groups; and older Americans disproportionately lack opportunities to use information technology to better their lives. Research has shown that this digital divide results not only from a lack of physical access to computers and the Internet. It also results from the lack of opportunities to acquire the skills needed to use information technologies effectively and from the problems attending the fact that the content and information that information technologies provide is not suited to the needs and interests of adult literacy and English-language learners. Further research is needed to identify promising practices and approaches for overcoming these barriers to access to learning technology.

Practice

The key implications of this review of research are in the areas of effective integration of new learning technologies into adult education and teacher professional development. These two areas are closely intertwined, as effective integration of learning technologies will only be achievable if adult educators increase their levels of competence in the use of new technologies to support their own as well as their students’ learning.

Systemic reform and improvement of ABE programs and services are needed to provide the context in which new designs for learning technolo-
gies and higher levels of teacher development and technology integration can be implemented effectively. As research and development makes available new designs for learning with computers and the Internet, particularly for self-supported learning beyond the classroom (in homes, communities, and the workplace), these new learning technologies (and learning opportunities) must become an integral part of adult literacy and ESOL service delivery systems. As noted, there is a growing body of research accumulating in community technology centers (and elsewhere) that has identified effective approaches to providing support for informal and formal opportunities for adults to learn about and learn with computers and the Internet. This research holds lessons for designing learning and instruction, as well as for selecting and applying learning technologies to support adult learning (see Fig. 4.2 for a summary of indicators of engaged adult learning and indicators of high-performance technology). This experience makes clear that inserting technology into poorly organized instructional programs and learning environments will not by itself improve learning and instruction. The key to effective technology integration is understanding effective adult learning and instruction plus understanding the limits and potential of learning technologies to support effective adult learning.

Developing such an understanding among adult educators will require expanded professional training and professional development. It is widely recognized that human resources (people who know how to use information technology) are as important as material resources (computers, software, and network infrastructure) in achieving effective integration of learning technology in adult literacy education (or in any educational system). Competence in the use of information technologies and understanding of how to make good use of information technology in learning and instruction should be the goal for current and prospective adult educators. The diversity of backgrounds and degrees of professionalism among adult educators will require developing a wide variety of programs, contexts, and materials to support learning about and learning with new learning technologies.

Policy

Research and development of effective applications of new learning technologies for adult literacy and lifelong learning are only beginning. Research-based policy from the much larger world of K–12 education can help to guide the work that will be needed to expand access to and design effective technologies for adult literacy and English-language learners.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator of Engaged Learning</th>
<th>Indicator Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision of learning</td>
<td>Responsible for learning</td>
<td>Learner involved in setting goals, choosing tasks, and developing assessments and standards for the tasks; learner has the big picture of learning and next steps in mind.</td>
</tr>
<tr>
<td></td>
<td>Strategic and transformative</td>
<td>Learner actively develops repertoire of thinking and learning strategies and critical awareness to empower pursuit of individual and collective goals.</td>
</tr>
<tr>
<td></td>
<td>Energized by learning</td>
<td>Learner is not dependent on rewards from others and has passion for learning. Learner develops new ideas and understanding in conversation and work with others.</td>
</tr>
<tr>
<td></td>
<td>Collaborative</td>
<td></td>
</tr>
<tr>
<td>Tasks</td>
<td>Authentic and builds on experience</td>
<td>Pertains to real world, addresses personal interest, and rooted in lived experience of learner.</td>
</tr>
<tr>
<td></td>
<td>Challenging and rewarding</td>
<td>Difficult enough to be interesting but not totally frustrating, usually sustained, and conveys clear and tangible benefits to the learner.</td>
</tr>
<tr>
<td></td>
<td>Integrative</td>
<td>Involves integrating information of many types and from a variety of sources to solve problems and address issues related to daily life and work.</td>
</tr>
<tr>
<td>Assessment</td>
<td>Performance based</td>
<td>Involving a performance or demonstration, usually for a real audience and useful purpose.</td>
</tr>
<tr>
<td></td>
<td>Generative</td>
<td>Assessments having meaning for learner; they may produce information, product, or service.</td>
</tr>
<tr>
<td></td>
<td>Seamless and ongoing</td>
<td>Assessment is part of instruction and vice versa; learners learn during assessment.</td>
</tr>
<tr>
<td></td>
<td>Equitable</td>
<td>Assessment is culture fair.</td>
</tr>
<tr>
<td>Instructional Model</td>
<td>Grouping</td>
<td>Learning Context</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Interactive and accommodates learning differences</td>
<td>Heterogeneous</td>
<td>Collaborative</td>
</tr>
<tr>
<td>Generative</td>
<td>Equitable</td>
<td>Knowledge building</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Empathetic</td>
</tr>
<tr>
<td>Instructor or technology program is responsive to learner needs and requests (e.g., is menu driven) and adapts instructions to suit a variety of learning styles and preferences.</td>
<td>Small groups with persons from different ability levels and backgrounds.</td>
<td>Instruction conceptualizes the learners as part of a learning community; activities are collaborative.</td>
</tr>
<tr>
<td>Instruction oriented to constructing meaning and to providing meaningful activities and experiences.</td>
<td>Small groups organized so that over time all learners have challenging learning tasks and experiences.</td>
<td>Learning experiences are set up to bring multiple perspectives to solve problems such that each perspective contributes to shared understanding for all; this goes beyond brainstorming.</td>
</tr>
</tbody>
</table>
| | Flexible | Empathetic | Instructor considers self as learner, is willing to take risks to explore areas outside his or her expertise, and collaborates with other instructors and practicing professionals. |}

FIG. 4.2. Indicators of engaged adult learning and of high-technology performance for adult learning.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator of Engaged Learning</th>
<th>Indicator Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learner roles</td>
<td>Explorer</td>
<td>Learners have opportunities to explore new ideas and tools; they can push the envelope in ideas and research.</td>
</tr>
<tr>
<td></td>
<td>Cognitive apprentice</td>
<td>Learning is situated in relationship with mentor who coaches learners to develop ideas and skills that simulate the role of workers in the real world.</td>
</tr>
<tr>
<td></td>
<td>Teacher</td>
<td>Learners are encouraged to teach others in formal and informal contexts.</td>
</tr>
<tr>
<td></td>
<td>Producer</td>
<td>Learners develop products of real use to themselves and others.</td>
</tr>
</tbody>
</table>

**Indicators of High-Technology Performance for Adult Learning**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator of High-Technology Performance</th>
<th>Indicator Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>Connective</td>
<td>Learning contexts are connected to the Internet, Web, and other resources. Technology resources and equipment are pervasive and conveniently located for individual (as opposed to centralized) use and are useable in daily life and work settings.</td>
</tr>
<tr>
<td></td>
<td>Ubiquitous and available in functional context</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interconnective</td>
<td>Learners and instructors interact by communicating and collaborating in diverse ways.</td>
</tr>
<tr>
<td></td>
<td>Designed for equitable use</td>
<td>All learners have access to rich, challenging learning opportunities and interactive, generative instruction.</td>
</tr>
<tr>
<td>Operability</td>
<td>Interoperable and convergent</td>
<td>Capable of exchanging data easily between diverse formats and technologies (including integration of diverse information and communication technologies).</td>
</tr>
<tr>
<td></td>
<td>Open architecture</td>
<td>Allows users easy access to third-party hardware or software.</td>
</tr>
<tr>
<td></td>
<td>Transparent</td>
<td>Users are not—and do not need to be—aware of how the hardware/software operates.</td>
</tr>
<tr>
<td>Organization</td>
<td>Distributed Technology and system resources are not centralized but exist across any number of people, environments, and situations.</td>
<td></td>
</tr>
<tr>
<td>Designed for user contributions</td>
<td>User can provide the technology and system with input and resources on demand.</td>
<td></td>
</tr>
<tr>
<td>Designed for collaborative projects</td>
<td>Technology is designed to facilitate communication between users with diverse systems and equipment.</td>
<td></td>
</tr>
<tr>
<td>Engagability</td>
<td>Access to challenging and appropriate tasks: Instructor, program, or Web site is responsive to learner needs and requests (e.g., is menu driven) and meets needs and interests corresponding to particular age categories and life situations.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enables learning by doing: Instruction oriented to constructing meaning and providing meaningful activities or experiences.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provides guided participation: Technology responds intelligently to user and is able to diagnose and prescribe new learning.</td>
<td></td>
</tr>
<tr>
<td>Ease of use</td>
<td>Effective help: Technology provides help indices that are more than glossaries; it may provide procedures for tasks and routines.</td>
<td></td>
</tr>
<tr>
<td>User-friendliness/user control</td>
<td>Technology facilitates user and is free from overly complex procedures; user can easily access data, Internet and Web locations, and tools on demand.</td>
<td></td>
</tr>
<tr>
<td>Fast</td>
<td>Technology has a fast processing and downloading or uploading speed and is not down for long periods of time.</td>
<td></td>
</tr>
<tr>
<td>Available training and support</td>
<td>Training is readily and conveniently available, along with ongoing support.</td>
<td></td>
</tr>
<tr>
<td>Provides just enough information just in time</td>
<td>Technology allows for random access, multiple points of entry, and different levels and types of information.</td>
<td></td>
</tr>
</tbody>
</table>

*FIG. 4.2. (Continued)*
<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator of High-Technology Performance</th>
<th>Indicator Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functionality</td>
<td>Diverse and robust tools</td>
<td>Technology enables access to full diversity of generic, context-specific, and portable tools basic to learning and working in the 21st century.</td>
</tr>
<tr>
<td></td>
<td>Media use</td>
<td>Technology provides opportunities to use full range of multimedia technologies.</td>
</tr>
<tr>
<td></td>
<td>Promotes programming and authoring</td>
<td>Technology provides tools (e.g., wizards and authoring software) that are used to make other tools.</td>
</tr>
<tr>
<td></td>
<td>Supports project design skills</td>
<td>Technology facilitates the development of skills related to project design and implementation.</td>
</tr>
</tbody>
</table>


FIG. 4.2. (Continued)
In a 1997 report on the use of technology to strengthen K–12 education, the President’s Committee of Advisors on Science and Technology (PCAST) Panel on Educational Technology (PCAST, 1997) made a number of recommendations based on a broad review of research and expert testimony. These recommendations represent a succinct statement of current research-based knowledge of the issues and challenges shaping the design, implementation, and effective use of learning technologies in K–12 schooling, and they have direct implications for designing effective uses of new learning technologies for adult literacy and lifelong learning.

The major findings and recommendations of the PCAST report can be summarized as follows:

1. Focus on learning with technology, not about technology. This recommendation is a response to the common problem of differentiating technology as subject matter (learning about technology) and technology as learning tool (learning with technology). Acquiring technology skills is an important goal for K–12 education (and even more important for ABE because of the need to support informal learning and the value of technology skills in the workplace), but the focus should be on applying computing and networking technologies to improve learning in all areas.

2. Emphasize content and pedagogy, not just hardware. Here again, the PCAST members argue for a goal that exceeds the common perception of lack of access to technology as the major problem in need of remedy. Access remains a vital concern for ABE, but increasing the distribution of hardware alone will not improve learning opportunities. More hardware and greater connectivity are necessary but not sufficient conditions for expanding learning opportunities. Adults will require new content and new learning designs, as just noted in the discussion of implications for research and practice.

3. Give special attention to professional development. The PCAST members point out that K–12 teachers need support if they are to integrate technology effectively into their teaching. Likewise, ABE teachers need professional development opportunities and ongoing support to make effective use of new learning technologies. Investment in human resources is the most important step that policymakers can take to improve the quality of ABE. New funding is needed to support professional development programs that instruct teachers how to use technology and integrate it into their teaching.

4. Engage in realistic budgeting. The PCAST members called for a significant increase in technology-related expenditures in K–12 education.
(recommending that spending on technology relative to overall spending in K–12 be increased from 1.3% to roughly 5% or from $3.4 billion to $13 billion in 1996 dollars). Given the comparatively low level of public funding for ABE, it is difficult to judge what realistic budgeting would mean for this system. Would 5% of the roughly $500 million (or $25 million) in federal funding that is distributed to states through the Workforce Investment Act make a difference if applied to technology-related expenditures? As noted, the key to wise use of available money is not to allocate it to the purchase of more software and hardware. The key is supporting programs that will cultivate expertise in the use of technology and the distribution of this expertise throughout the system.

5. Ensure equitable, universal access. As already noted, ensuring equitable and universal access to low-income and underserved adults may be even more difficult and more critical to ABE than it is to K–12 education. Much as the well-known Matthew effect in early reading development creates a growing knowledge gap between children who learn to read early and those whose reading development is delayed, differential access to technology and differences in ability to use it to support lifelong learning are the wedges that widen societal gaps in opportunity. Adults who are fluent in English, are highly literate, and can afford home access to computers and the Internet have wonderful opportunities to learn with new learning technologies. Others adults with limited education, income, or English do not have the same opportunities to learn. Expanding access through such venues as community technology centers and creating new designs and new content for these technologies (as just discussed) so that all Americans can take advantage of this new information infrastructure should be a priority for public policy.

6. Initiate a major program of experimental research. PCAST members pointed out the alarmingly low level of funding that has been devoted to research on the efficacy and cost-effectiveness of learning technology and called for sufficient funding to support a large-scale program of well-articulated research studies. The panel further recommended that funding for research be expended at the federal level to avoid systematic underinvestment. Here again, the PCAST recommendations for K–12 seem equally applicable to ABE.

The last item in the PCAST list of recommendations—the call for a major research program on the efficacy and cost-effectiveness of educational technology—is a point of particular interest. For the field of adult literacy and learning, the questions that have not yet been adequately
addressed by research have to do with how to provide all Americans with opportunities to benefit from the power of new learning technologies to support learning anywhere and anytime. The barriers to such opportunity for the ABE target population are particularly high and can be overcome only with substantial commitment and investment in new research and development. The existing research has revealed the limitations of the new learning technologies (problems with accessibility, learning designs, and costs), but research has also shown how these problems may be overcome with new, more accessible, and more effective designs for learning technologies for adult literacy and lifelong learning. These new designs will incorporate better instructional models for adult learning (not just drill-and-practice but also interactive, learner-centered, integrated skill development that transfers to improved performance in the real world). Access can be increased through programs that bring technology into the community, as do community technology centers, and through the development of cheaper, more portable, and more practical devices. Researchers, educators, and policymakers are just beginning to understand the potential of new learning technologies. In the short run, the costs of researching and developing new applications of learning technologies to meet the needs of adult literacy and English-language learning will be high, but the benefits—and savings—in the future will be well worth the investment. If we fail to invest in making learning with new learning technologies available to all Americans, we risk increasing societal gaps in wealth and opportunity. Equal access to education is the bedrock of a healthy democracy and a healthy economy, and in the 21st century equal access to education cannot be achieved without opening opportunities for all to benefit from the lifelong learning that new learning technologies can afford.

REFERENCES


Applying Constructive–Developmental Theories of Adult Development to ABE and ESOL Practices

Deborah Helsing
Eleanor Drago-Severson
Robert Kegan

When adult educators walk into classrooms or workshops, they find a diverse group of learners who at one moment can draw on a rich store of life experiences and at the next may resist new ideas that challenge what they already know. Adults tend to be highly motivated to learn yet will sometimes focus on evaluations or grades rather than on learning. They think of themselves as “self-directed” yet they may feel shortchanged when an educator explains that she intends to be less a source of answers than a resource for learning. . . . Many adults who have successfully managed their own professional development nevertheless sometimes revert to classroom strategies that [previously] worked for them (“How many pages?” “Will this be on the test?”), generally trying to do “what the teacher wants.” In the training environment, learners may seek to improve their job performance yet may deny themselves the practice it takes to develop the new skills.

—Taylor, Marienau, and Fiddler (2000, p. 3)

Educators who have been frustrated by adult students in the just-mentioned ways may have wondered about the source of these differences and how
the differences can be best addressed. In focusing exclusively on grades and correct answers, are these students simply being practical? Is the preference for self-direction or teacher-led classrooms simply a matter of past educational history or personal learning style? We suggest that by looking at these matters through the lens of adult developmental theories, particularly constructive--developmental theory, adult educators may gain a new understanding of the reasons for and implications of these differences in our students.

Most adults are familiar with the developmental differences they see among children. For a typical 4-year-old the future hardly seems real, and he or she may find it hard to wait to get something or to consider the consequences of actions. Captive of impulses, the child may have difficulty sitting still or keeping quiet. A 4-year-old does not distinguish between the unlimited potential of his or her fantasies and the rules of reality. But we expect 10-year-olds to understand themselves and the world in very different ways. We expect them to follow rules and anticipate consequences for their actions. We expect them to distinguish between fantasy and reality. We see that they have a whole different way of knowing and understanding their world (Kegan et al., 2001b).

Teachers of children have long understood the importance of considering their students’ developmental capacities in order to facilitate the educational process. Knowing how a child conceives of the world enables a teacher to understand who that child is and what he or she needs to learn and grow. But how familiar are we with the different ways of knowing that adults use to understand their worlds? How well do we understand what adult learners need to continue to learn and to grow?

Although the adult students in any one classroom may be classified as similar in their skill level or familiarity with a subject matter (e.g., as beginners in math or as intermediates in computer skills), there are likely to be important differences in the ways that they take in, organize, understand, and analyze new material and skills. Adult educators may recognize some of these differences as deriving from fixed sources such as race, gender, culture, ethnicity, socioeconomic status, or learning style. But what if these differences result, in large part, from adult students’ different developmental capacities? What if this more mutable source powerfully

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1 Portions of this chapter appear in similar form in Toward a “New Pluralism” in the ABE/ESOL Classroom: Teaching to Multiple “Cultures of Mind”—A Constructive Developmental Approach (Kegan et al., 2001b) and/or its executive summary (Kegan et al., 2001a). They are used by permission of the publisher, the National Center for the Study of Adult Learning and Literacy.
explains why in some classrooms the very same curriculum, activities, and teaching behaviors can leave some learners feeling excited, with their needs well met, whereas others feel deserted or lost? In such cases, teachers may be using materials or strategies that are intended to reach everyone in the class but in fact are attuned to students at one developmental stage and neglect students at other stages. A teacher’s enhanced capacity to support all students in a class, across a range of developmental levels, is likely to make more students feel recognized and valued for the meanings they bring to their learning (Drago-Severson, 2001; Drago-Severson & Berger, 2001; Drago-Severson et al., 2001b; Helsing, Broderick, & Hammerman, 2001; Kegan et al., 2001a, 2001b; Popp & Boes, 2001; Portnow, Diamond, & Rimer, 2001). Students who are adequately and appropriately supported and challenged academically are likely to learn more.

KEY ISSUES AND THEORIES IN ADULT DEVELOPMENT

The underlying premise of adult developmental theory is that processes of mental development do not occur only during childhood but continue throughout adulthood. Adults, like children, move through a series of qualitatively distinct levels in the complexity with which experience is organized or understood. Movement from one level to another occurs as a process of interaction between individuals and their environment that influences many dimensions of an individual’s life (including cognitive, affective, interpersonal, and intrapersonal experience; Kegan, 1982; Popp & Portnow, 2001). One key difference among theorists is the distinctions made between these levels or stages. Some distinguish stages in terms of the tasks adults generally undertake at different ages or phases in their lives (see, e.g., Levinson, 1978, 1996), whereas others distinguish stages in terms of degree of complexity, depicting the ways that the mind of an adult continues to grow and become more complex (see, e.g., Kegan, 1982, 1994). In this chapter we provide a brief sketch of two common models of development: age or phasic models and models based on gender differences. Then we describe a constructive–developmental model, illustrating how it might both incorporate aspects of these other models and provide the most useful framework for understanding differences in the psychological capacities of adult learners. We pay particular attention to a study supported by the U.S. Department of Education’s Office of Educational Research and Innovation (Kegan et al., 2001b) because it is the only study
we know of that applies constructive–developmental theory specifically to learners in adult basic education (ABE) and in classes for English for speakers of other languages (ESOL).²

**Age/Phasic Models**

Some life cycle and adult developmental theorists (Arnett, 2000; Erikson, 1964, 1968; Levinson, 1978, 1996; Scarf, 1980; Vaillant, 1977; Wigfield, Eccles, & Pintrich, 1996; Wortley & Amatea, 1982) depict development as an individual’s journey through distinct life phases: infancy, childhood, adolescence, early adulthood, middle adulthood, and late adulthood. According to life cycle theorists, the physical, social, psychological, and emotional changes that individuals experience at given phases of their lives are interrelated and age dependent, following a predictable and somewhat uniform course. In our 20s, for example, we are supposed to formulate a dream that concerns our goals and vision for our future career (Levinson, 1978, 1996; Scarf, 1980).

Age or phasic models of adult development may help educators to illuminate important similarities and differences in students engaged in age-related life tasks. In fact, research illustrates that, as a group, adult learners differ from traditional-age college students in terms of their learning style, motivation, assertiveness, and goals for attending college (Apps, 1981; Brookfield, 1987; Knowles, 1984; Knox, 1981; Mezirow & Associates, 1990). A teenage student experimenting with developing greater independence from his or her parents and with the formation of intimate relationships may have concerns and motivations very different from those of a student in his or her mid-30s who is juggling the roles of student, parent, spouse, and worker. These two students may require and benefit from quite different forms of support if they are to thrive academically while coping with their life transitions. One way of meeting these differing needs is through the development of mentoring relationships in which students can find the support and challenge they need to make transitions in their lives (Brookfield, 1987; Daloz, 1986). Educators can also help students by explicitly discussing the types of stress students may experience as a result

²From 1998 to 1999, Kegan et al. (2001b) were part of a research group that studied 41 adult learners from around the world who were enrolled in three different U.S. ABE programs at a community college, a family literacy site, and a workplace site. As developmental psychologists and educators, we wanted to understand how these adult learners experienced their program learning. For a full report of this study, see Kegan et al. (2001b).
of multiple forms of transition, role conflicts, and the loss of former ways of being (Wolf & Leahy, 1998).

Although age or phasic models can be helpful, they also have been found to be somewhat limited in accounting for many important differences among students. They do not sufficiently account for the complexities and variations of culture, gender, and life experience (Helsing, Broderick, et al., 2001), and they do not explain how individuals of the same age, facing the same major life tasks, might understand these tasks in fundamentally different ways (Kegan, 1994).

Relational Theories — The Role of Gender

Some scholars argue that traditional age or phasic models do not provide accurate descriptions of women’s development. Traditional models tend to frame development as a process of increasing independence, psychological separation, and autonomy (Caffarella & Olson, 1993; Gilligan, 1977, 1982; Taylor, 2000), qualities commonly expected of men as they mature. In contrast, women are encouraged to define themselves in relation and connection to other people (Baxter Magolda, 1992; Belenky, Clinchy, Goldberger, & Tarule, 1986; Brown & Gilligan, 1992; Gilligan, 1977, 1982; Miller, 1991; Ross-Gordon, 1999; Taylor & Marienau, 1995). Some theorists (Belenky et al., 1986; Gilligan, 1982; Taylor & Marienau, 1995) have thus reasoned that developmental models should be devised to account for the unique patterns of change in women’s lives. Gilligan (1982), for example, whose work has focused on women, showed that characteristics such as empathy, intimacy, and a concern for preserving relationships are not necessarily signs of weakness, deficiency, and immaturity, as earlier models, which were based solely on men, had suggested. In illuminating the value and integrity of women’s perspectives on relationships, Gilligan (1982) noted that women are more likely to approach and understand moral problems in terms of an ethic of care, placing concern for important others as paramount. Men, on the other hand, are more likely to apply an ethic of justice, relying on rules and procedures to resolve moral problems.

Many researchers and scholars who focus on women’s development have highlighted the importance of attending to the relational aspects of the learning process (Fiddler & Marienau, 1995; Flannery, 2000; Goldberger, Tarule, Clinchy, & Belenky, 1996; Taylor & Marienau, 1995). In fact, Caffarella (1996) outlined the following four guidelines adult educators should utilize to address the importance of relationships and women’s learning needs:
(1) use collaborative interaction as one of the fundamental ways to plan and organize learning experiences; (2) foster a climate for learning where learners and instructors support each other in the learning process, both in and out of formal learning situations; (3) use a cooperative communication style; and (4) recognize that feelings are a critical part of fostering relationships in learning experiences. (pp. 40–42, as cited in Merriam & Caffarella, 1999, pp. 109–110)

Belenky et al., (1986, p. 214) described the importance of establishing a more collaborative and student-centered model of teaching as “connected teaching,” arguing that teachers and classrooms that are structured according to these principles may cultivate development and learning among women, working against traditional and male models of teaching that may inhibit or even reverse women’s growth. In the last few years, researchers have also begun to reconsider assumptions about the development of boys and men that have led to cultural and educational misunderstandings and the mistreatment of boys and men (Gurian, 1996, 1999; Gurian & Henly, 2001; Kindlon & Thompson, 1999; Levant & Pollack, 1995; E. Newberger, 1999; Pollack, 1998, 2000).

**Constructive–Developmental Theories**

Constructive–developmental theorists suggest that qualitative differences in the ways that individuals make sense of their experiences are not exclusively linked to matters of age, life phase, or gender. Instead, these theorists describe developmental differences in terms of the complexity of individuals’ meaning-making abilities. As we interact with our environment, we make sense of our experience, and through this interaction and negotiation—sometimes fitting our experience to mental models, sometimes adjusting our mental models to fit our experience—our meaning systems may gradually evolve and grow more complex. The pace of this growth and change varies, such that even two people of the same age may differ in the complexity of their meaning systems. Because constructive–developmental theories focus not only on changes within the individual but also

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3We acknowledge Nancy Popp and Kathryn Portnow for their summary of constructive–developmental theory. This section is a revised form of chapter 2 (Popp & Portnow, 2001) in Toward a “New Pluralism” in the ABE/ESOL Classroom: Teaching to Multiple “Cultures of Mind”—A Constructive Developmental Approach (Kegan et al., 2001b). It is used by permission of the publisher, the National Center for the Study of Adult Learning and Literacy.
on the context in which the individual is situated, they can accommodate theories that look at the ways that race, ethnicity, gender, and sexual orientation can influence development.

In this chapter, we focus primarily on constructive–developmental approaches to adult development for three reasons. One reason is that the underlying principles of an adult’s belief system shape every experience he or she has. By gaining a better understanding of these belief systems and the ways in which they can change, we can improve our understanding of the ways in which ABE and ESOL students experience learning in general and learning in the classroom. We gain a better understanding of what different students need in order to learn. The second reason is that in integrating concerns about the individual person as well as the surrounding context, these theories can incorporate key principles of other developmental theories that highlight one particular feature or domain of development. For example, the constructive–developmental models of Belenky et al. (1986), Baxter Magolda (1992), and Kegan (1994) all incorporate explanations of possible distinctions between genders. The third reason is that these theories offer a developmental perspective, as well as specific suggestions, on the most effective ways to support and challenge adult learners. From a developmental perspective, support, in its broadest sense, is confirmation of the learner and his or her current efforts. It includes, for example, positive feedback of all kinds, clear and explicit communications and directions, affirmation of what the learner already knows, and response to the learner’s perceived needs. Challenge, in its broadest sense, is encouragement to stretch beyond what is currently familiar and comfortable to achieve some new level of competence. It focuses on what remains to be done rather than on what has already been accomplished. It may involve ambiguities, with the intention that the learner takes a more active role in decision making. Educators may also, after appropriate consideration, challenge adults by not responding to certain of their expressed desires (Taylor et al., 2000, p. 326).

Constructive–developmental theories are an extension of the work of Jean Piaget (1952, 1963, 1965), who saw each child as a kind of philosopher, someone whose beliefs and understandings arise from a distinctive way of knowing, with a coherence, wholeness, and dignity all its own. Piaget (1952) observed and interviewed children to illuminate the different forms of reasoning they were able to use to solve problems. He elaborated a continuum of stages, from infancy through adolescence, that depicts the ways in which children develop increasingly complex and distinct ways of making sense of a situation. In the last 30 years, many other researchers
have built on the work of Piaget. One study (Kegan et al., 2001b) applies Kegan’s (1982, 1994) constructive–developmental theory of adulthood to learners in ABE and ESOL settings. To our knowledge, it is the first time this theory has been extended to a sample that includes mostly nonnative speakers of English and that is diverse with respect to race, ethnicity, age, past educational experiences, socioeconomic status, and social roles.

These theories are referred to as constructive–developmental because they consider the ways in which our beliefs construct the reality in which we live and the ways in which these beliefs can change or develop over time. When considered from this perspective, our beliefs amount to an interpretive lens through which we make meaning. This lens filters the way each of us takes in, organizes, understands, and analyzes our experiences. Constructive–developmental theories suggest that our relationship to these beliefs is not casual, random, or strictly idiosyncratic. Rather, these beliefs are durable for a period of time. They reflect an inner logic and coherence. They are central to our identities. The world we construct through our way of knowing may seem to us less the ways things look than the way they really are (Drago-Severson et al., Kegan et al., 2001a, 2001b). We construct increasingly complex systems of meaning to better understand ourselves and our experiences in an increasingly complex world (Popp & Portnow, 2001). Our gradual evolution from a simpler way of knowing to more complex ways of knowing depends on the nature of the supports, challenges, and encouragement that are available to us.

4Popp and Portnow (2001) provided a helpful summary of the scope of this work: Researchers and theorists of a neo-Piagetian persuasion have built on the key concepts of Piaget’s research, extending the study of cognitive development beyond the development of Piaget’s last stage of cognitive development, abstract thought (Basseches, 1984; Commons et al., 1990; King & Kitchener, 1994; Kohlberg, 1969, 1981; Perry, 1970). Other constructive–developmentalists have applied the key tenets of Piaget’s framework to different domains of human development, such as adult learning and higher education (Belenky et al., 1986; Daloz, 1986; Macuika, 1990; Perry, 1970; Weathersby, 1976), moral and spiritual development (Fowler, 1981; Kohlberg, 1969, 1981; Parks, 1986), social and psychological development (Noam, Powers, Kilkenney, & Beedy, 1990; Selman, 1980), skill development (Kitchener & Fischer, 1990), and self- and identity development (Harter, 1999; Kegan, 1982, 1994). Constructive–developmental principles have also been used to research role capacity, particularly in exploring the ways in which increasing complexity in adult thought intersects with professional effectiveness and role leadership (Kegan & Lahey, 1983; Torbert, 1976, 1987, 1991), role efficacy and understanding as parents (C. Newberger, 1980; Roy, 1993; Sonnenschein, 1990), and spousal role communication and family patterns (Goodman, 1983; Jacobs, 1984, pp. 2–3).
Some readers may wonder if we are suggesting that higher levels are intrinsically better than lower levels or that a person is a better person just for having a more complex meaning system. We are not. We prefer to look at this question in terms of the natural learning challenges people face in their lives. If the complexity of one’s meaning system is sufficient to meet those challenges, then there may be no need to construct a more complex meaning system. But if the complexity of the challenges and demands one faces surpasses the complexity of one’s meaning system, then it would indeed be better, in a practical sense, to expand the capacity of one’s meaning system (Drago-Severson et al., 2001a; Kegan, 1994).

CONSTRUCTIVE–DEVELOPMENTAL THEORY AND ADULT LEARNERS

Constructive–developmental theories emphasize the many differences in students’ underlying belief systems that influence the ways in which they may understand their experiences. These theories suggest, for example, that students will bring deeply held assumptions about the nature of knowledge to the educational enterprise. As Belenky et al. (1986) noted in their introduction to Women’s Ways of Knowing:

We do not think of the ordinary person as preoccupied with such difficult and profound questions as: What is truth? What is authority? To whom do I listen? What counts for me as evidence? How do I know what I know? Yet to ask ourselves these questions and to reflect on our answers is more than intellectual exercise, for our basic assumptions about the nature of truth and reality and the origins of knowledge shape the way we see the world and ourselves as participants in it. They affect our definitions of ourselves, our sense of control over life events, our views of teaching and learning, and our conceptions of morality. (p. 3)

Moreover, students’ assumptions about the nature of knowledge also influence their goals for themselves as learners, their understanding of the role of student and teacher, their interactions with knowledgeable

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5 We acknowledge Maria Broderick for devising this overview and synthesis of developmental theories and their application to adult learning. It appears in a slightly different form in chapter 4 (Helsing, Broderick, et al., 2001) of Toward a “New Pluralism” in the ABE/ESOL Classroom: Teaching to Multiple “ Cultures of Mind” — A Constructive Developmental Approach (Kegan et al., 2001b). It is used here by permission of the publisher, the National Center for the Study of Adult Learning and Literacy.
authorities (texts and teachers), and their satisfaction with their learning experiences. Teachers may recognize evidence of a student’s commitment to a particular way of knowing in his or her expectations of teachers, opinions about coursework, or apparent ease or difficulty in meeting certain academic requirements. A teacher who understands how students’ ways of knowing shape their learning experiences has powerful information with which to support their growth.

Students’ understanding of the nature of knowledge will also change as they develop more complex capacities of mind. As they increasingly recognize the constructed nature of knowledge, they move away from conceptions of knowledge as being handed down from authorities or made up only of concrete facts and literal meanings. They increase their ability to evaluate any claim to knowledge based on the premises behind it and the appropriateness of the argument being made. Developmental educators who work with adults believe that these transformations can help learners master increasingly complex tasks as they progress through educational systems. These transformations can also enable learners to achieve the goals of critical literacy: to recognize, oppose, and organize against social and economic injustices (Fingeret & Drennon, 1997; Freire, 1981; Quigley, 1997). Because these types of change do not unfold naturally and may in fact be resisted by learners, developmental educators have to facilitate change by challenging students’ current understandings. To offset the potentially damaging impact of extreme challenge, developmental educators must also build into the educational experience useful and timely supports that will help students who are being asked to stretch their current conceptual frameworks.

The Development of Adult Learners

Developmental theorists who have studied adult learning have for the most part concentrated on the transformations of mind that college students undergo during 4 years of liberal arts education. In the various frameworks constructed through research, developmental educators aim to explicate the stages or phases that learners go through (ideally or in practice) as they expand their capacity for critical thinking. Although adult students may differ from traditional-age college students in terms of age and life experience, some constructive–developmental theorists have found that these groups “do not appear to be dramatically different” (King & Kitchener, 1994, p. 170) in terms of their developmentally related cognitive capaci-
ties, such as demonstrations of reflective thinking. Furthermore, samples of ABE and ESOL learners who vary in age, educational background, social class, country of origin, ethnicity, gender, and social role vary in their developmental levels along a continuum not unlike those found in studies with a similar range of diversity among participants’ socioeconomic status (Drago-Severson, 2001; Drago-Severson & Berger, 2001; Helsing, Broderick, et al., 2001; Kegan et al., 2001a, 2001b; Portnow et al., 2001). The profile of ABE and ESOL learners does not show a skew toward the low end of a developmental continuum, and the differences in capacity are not highly associated with level of formal education (Drago-Severson, 2001; Drago-Severson & Berger, 2001; Helsing, Broderick, et al., 2001; Kegan et al., 2001a, 2001b; Portnow, et al., 2001). Thus, we have reason to suppose that developmental trajectories based on traditional-age college student populations also apply to those of nontraditional adult student populations.

If there is a key lesson on traditional settings of higher education that is broadly applicable to adult education in all settings, it is this: Adult learners can undergo important transformations of their perspectives that shape the way they understand, embrace, and (sometimes) resist education. Adult learners can anticipate having the ground of understanding shift as they engage in learning experiences that challenge their frame of mind. Educators of adults benefit from understanding what forms these shifts will take and what forms of instruction can elicit them.

Many adult learning researchers in this tradition (Baxter Magolda, 1992; Belenky et al., 1986; Kegan, 1982, 1994; King & Kitchener, 1994; Weathersby, 1980) state an intellectual indebtedness to William Perry (1970), the first developmentalist to explore adult students’ meaning making and to cast his views into a framework. Researchers who study the development of adult learners also tend to focus on cognitive abilities (Baxter Magolda, 1992; Belenky et al., 1986; King & Kitchener, 1994; Perry, 1970; Weathersby, 1980). Fundamentally, it is the identification of students first as knowers that sets developmental schemes apart from other models of adult learning. However, a person’s underlying beliefs shape and influence multiple aspects of his or her life, including emotions, self-understanding, and interactions and relations with others. In taking on the role of student, the individual may prioritize cognitive abilities and growth, but we argue that it is also important to consider these other domains of students’ lives, which surely have an impact on their learning experiences.
Four Levels of Adult Development in Learning

Although individual theorists have their differences (in terms of the number of levels they describe or the distinctions between the types of learners who share a level), they generally agree about the nature and direction of developmental growth. Next, we summarize the levels identified in five models (Baxter Magolda, 1992; Belenky et al., 1986; Kegan et al., 2001b; King & Kitchener, 1994; Perry, 1970) directly derived from studies of adult learners primarily in higher educational settings using a Piagetian perspective. Based on extensive discussion with students, these models offer representations of students’ own descriptions of their knowing and provide a rubric for locating students in the trajectory of their own development and for defining appropriate developmental challenges. This section is not intended to be an exhaustive review or rich critique of each of these perspectives. Instead, it is an opportunity to delineate some key elements of and differences in adults’ views of knowledge and knowing, as well as to emphasize the implications of these differences for students’ understandings of the learning and teaching process. Table 5.1 provides an example of how learners at different developmental levels conceive of one aspect of their learning—their understanding of what makes a good teacher.

**Level 1.** Across the five models summarized in Table 5.1, the descriptors vary, as do the number of levels represented. In the most global sense, however, it is possible to sketch a common trajectory. The first major position, level, stage, or way of knowing evident in all five models is characterized primarily by the learners’ commitment to an absolutist stance toward knowing (Perry, 1970). Knowledge is seen as “certain or absolute” (Baxter Magolda, 1992, p. 75), and learners do “not understand that real problems exist for which there may not be an absolutely correct answer” (King & Kitchener, 1994, p. 47). Learners at this developmental level understand knowledge as something directly observable and based on facts that are not subject to multiple interpretations. Learners who view knowing through this frame are philosophical dualists: They perceive a polar distinction between what they believe to be true or false. As Perry (1970) wrote, “From this position, a person construes all issues of truth and morality in . . . terms of a sweeping and unconsidered differentiation between in-group [and] out-group. The division is between the familiar world of authority-right-we [and] the alien world of illegitimate-wrong-others” (p. 59).
These students understand their roles in terms of how well they can “obtain knowledge” (Baxter Magolda, 1992, p. 75) from their instructors. They believe that good students study hard, follow clear instructions and rules, find the right answers, get good grades, and possess the correct facts and skills. They expect their instructors to communicate knowledge clearly, giving them the rules to follow to get the right answers. Good instructors make sure that the students understand the subject matter (Drago-Severson, 2001; Drago-Severson & Berger, 2001; Helsing, Broderick, et al., 2001; Kegan et al., 2001a, 2001b; Portnow, et al., 2001).

**Level 2.** With growth and differentiation, students begin to revise their ideas about the absolute certainty of knowledge. In what Baxter Magolda (1992) named “transitional knowing,” the learner recognizes that some knowledge is only “partially certain” (p. 30). This is a state brought about, in the learner’s view, not by the relative nature of truth but by the incomplete state of knowledge in certain disciplines or subdisciplines. Knowledge will ultimately be complete, but that ideal state has not yet been realized by authorities in the field. Movement to this level signals an awareness or acknowledgment that uncertainties exist in what is known, but it does not necessarily indicate a tolerance for the incomplete state of knowledge. Rather, the learner “accords pluralism of thought and judgment the status of a mere procedural impediment intervening between the taking up of a problem and finding the answer” (Perry, 1970, p. 78).

These learners do not simply obtain knowledge but are interested in understanding it so that they can apply it in class as well as to other parts of their lives (Baxter Magolda, 1992). They begin to understand themselves as students in terms of their internal characteristics—their attitudes toward themselves and the subjects they are studying. When they have learned something they can feel it; but they also look to the teacher for acknowledgment that they have learned (see, e.g., Drago-Severson, 2001; Drago-Severson et al., 2001b; Helsing, Broderick, et al., 2001; Helsing, Drago-Severson, et al., 2001; Popp & Boes, 2001; Portnow, et al., 2001). Seeking rapport with teachers, these students focus on teachers’ human qualities, appreciating kindness, patience, caring, and encouragement (Drago-Severson, 2001; Drago-Severson et al., 2001b; Helsing, Broderick, et al., 2001; Kegan et al., 2001b; Portnow, et al., 2001).

**Level 3.** With further growth, the learner comes to understand that uncertainty of knowing does not depend solely on the status of truth but has more to do with the nature of truth. Models vary in the number of
## Table 5.1

### Adult Learners’ Conceptions of Good Teachers

<table>
<thead>
<tr>
<th>Level, Stage, Position, or “Way of Knowing”</th>
<th>Corresponding Development Levels</th>
<th>Adult Learners’ Conceptions of Good Teachers</th>
<th>Comments From Learners&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>Absolutist stance (Perry, 1970)</td>
<td>Good teachers show learners how to learn.</td>
<td>Good teachers “give you that little push” . . . they “make me learn . . . explain how to do it, ask you to write it down, and you write down exactly how to do it. Then we’d do it.”</td>
</tr>
<tr>
<td></td>
<td>Absolute knowing (Baxter Magolda, 1992)</td>
<td>Good teachers give learners their knowledge and the rules they need to follow to get the right answers. When these learners can do something (demonstrate a behavior) and when they get a good grade (a consequence), they know that they have learned.</td>
<td></td>
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<tr>
<td></td>
<td>Instrumental way of understanding (Kegan, 1982, 1994)</td>
<td>Good teachers really listen and offer support. Good teachers know what is good for learners to know and tell learners what they should know. Good teachers are described as having certain qualities; they are kind, patient, and encouraging. These learners feel inside when they have learned something and the teacher acknowledges that in them.</td>
<td></td>
</tr>
<tr>
<td>Level 2</td>
<td>Dualism (Perry, 1970)</td>
<td>Good teachers care about learners and explain things to help them understand knowledge. Good teachers really listen and offer support. Good teachers know what is good for learners to know and tell learners what they should know. Good teachers are described as having certain qualities; they are kind, patient, and encouraging. These learners feel inside when they have learned something and the teacher acknowledges that in them.</td>
<td>Good teachers “keep explaining things in different ways, show you different ways to learn . . . help you feel important and accepted . . . never forget you.” Good teachers have a “kind heart”; they “don’t give up on students.” “If you don’t have a good teacher, you’re not going to be self-confident.” “If [the teacher] doesn’t teach you the way you learn good, that doesn’t help you.”</td>
</tr>
<tr>
<td></td>
<td>Transitional knowing (Baxter Magolda, 1992)</td>
<td>Good teachers really listen and offer support. Good teachers know what is good for learners to know and tell learners what they should know. Good teachers are described as having certain qualities; they are kind, patient, and encouraging. These learners feel inside when they have learned something and the teacher acknowledges that in them.</td>
<td></td>
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<tr>
<td></td>
<td>Socializing way of understanding (Kegan, 1982, 1994)</td>
<td>Good teachers really listen and offer support. Good teachers know what is good for learners to know and tell learners what they should know. Good teachers are described as having certain qualities; they are kind, patient, and encouraging. These learners feel inside when they have learned something and the teacher acknowledges that in them.</td>
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</tbody>
</table>
| Level 3                                    | Between dualism and the full emergence of relativism (Perry, 1970) Independent knowing (Baxter Magolda, 1992) | Good teachers encourage and support students’ independent thinking. They care about students as people and understand learners’ backgrounds, and this support helps students with their learning. Good teachers listen | Good teachers “consider when you are asking a question, they answer you, they don’t ignore you.” “They really understand people and care for their students.” “I can ask a good
### TABLE 5.1 (Continued)

<table>
<thead>
<tr>
<th>Level, Stage, Position, or Way of Knowing</th>
<th>Corresponding Development Levels</th>
<th>Adult Learners’ Conceptions of Good Teachers</th>
<th>Comments From Learners</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 4</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socializing/self-authoring transitional way of understanding (Kegan, 1982, 1994)</td>
<td>to student feedback so they can improve their own teaching. Good teachers are described as polite and patient, and they help their students learn what they need to learn to pursue their goals.</td>
<td>teacher for help with what I know I do and do not understand.” “I think it’s very tough for a teacher to teach and listen and explain all the time.”</td>
<td></td>
</tr>
<tr>
<td>Multiplicity correlate or relativism subordinate (Perry, 1970)</td>
<td>Good teachers promote application of knowledge in context. They support evaluative discussion of various perspectives. Good teachers are one source of knowledge, and these adult learners see themselves and their classmates as other sources. These students think that good teachers use a variety of teaching strategies in their practice and help them meet their own internally generated goals. They know that they have learned something, and when they have, they can then think of different ways in which to teach what they know to others.</td>
<td>Good teachers “understand their students.” “She learned from me, I learn from her.” “No matter how good a teacher you have, if you don’t really want to learn, you’re not going to learn nothing.” Good teachers “make learning interesting. It has to be interesting to the student.” “What you do with knowledge after it’s given to you is of your own choosing.” Good teachers “do their jobs and help me to do better, I’m proud of that.”</td>
<td></td>
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<tr>
<td>Contextual knowing (Baxter Magolda, 1992)</td>
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<td></td>
</tr>
<tr>
<td>Self-authoring way of understanding (Kegan 1982, 1994)</td>
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</table>

**Note.** Adapted from chapter 7 (Drago-Severson, 2001) and also drawn from chapter 4 (Helsing, Broderick, et al., 2001) of Toward a “New Pluralism” in the ABE/ESL Classroom: Teaching to Multiple “Cultures of Mind”—A Constructive Developmental Approach by R. Kegan et al. (2001b). It appears here by permission of the publisher, the National Center for the Study of Adult Learning and Literacy.

The terms *level, stage, position, and way of knowing* are used interchangeably by developmentalists. Each is understood to represent an internally consistent frame of reference from which the learner interprets educational experience.

*From Kegan et al. (2001b).*
levels named as part of this transition, but they are fairly consistent in their descriptions of the overall framework. Here, the realization dawns that truth is neither ultimate nor singular “but multiple and infinite” (Belenky et al., 1986, p. 63). In an ironic twist, the learner who previously embraced authority’s perspective on truth as unquestionable now maintains that “all opinions are equally valid; everyone, including the self, has the capacity and the right to hold his or her own opinions” (Belenky et al., 1986, p. 63). The quality of the learner’s feelings and attitudes about knowledge shift; the perspective moves from one of a search for ultimate answers and certainty to an openness that reflects the tentative abandonment of authority. Baxter Magolda (1992) found that the word openness captured the core assumptions of learners at this stage of knowing. She explained:

They believed that knowledge was open to many interpretations, that people should be receptive to others’ ideas, that instructors should be open to students’ ideas, and that many possibilities existed in the choices confronting them. This openness facilitated the emergence of individually created perspectives because the risk of being wrong was eliminated. Because knowledge could be seen in so many ways, there was no obligation to make judgments about various views. Although independent knowers did make decisions about what to believe, they rarely identified criteria upon which these should be based. Thus, the independent knowers were free to think for themselves, and they could use their voices with minimum risk. Subsequently, they valued expressing their opinions in all realms of learning and expected others to do the same. (p. 146)

The development of relativism makes possible the beginnings of critical thinking. To reflect on their own assumptions or on the precepts of his or her community, learners first must be able to detect the multiple assumptions that make up any claim to truth. Yet, to bring critical faculties fully to bear on the determination of which truth to privilege, learners must further develop standards and criteria by which to assess multiple claims to truth.

These students want to think for themselves, develop their own perspectives, and share them with others in the class. These students may acknowledge their peers as legitimate sources of knowledge, but they may also be “impatient and dismissive of other people’s interpretations” (Belenky et al., 1986, p. 84) as a way of protecting and defending their own stance and authority. These learners expect their instructors to promote and reward independent thinking (Baxter Magolda, 1992) and value instructors who nurture and affirm their thoughts and values.
**Level 4.** In making the move to this level of learning, the learner shifts from relativism to a formal appreciation of how context affects the interpretation of what is worthy or the truth and how evidence can be evaluated on the basis of its origins and the rigor with which it was developed. As Baxter Magolda (1992) observed, “Contextual knowers incorporated the exchange and comparison of views in their learning process, which was aimed at thinking through knowledge claims and integrating information in order to apply it within a context” (p. 177). The learner at this level makes use of authoritative views in a field as potential perspectives on which truth may be built but not as voices that determine that truth. Learners at this level have come to respect not the status of authority but the process through which an authoritative argument is constructed. Critical thinking is fully possible, and the tools through which it can be readily applied are now meaningful for the learner.

Learners at this stage view good students as those who can create and explain their own complex ideas, which may differ from teachers’ ideas. They can construct their own standards for self-evaluation and take responsibility for their own learning. These students are able to offer feedback to teachers about their teaching and expect that good teachers will listen. They appreciate teachers who use a variety of teaching strategies and who encourage students to evaluate the validity of an argument (Baxter Magolda, 1992; Drago-Severson, 2001; Drago-Severson et al., 2001b; Helsing, Broderick, et al., 2001; Kegan et al., 2001b; Portnow et al., 2001).

Admittedly, the four levels briefly reviewed here collapse important transition steps and cloud interesting distinctions between models. Some models delineate multiple moves between these levels or identify the different ways in which different groups of learners within any one level may express a position. We believe, however, that the range of perspectives and values depicted in this trajectory is likely to represent the range of developmental levels adult educators have in any given classroom. This means that students will have fundamentally diverse understandings and expectations of their teachers, themselves, their peers, and the subject matter.

**Transformation and Transformational Learning**

As Cranton noted, “Transformational learning occurs when an individual has reflected on assumptions or expectations about what will occur, has found these assumptions to be faulty, and has revised them” (Cranton,
1994; Mezirow, 1991, as cited in Cranton, 1996, p. 2). Although each level of development or way of knowing has its own strengths and limitations, each successive level represents growth in the capacity to organize and reflect on experience. This growth occurs when individuals experience challenge, an experience that disturbs their current belief system and calls on them to reconfigure that belief system on a new, more complex level. Constructive–developmentalists refer to these changes as transformations. However, such growth can be a painful and difficult process, requiring the person to relinquish core beliefs. According to Perry (1970), because each step in the process of development is “a challenge to a person’s previous assumptions and requires that he redefine and extend his responsibilities, his growth does indeed involve his courage” (p. 44). Many of us do not seek out such changes to our way of knowing and may actually resist such invitations to change the whole way we understand ourselves and our world. Kegan (1994) reminded us that “only a fraction of the adults entering school programs do so with the hope or intention of personally growing from being in school. Most have what they . . . would consider far more practical goals” (p. 293). We can understand these more practical goals as informational learning, learning that “primarily focuses on the acquisition of more skills and an increased fund of knowledge” (Portnow, Popp, Broderick, Drago-Seveson, & Kegan, 1998, p. 22), whereas transformational learning not only increases knowledge but, more important, “leads to deep and pervasive shifts in a [person’s] perspective and understanding” (Portnow et al., 1998, p. 22).

The concepts underlying transformation may be most familiar to readers of Paulo Freire (1981, 1989) or Jack Mezirow (1990, 1991, 1996). According to Freire (1981), students and teachers engage in dialogue to explore issues central to students’ life experiences and interests for the purpose of developing an “increasingly critical understanding” (p. 46) of the surrounding culture. Ultimately, this heightened awareness can lead to greater political and social democratization. Mezirow (1996, p. 162) also subscribed to the emancipatory power of learning, believing it can counter the corruption caused by unequal social power and influence. For both

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6Note that neither Freire nor Mezirow relied on constructive–developmental theory as the basis for his model of transformation. Furthermore, despite Mezirow’s (1989, 1992, 1994, 1996) claims to the contrary, some critics suggest that, unlike Freire, Mezirow did not provide enough emphasis on social action against injustice in his conception of transformation (Clark & Wilson, 1991; Collard & Law; 1989; Cunningham 1992; Hart, 1990; Tennant, 1993).
theorists, the process by which these changes occur shares many features of the developmental understanding of transformation. As Merriam and Caffarella (1999) noted:

Mezirow’s and Freire’s approaches to adult education emphasize the importance of inner meaning and mental constructs in defining the nature of learning in adult life. Key to both of their theories is change—change brought about by critical reflection on the origin and nature of our submerged assumptions, biases, beliefs, and values. Tentative new understandings and new meanings are tested out in discourse with others. The process does not end there, however. Our new meanings, perspectives, or consciousness need to be acted on. (pp. 325–326)

Similarly, the models developmentalists put forward are not value neutral. Growth in these models is desirable; higher levels of development are viewed as advances that learners would be well served to accomplish. As with education generally, goals are inherent to the developmentalists’ perspective, and these goals preference steady movement in the direction of greater capacity. According to Perry (1970):

The word “growth” suggests that it is better to grow than to arrest growth or to regress. . . . The values built into our scheme are those we assume to be commonly held in significant areas of our culture, finding their most concentrated expression in such institutions as colleges of liberal arts, mental health movements and the like. We happen to subscribe to them ourselves. We would argue, for example, that the final structures of our scheme express an optimally congruent and responsible address to the present state of man’s predicament. These are statements of opinion. (pp. 44–45)

It is not, in other words, a commonly held opinion among developmental educators that a Level 1 frame of reference and a Level 3 frame of reference are equally adequate for all tasks a learner might face. However, in seeking to encourage transformations, we should be aware that development is a gradual process and that complete transformations commonly take years to occur.7 Furthermore, the nature of and impetus for transformation varies across individuals, as does the timing. Every person grows at a unique pace. Yet, there is some evidence to suggest that one’s environment may support or constrain the motion of development.

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7All adult educators do not agree on this point. For example, Mezirow (1996, 2000), who is not a constructive–developmentalist but who does write about transformations, identified some types of changes that can occur rather suddenly.
The Holding Environment

The exercise and transformation of our ways of knowing always occur in some context. The British psychologist D. W. Winnicott (1965) coined the term holding environment to refer to the psychosocial environment that supports the healthy development of an infant. Others, notably Erikson (1968) and Kegan (1982), have since worked out conceptions of the holding environment throughout the life span. The idea of holding “refers not to keeping or confining, but to supporting (even ‘floating,’ as in an amniotic environment) the exercises of who the person is” (Kegan, 1982, p. 162). A healthy holding environment can, therefore, affirm individuals as they are as well as assist in their development.

A good holding environment serves three functions (Kegan, 1982, 1994). First, it must hold well, meaning that it recognizes and confirms students as they are currently making meaning without creating frustration or demands for change. Second, a good holding environment lets students move on when they are ready, challenging them to grow beyond their existing perceptions to new and more complex ways of knowing. Third, a good holding environment remains in place to recognize and sustain individuals’ growth and change. Although some ABE and ESOL classrooms may have difficulty providing the kind of longer term continuity and availability suggested by this third characteristic of good holding, any classroom can include the first two features; programs with very different structures can provide learners with substantial benefits (Drago-Severson & Berger, 2001; Drago-Severson, Helsing, Kegan, Popp, Broderick, & Portnow, 2001; Helsing, Broderick, et al., 2001; Kegan et al., 2001a, 2001b; Popp & Boes, 2001; Portnow et al., 2001).

Holding environments encourage growth when they supply an optimal balance of challenge and support (Daloz, 1986; Kegan, 1982, 1994). Too much support without enough challenge may be comfortable but insufficiently stimulating, and adult learners whose classrooms are overly supportive may feel bored or disengaged or remain dependent on the program. Conversely, too much challenge without enough support can generate defensive resistance and withdrawal, and adult learners who are overly challenged may feel threatened, alienated, and overwhelmed. McGrath and Van Buskirk (1999) noted that the community college environments that “are particularly successful in educating at-risk populations” achieve an optimal balance between challenge and support. They provide safe places for students to try out new identities and new ways of
behaving while structuring out anxiety-producing considerations. They stated that:

By helping students reinterpret their experiences in ways that build a sense of competence, they allow them to concentrate on the task at hand. . . . At the same time that these programs “hold” students in a safe and supportive environment they also encourage independence so that they can move on. As students develop new competencies, they must shift their attention to the future and move on to new educational or professional settings. The programs must shift their orientation from immediate support to promoting a sense that the organization will still “be around for them. . . .” This balance of “holding on” and “letting go” that Kegan describes as essential to adult development (Kegan, 1982) produces graduates who are neither alienated from the organization nor overly dependent on it. (pp. 32–33)

**SUPPORTING TRANSFORMATIONS IN ADULT LEARNERS**

Some constructive–developmental theorists provide specific descriptions of how these theories can inform classroom practice (Baxter Magolda, 1992; Belenky et al., 1986; Kegan, 1994; Kegan et al., 2001b; King & Kitchener, 1994). There are also adult educators (Brookfield, 1987; Cranston 1994; Freire, 1981, 1989; Mezirow, 1991, 1996) who do not identify themselves as constructive–developmentalists but who do describe the ways in which adult learning experiences can cause shifts of consciousness or transformations in learners (Taylor et al., 2000). Because the attention to processes of transformation is quite consonant with key principles of adult development, teaching practices drawn from or inspired by these theorists and educators are included here.

First, however, one key point should be made about this group of educators. Often, the types of transformations they wish to facilitate in learners do not account for how learners might move from Level 1 to Level 2 or from Level 2 to Level 3. Instead, they tend to focus on one particular transformation—that of the most complex kind we describe (to Level 4). They attend to or seek to support students’ ability to be self-directed learners and critical thinkers who can welcome multiple perspectives on a given issue and can consider themselves and their peers as sources of authority in the classroom. For example, Freire (1981, 1989, p. 66) advocated “problem-posing education,” which encourages learners to reflect on imbalances of
power in their lives to transform them. He was looking for learners who can enter into new, more liberated and collegial relationships with teachers. To support the development of critical consciousness, educators are thus advised not to simply present students with facts and information but to encourage them to develop and express their own ideas and understandings about the subject matter.

These teaching practices would appropriately support learners who are developmentally poised near Level 3 or Level 4, but they may not be very supportive of learners who are solidly stationed at or around Level 1 or Level 2. These learners demonstrate motivation and enthusiasm for learning when teachers act as authority figures and keepers of knowledge. They report feeling mystified when asked to be equal partners in teaching and learning. Because these learners may not be ready to take on the types of learning associated with Levels 3 and 4, teachers who insist on utilizing only these practices in the classroom will find many learners who are overwhelmed and undersupported (Helsing, Broderick, et al., 2001). Thus, developmentally conscious educators will not only teach in ways that expect and reward students’ capacities to demonstrate higher stage ways of thinking and acting but will also find ways of meeting students at their level. Tinberg and Weisberger (1998) noted that “the journey is not the same thing as the destination” (p. 54) and cited Kegan’s (1994) metaphor of “bridges” that can be constructed to help students toward the gradual accomplishment of higher level reasoning over time. We present the following recommendations for practice in this spirit so that they may serve as bridges that connect to all students’ ongoing development.

The Student–Teacher Relationship

As Taylor et al. (2000) noted, “though some people succeed in growing and changing without [a mentor or] guide, it is a much lonelier and more difficult process, and like any challenging journey undertaken alone, more prone to missteps, injury, and losing one’s way” (p. 330). Researchers in

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8Previously in this chapter, we used the pronoun we to refer to ourselves as researchers and authors. In studying and writing about theories of adult development, we have also been quite interested in the implications of these theories for our own and others’ work as teachers. We offer some ideas about these implications in this second half of the chapter. Because it could be confusing to readers to shift the use of the pronoun we to include both ourselves and others as teachers, we tried to avoid using pronouns for the word teachers where possible and resorted to they in a few instances. It is not our intention, however, to sound prescriptive or preachy, an unfortunate potential consequence of using the pronoun they.
the field of adult development suggest that teachers’ knowledge, experience, and teaching personality can both support and challenge students. One dimension of the teaching role that can encourage transformational learning is that of the teacher as advocate, counselor, or mentor (Belenky et al., 1986; Brookfield, 1987; Cranton, 1994; Daloz, 1986). In taking on this role, teachers may bolster students’ sense of self-worth and the expectations they hold for themselves, providing a climate of safety in which “the risk of exploring new ideas is minimized” and students are “encouraged to experiment in ways that [they] might not otherwise try” (Daloz, 1986, p. 226).

Teachers can also consider how issues of authority may be perceived by and may influence learners. Here, there is an interesting disagreement among advocates of transformational learning that the developmental perspective may illuminate. Some educators (Cranton, 1994; Daloz, 1986; Freire, 1981, 1989; Taylor et al., 2000) believe teachers should project less formal authority, with the goal of empowering learners to take responsibility for their own learning. Taylor et al. (2000) suggested that “one of the more effective ways of abandoning our [teachers’] pedestal is to admit being human, flawed, and still engaged in our own process of growth and development” (p. 305). Similarly, Daloz (1986) advocated the importance of self-disclosure from mentors and teachers, stating that such openness blurs authoritative lines and can empower students “to see more deeply” (p. 177). But, as we suggested, all learners may not be developmentally ready to take full responsibility for their learning. Although student self-direction may be the ultimate goal, teachers who abandon the position of expert or authority may also be abandoning those students who rely on authorities as the source of their own values (Grow, 1991; Helsing, Broderick, et al., 2001; Kegan, 1994).

Instead, teachers can exert authority to show students actively and explicitly how to become more responsible for their learning (Gajdusek & Gillotte, 1995). Teachers can do so by modeling developmentally related skills, such as critical thinking, and welcoming and developing in students a greater complexity of understanding (Brookfield, 1987; Cranton, 1994; Daloz, 1986; Fiddler & Marienau, 1995; Gajdusek & Gillotte, 1995) by using exemplary student work as models (Gajdusek & Gillotte, 1995), mirroring students’ ideas and actions to help make their assumptions explicit (Brookfield, 1987; Cranton, 1994; Daloz, 1986), using evocative language such as rich metaphors that offer students new ways of thinking about the world (Daloz, 1986), and employing techniques such as brainstorming and envisioning alternative or preferred future scenarios.
(Brookfield, 1987; Daloz, 1986). Finally, teachers can talk frankly with students about the ways that social power structures operate in the larger culture, learning institutions, and classrooms, providing students with opportunities to increase their awareness of the ways in which such factors influence their own and others’ experiences (Brookfield, 1987; Freire, 1981, 1989; Merriam & Caffarella, 1999).

In coordinating these multiple aspects of their role, teachers need to exercise a flexibility and responsiveness to learners’ different needs and abilities and to the nuances of classroom life. In assessing how to best support students’ thinking at any given time, teachers may have to shift from one strategy or role to another. Brookfield (1987) named this flexibility and responsiveness “critical teaching,” wherein teachers function sometimes as “catalysts of discussion and inquiry, sometimes as contributory group members. We perform such diverse roles as being advocates for missing perspectives, adversaries to propaganda, recorders of sessions, mediators of divisive tendencies, and resource persons” (p. 80). Similar to the models of teaching advocated by Freire (1981, 1989), Mezirow and Associates (1990), and Belenky et al. (1986), this type of involvement and on-the-spot decision making demonstrates great depths of engagement, personal commitment, versatility, and awareness on the part of the teacher.

**Student Assignments**

As Taylor et al. (2000) noted,

> Using experience as a basis for learning can be both liberating and constraining. Learners who have just begun to trust in their own voice—for whom knowledge formerly resided in others, including educators and authority figures—feel empowered when their experience becomes text. However, there is a crucial distinction between using one’s experience as a text for learning . . . and using it as the only text (p. 313).

Although teachers can employ a developmental perspective to teach any subject, certain subject areas and assignments lend themselves better to this perspective than others. For example, when students are asked to relate subject matter directly to their own lives through the use of journals, autobiographical assignments, and reflective writing assignments about their learning, they are being encouraged to step back from their experiences to examine them and the assumptions behind them (Armstrong, 1998; Cranton, 1994; Drago-Severson, 2001; Gajdusek & Gillotte, 1995; Portnow et al., 2001; Rossiter, 1999; Walden, 1995). As Rossiter (1999) explained,
The process of telling one’s story externalizes it so that one can reflect on it, become aware of its trajectory and the themes within it, and make choices about how one wishes to continue. Thus, learning activities in which learners are encouraged to draw autobiographical connections, to work with their own stories, and to reflect on alternative plots for their lives are key to education that is responsive to individual developmental trajectories. (pp. 68–69)

In attending to the richness of any one learner’s story, the teacher can play the important role of a supportive and encouraging listener as well as the role of a critical friend or coach who can ask questions and help clarify the assumptions at work in the stories.

The specific ways that teachers construct and communicate these assignments can make developmental demands on learners. For example, students making meaning at Level 1 can relate the facts and circumstances of their own experiences, but they have difficulty generalizing and theorizing about these experiences and may experience frustration, confusion, and discomfort when asked to reason abstractly in these ways (Tinberg & Weisenberger, 1998). Among those students who are able to reason abstractly about their experience, some (those making meaning at Level 2) may be uncomfortable if asked to provide a critical evaluation of their own experiences or to assess contradictory information and opinions expressed by authorities. Some who feel comfortable expressing their opinions and making their own decisions (e.g., those making meaning at Level 3) may not be able to identify the criteria on which these opinions and decisions should be based (Baxter Magolda, 1992).

**Student Interactions**

Teachers must also develop the ability to manage the group dynamics in a classroom, especially regarding ethical issues and conflicts (Brookfield, 1987; Cranton, 1994; Tennant & Pogson, 1995). In part because of differences in developmental capacity, some students (those making meaning at Level 4) are likely to feel that ethical disagreements and debates, even about deeply held values, are exciting and supportive of their learning. However, other students (those making meaning at Level 2) may experience such conflicts as threatening and confusing. These students may be looking to their teachers to settle disputes and declare what is the truth on a matter.

A certain amount of conflict and disagreement may be necessary to help students make their underlying assumptions more explicit and can provide the kind of challenge necessary for students to reconsider these assump-
tions (Brookfield, 1987). Still, some educators caution that such issues must be handled carefully. Rather than structuring conversations in a manner that polarizes differing perspectives, which often leads students to become more deeply entrenched in their own position, teachers should use dialogue to help students “engage with different perspectives, different ways of viewing a problem or a phenomenon” (Daloz, 1986, p. 226). It is important to maintain a climate in which each student’s values are respected and in which students are free from pressure to change those values (Cranton, 1994). One strategy that can help students explore differences of opinion in a less charged atmosphere is asking a student to summarize the comments of another student before expressing his or her own opinion. Teachers can also ask students to engage in role plays in which they take on a perspective different from their own and defend it (Brookfield, 1987).

Teachers often employ collaborative learning strategies in the classroom to promote transformational learning (Drago-Severson & Berger, 2001; Helsing, Broderick, et al., 2001; Popp & Boes, 2001; Portnow et al., 2001). In a research study with ABE and ESOL learners, Drago-Severson and Berger (2001) found that different models of collaborative learning seem to work best with learners at different developmental levels. For example, learners making meaning at Level 1 might appreciate collaborative learning activities that help them achieve specific, concrete behavioral goals. Learners making meaning at Level 2 or Level 3 might value collaborative work for the important emotional and psychological support it can offer as they balance the multiple demands in their lives, such as work, family, and school. Learners making meaning at Level 4 might want to focus on how to appreciate the different perspectives that other students bring to any particular learning activity and how to use these differences to broaden their own perspectives.

**Teacher Development**

As Taylor et al. (2000) noted,

Educating others . . . is a developmental challenge. No matter how seasoned an educator we might be, all of us constantly struggle with making meaning of our teaching and training experiences and strive to learn from them. Many of us recognize that as adult educators we are also adult learners, and that engaging in critical self-reflection about our existing assumptions, values, and perspectives can further prompt our development” (p. 317).
The primary focus of a teacher’s work is the growth and learning of students, but teachers are also engaged in growing and learning, and these processes—the students’ and the teacher’s—are interrelated (Lyons, 1990). Teachers who are aware of and attend to processes of self-development increase the chances not only of finding fulfillment but also of becoming better teachers.

The foremost developmental tool for practitioners is described in the literature on reflective practice (Brookfield, 1995; Cranton 1994; Osterman & Kottkamp, 1993; Schön, 1983). According to this literature, when teachers recognize a problem in practice that cannot be resolved easily, they may need to examine and perhaps modify the fundamental assumptions or deep-seated beliefs at work in their teaching. To do so, they may try to gather more information about how students experience their classes and to experiment with alternative methods of instruction. Such pursuits can lead to the development of new theories about both the student and the teacher, as well as about the processes of learning and teaching. Osterman and Kottkamp (1993) viewed reflective practice as “a means by which practitioners can develop a greater level of awareness about the nature and impact of their performance, an awareness that creates opportunities for professional growth and development” (p. 19). They maintained that the self-awareness that comes with reflective practice is necessary for behavioral change and that this kind of awareness is difficult to attain because every individual’s theories in use (the assumptions on which personal behavior is based) are not easily articulated.

The fundamental goal of reflective practice is to improve one’s teaching (Bright, 1996; Brookfield, 1995; Osterman & Kottcamp, 1993), including an emphasis on the psychological well-being and development of the teacher. Brookfield (1995), for example, contended that reflection can help teachers ground themselves emotionally so that they are not completely governed by the day-to-day ebbs and flows of the classroom or by students’ expressions of resistance or eagerness to learn. When teachers work to clarify and question their underlying assumptions, they can develop a more robust rationale for practice that can serve as the basis for even the most difficult teaching decisions.

Teachers can also benefit from participating with colleagues in groups designed to support professional development (Brookfield, 1995; Cranton 1994; Kegan & Lahey, 2001; McDonald, 1992; Osterman & Kottkamp, 1993). The purposes of these groups might be to provide an environment for personal support and idea exchange, arrange for peer observations and feedback, discuss examples of student work, examine and experiment with
the ways the work of teaching is understood and discussed, and develop and share case studies or autobiographies of teaching experiences. All of these activities can help teachers identify and perhaps modify the assumptions at work in their own and others’ practice, and they can also lead to changes on a more institutional or organizational level.

**Other School-Based Supports**

Certain features of program design help to create effective holding environments for developmental transition and transformation. We briefly discuss two: ancillary supports and the cohort effect.

Students who can rely on ancillary supports such as tutoring services, access to course-related computer software, therapeutic and psychological counseling services, and extensive academic advising and mentoring are more likely to be well-held by their institution. These services can provide learners with the academic and emotional support they may need to continue their development. For example, when protracted conflicts arise among students or between students and their teacher, learners who are not developmentally ready to generate their own critiques of their classroom experiences may need to be counseled about their option to (and the procedures to) drop a class (Helsing, Broderick, et al., 2001).

Another feature believed important to student development is the change that occurs when a group of learners ceases being merely a class and becomes a cohort, a tightly knit, reliable, common-purpose community of learners (Drago-Severson & Berger, 2001). Researchers supporting this view challenge the belief that adults, who often enter a program with well-established social networks, are less in need of entrée to a new community than, for example, older adolescents, who are psychologically separating from their families of origin and who have not yet established new communities (Aslanian & Brickell, 1980; Cross, 1971, 1981; Drago-Severson & Berger, 2001; Drago-Severson et al., 2001; Helsing, Broderick, et al., 2001; Kegan et al., 2001b; Knowles, 1970, 1975; Popp & Boes, 2001; Portnow et al., 2001). Cohorts, or learner networks, can make a critical difference to students’ academic learning as well as their emotional and psychological well-being (Brookfield, 1987; Cranton 1994; Drago-Severson & Berger, 2001; Drago-Severson et al., 2001; Helsing, Broderick, et al., 2001; Kegan et al., 2001b; Popp & Boes, 2001; Portnow et al., 2001).

Learner cohorts can also provide members with opportunities to clarify and broaden their perspectives and assumptions. The sharing of ideas can
challenge students to experiment with and enact new ways of thinking and behaving, serving as a catalyst for some students to make developmental transitions and transformations. It may not be possible to design every program such that learners all enter and exit at the same time and study together toward the same goal, but program developers can look for ways to maximize the consistency, cohesion, and endurance of learner cohorts within existing programmatic restraints (Drago-Severson & Berger, 2001; Drago-Severson et al., 2001; Kegan et al., 2001a, 2001b).

FURTHER IMPLICATIONS FOR PRACTITIONERS, PROGRAM DESIGNERS, POLICYMAKERS, AND RESEARCHERS

An adult developmental perspective has multiple implications for teaching and learning in ABE and ESOL settings. Not only does it help teachers understand how students are making sense of their classroom experience, it also helps teachers form realistic expectations for students and find ways of helping students grow to meet new challenges.

A New Pluralism in the ABE and ESOL Classroom

By orienting themselves to diversity of developmental level in addition to the other important types of diversity among learners, ABE and ESOL teachers and program developers can achieve powerful new insights into learners’ experiences and the ways in which programs can best respond to learners’ strengths and needs. Learners who share a developmental position also share important ways of understanding themselves, their learning, and their environment. These similarities reach across many aspects of learners’ lives, including the ways they conceive of their learning experiences, their aspirations, their classrooms and teachers, the programs and institutions in which they are enrolled, and their relationships to their own and other cultures (Drago-Severson, 2001; Drago-Severson & Berger, 2001b).

9 A similar version of these implications appears in Toward a “New Pluralism” in the ABE/ESOL Classroom: Teaching to Multiple “Cultures of Mind”—A Constructive Developmental Approach (Kegan et al., 2001b) and its executive summary (Kegan et al., 2001a). The material appears here by permission of the publisher, the National Center for the Study of Adult Learning and Literacy.
2001; Helsing, Broderick, et al., 2001; Kegan et al., 2001a, 2001b; Popp & Boes, 2001; Portnow, et al., 2001). A teacher who can support all of the students in a class, across a range of ways of knowing, can increase the chances that more students will feel recognized and valued for the meanings they bring to their learning. Students who are adequately and appropriately supported and challenged academically are likely to learn more and feel more competent. Teachers may need to utilize a wider variety of instructional designs, encompassing a better understood range of adult learners’ ways of knowing (Drago-Severson et al., 2001b; Helsing, Drago-Severson, et al., 2001).

Research with ABE and ESOL learners has found that students who share a developmental level also share assumptions about the student–teacher relationship (Drago-Severson, 2001; Helsing, Broderick, et al., 2001; Kegan et al., 2001a, 2001b; Portnow et al., 2001). For example, students operating primarily at Level 1 or Level 2 may be more responsive to a teacher-driven approach, whereas learners making meaning at Level 3 or Level 4 may prefer a student-driven approach. For teachers who aim to extend themselves to the broadest possible range of students, a developmental perspective can serve to lend meaning to potentially puzzling differences in student responses to the teacher’s practice and presence. It may serve to build tolerance for these differences and point to possibilities for enhancing flexibility in teaching style. And it can help teachers gauge the ways in which innovations in practice might be received by students who have grown accustomed to other forms of pedagogy.

Adult educators might, therefore, use a developmental perspective to ensure that students’ preferences are taken into account when debating the merits of different forms of instruction. Considerations of how to pace the introduction of new forms of thinking such as self-reflection or critical inquiry can benefit from a developmental perspective. Program designers and teachers can better or more fairly set expectations for the time it will take to help students build higher order thinking skills when they are aware of the enhanced developmental capacities such a goal implies (Kegan et al., 2001a, 2001b).

Toward More Appropriate—and Varied—Expectations

An awareness of adult development can inform teachers’ expectations for students. Popp and Boes (2001) described how many desired skills or competencies can be successfully performed from a wide range of devel-
opmental stages, although the purposes and nature of the performance will differ at each stage. For example, competence for students making meaning at Level 2 would involve taking responsibility for their own learning by making sure to follow the teacher’s rules and by completing assignments according to the given instructions. Students making meaning at Level 3, however, would experience competence in exercising their own sense of authority over the best way to learn something, relying on the teacher for support and validation.

Appropriate goals for one student’s performance will be inappropriate for another student who is operating with different developmental capacities. Any subject matter or general skills goal might be appropriate if it is taught at a level of complexity that matches the learner’s developmental capacity (Popp & Boes, 2001). Educators may do well to consider the different ways students can demonstrate competence and to scrutinize the overall program goals and individual lesson objectives for ways in which they may be inappropriately cueing students to perform at a certain level of complexity in their meaning system. Does a particular instructional design favor students at one developmental stage over those at another? Are there ways to make sure students at other developmental stages are also engaged?

Practitioners can also benefit by remaining alert to the ways in which learners’ meaning systems can change over time so as to support students’ emerging identities and capacities. In inviting development, educators should consider the potential costs as well as the gains to individual learners. Rather than imposing expectations on learners in the form of curricular or programmatic requirements, teachers should meet students at their particular level, orienting themselves to students’ existing frames of knowing.

We suggest, therefore, that ABE and ESOL teachers can improve their practice by increasing their familiarity with the theoretical and practical insights of adult development theories. A background in these theories may be relatively uncommon among practitioners, however, because many have teaching certification in K–12 programs, which are more likely to stress issues of child and adolescent development (Perin, 1999). But several states are now developing ABE teaching standards or certification programs. Massachusetts recently developed qualifications for a new ABE teaching license that is somewhat unique in its scope and depth, legal status (recognized, although not required, by the state), and attention to issues of adult development (Mary Jayne Fay, personal communication, August 2, 2001). Providing ABE teachers with this type of knowledge of
the unique and diverse needs of adult learners can lead teachers to better understand students’ current capacities as well as potential for growth.

**Program Design: From Either-Or to Both-And**

In the realm of adult literacy and learning, there are familiar and long-standing debates between advocates of progressive, student-centered designs; those favoring cognitive, skill-based designs; and those who promote critical or emancipatory designs. Because the theoretical literature highlights the tensions and disagreements, it pays scant attention to the ways in which the perspectives might interrelate and complement each other (Wray, 1997). Each side of the debate seeks to persuade practitioners of the importance of accepting its point of view and devalues and criticizes the others. Each comes with prescriptions and moral mandates for teachers’ and program developers’ actions. Practitioners, therefore, face decisions about how to regard these conflicting perspectives. One strategy for addressing this dilemma would be to choose from the theories in either–or terms. One might then choose, for example, to be a skills-centered teacher or a learner-centered teacher or a catalyst for personal, social, and political emancipation.

A developmental perspective offers an alternative stance, one that embraces and integrates these positions. This perspective neither favors nor condemns one particular educational philosophy or approach to program design, recognizing that no one particular theory of instruction can address the developmental needs of all learners. What would be least helpful would be to design programs and provide instruction in a way that meets the developmental needs of only one type of learner.

For example, one approach to skills-based education might utilize a very concrete, highly scaffolded type of learning. In such a class, students might engage in rote learning that involves the memorization and accumulation of facts and information. Although these facts and skills may be important and this type of curriculum might appeal to some learners (especially those making meaning at Level 1 or Level 2), it would likely overwhelm those at higher stages and also underprepare them for the types of work they are ready to do.

Similarly, it would be unhelpful for progressive, learner-centered instructors to expect all students to be able to prioritize the needs of the group over their individual needs without providing some supports and scaffolding for learners who have not yet developed these capacities. Furthermore, learner-centered instructors might also consider how to help
some students (those who are making meaning at Level 3) and recognize that others (those making meaning at Level 4) rely less on their peers and teachers for confirmation of their learning.

Finally, among educators who embrace critical pedagogy, there is danger in the assumptions that all learners will have developed the abilities for ideological critique and self-directed learning and will feel empowered when the class is set up in this way. Learners making meaning at Level 1 or Level 2 will expect and find confirmation in teachers able to act as authorities who actively set guidelines and make decisions on behalf of the students, even when the teachers feature a sociocultural, critical stance, if that is their preference.

A straightforward interpretation of this implication is that program designers might use a developmental perspective to ensure that teachers’ and students’ actual preferences are considered when debating the merits of different forms of instruction and program design. Teachers with different personalities and philosophies are likely to have different pedagogical strengths. One may engage and challenge learners by focusing on how to help them meet their immediate goals of passing the general educational development test battery, writing a resume, or interviewing for a job. Another may encourage growth by helping learners explore their fears and hopes about the future through conversation and writing. However, both teachers can share a common philosophy of dedication to learners’ ongoing development, a philosophy that can undergird and incorporate methodological differences.

Overall, a developmental framework accommodates the different experiences of learners, their goals and aims for their education, and the experiences of teachers in classrooms who intend to make learning a sustained possibility. It also recognizes the significance of individuals’ similarities in meaning making, the important influences of culture, language, social role, and age notwithstanding. Learners who share a developmental level also share a loyalty and adherence to a way of making meaning that is the product of their persistent engagement with the struggle to know. The consistencies apparent in these meaning-making systems do not dilute their importance or the extent of their influence on each learner’s individual experiences.

Policy Recommendations for Forms of Support

Nurturing development is complex work. Learners engaged in transformation are undergoing deep and profound changes, reconstructing their
fundamental beliefs about knowledge, society, themselves, and those around them. Effective policies for the adult education field will take the complexity and enduring nature of this process into account. Instead of measuring successful growth in terms of immediate, measurable change, policymakers can best support learners’ development by focusing on the more long-term, overall purposes of literacy (Fingeret & Drennon, 1997). We must commit to providing the financial and political resources necessary to the stable and ongoing support of learners that comes with an experienced, well-trained faculty with secure jobs; the cohesion among learners who are members of cohorts; and the web of ancillary supports that complement basic classroom learning experiences.

The most effective policies will also be informed by the knowledge of adult educators and by the expectations and experiences of adult learners. The political and popular images of literacy and adult learners become misguided and inaccurate when shaped by demands for impressive statistics, dramatic and inspirational stories of success, and clear outcomes (Quigley, 1997). These erroneous assumptions can lead to the types of policies that interfere with learners’ existing social and economic networks (such as their families, sources of child care and employment, and grassroots organizations) and contradict their self-created goals. An alternative approach is to consider how policies can connect with and strengthen these networks. In their research on single mothers’ journeys out of poverty, Holloway, Fuller, Rambaud, and Eggers-Piérola (1997, pp. 207–209) identified some examples of these policies, such as the provision of tax benefits to qualifying households that contribute to the support of individual mothers.

**Studying and Supporting Teacher Development**

We urge other researchers in the field to consider closely the meaning making of teachers in ABE settings. Like learners, teachers typically encounter barriers that keep them from working in ways they find effective and professionally satisfying. Active debates over directions for teacher development, teacher socialization, and the professionalization of the field would benefit from richer understandings of teachers’ preferences for their own learning. Underresourced, undercompensated, and often underappreciated, teachers, like learners in ABE settings, face issues of social and economic marginalization. Also like learners, some teachers find ways to work successfully in the context of considerable constraint. By studying effective teachers and exploring their meaning making, we might identify
aspects of professionalism associated with success in spite of constraints and in the midst of the slow process of systemic reform.

If teachers are asked to become knowledgeable about the ways in which issues of adult development can inform their teaching practice, then institutions and policymakers must commit to supporting teacher development. Traditionally, the vast majority of ABE and ESOL teachers have worked on a part-time or temporary basis; thus, adult literacy programs have suffered from high rates of teacher burnout and turnover (Perin, 1999). Employing institutions have not invested in nurturing the growth of these teachers or provided them with the types of long-term professional development they need (Perin, 1999). Minimally, we must designate adequate funding and time for training teachers in adult development. A more substantive type of support would provide resources on behalf of ABE and ESOL teachers’ own continuing development, such as that afforded by full-time employment and the opportunity to participate in long-term reflective practice groups. The work of ABE and ESOL teachers is extraordinarily important. It is shortsighted not to invest in supporting them while we expect them to sustain the high-dividend support they extend to their students.

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Since the founding of the field of adult education, the task of explaining how adult learners learn has been a major one on the part of both researchers and practitioners. Adult learning, after all, is the glue that holds together an otherwise widely disparate field, a field that ranges from adult basic education (ABE) to human resource development, and from educational gerontology to continuing professional education. The variety of settings in which adult education occurs, the range of curricula, and the diversity of the students have caused the field to be a sprawling—some would say incoherent—entity, united in the one common goal of facilitating adult learning. After some 80 years of study, we have no single answer, no one theory or model of adult learning. What we have instead is a colorful mosaic of theories, models, sets of principles, and explanations that combined create the knowledge base of adult learning. At the center of these theories and models is the adult engaging in formal and informal learning activities that address some perceived need or interest. Whether enrolled in an ABE class, participating in a management training session at work, or learning to trace his or her family history, the adult is engaged in learning. The more we know about the identity of the learner, the context of this learning, and the learning process itself, the better able we are to design effective learning experiences.
The development of this knowledge base can be divided into three periods. Early research on adult learning focused on answering the question of whether adults could learn. By midcentury, adult educators became concerned with the question of how adult learning could be differentiated from the way in which children learn. Finally, since the mid-1980s, adult learning theory has expanded to incorporate several new approaches from disciplines outside the field of adult education. The contributions of each of these periods make up the current landscape of adult learning theory.

FOUNDATIONS: CAN ADULTS LEARN?

From anecdotal evidence, philosophical musings, and storied narratives, we have known for centuries that adults learn as part of their daily lives. However, human learning was not studied systematically by behavioral scientists in controlled settings until the early decades of the 20th century. Also, perhaps because learning had by then become associated with schooling, the assumption that adults could learn became something to be questioned, tested, and documented. In Adult Learning (Thorndike, Bregman, Tilton, & Woodyard, 1928), the first book to report the results of research on this topic, the authors claimed that “teachers of adults of age 25 to 45 should expect them to learn at nearly the same rate” (p. 178) as 20-year-olds. Thorndike and others approached adult learning from a behavioral psychological perspective, testing learners of all ages under timed conditions on various learning and memory tasks.

Because much of this early research pitted older adults against young people under timed conditions, it appeared that as one aged, the ability to learn declined. It was later pointed out that adult test scores were related to previous education and skills, not to age per se, and that when time pressure was removed, adults up to age 70 did as well as younger adults (Lorge, 1944, 1947).

Intelligence testing was another major focus of this early research. As with learning tasks, older adults did not score as well as younger adults, who in turn did not do as well as young students. The introduction of more sophisticated research designs combined with multifactor models of intelligence challenged the notion that intelligence necessarily declined with age. Rather, it appeared that some aspects of intelligence declined with age, whereas others increased, resulting in a fairly stable composite mea-
sure of intelligence throughout adulthood (Schaie & Willis, 1986). Schaie (1996) noted that the way intelligence has been studied involves “a natural hierarchy . . . leading from information processing, through the products measured in tests of intelligence, to practical and everyday intelligence” (p. 266). Currently, multifactor models are thought to present a more accurate picture of intelligence. The most prominent are Cattell’s (1963) theory of fluid and crystallized intelligence, Guilford’s (1967) structure of intellect, Gardner’s (1993) theory of multiple intelligences, and Sternberg’s (1996) work on practical intelligence.

Other aspects of human learning, such as problem solving, information processing, and memory, have engaged educational psychologists, gerontologists, and cognitive psychologists since the early decades of the 20th century. If adults are included in this research, investigators tend to frame the research in terms of how advancing age affects the learning activity (Bee, 2000). Because much of this research has been conducted in laboratories and other artificial settings, it is difficult to make generalizations from it or to apply it to real-life situations. Furthermore, deficits and declines are often shown to be functions of noncognitive factors, such as level of education, training, health, and speed of response (Merriam & Caffarella, 1999).

Another stream of research begun in the early decades of the 20th century that continues to this day has focused less on whether adults could learn and more on the learning process itself. Specifically, cognitive development—that is, how one’s cognitive structure changes with age—was investigated first by Piaget. Piaget’s (1966) stages of cognitive development became the foundation for other models, some of which deal more explicitly with adults. Perry (1981), for example, working with data on young adult college students, proposed nine positions (rather than stages) of development that move from relatively simple thinking patterns to highly complex ways of perceiving and evaluating knowledge. Drawing from Perry and others, Belenky, Clinchy, Goldberger, and Tarule (1986) grouped women’s ways of knowing into five major categories, ranging from silence, in which women are passive, mindless, and voiceless, to constructed knowledge, in which women view knowledge as contextual and themselves as creators of knowledge, thus having both a mind and voice. Kegan (1994) argued that our thinking must continue to evolve through five levels of consciousness to navigate “the mental demands of modern life.” Proponents of yet another model suggest that mature thought is a dialectic process entailing the ability to accept inherent contradictions and ambiguities (Basseches, 1984; Riegel, 1973). Finally, Sternberg (1990),
among others, posited that wisdom, though culturally and contextually bound, is the epitome of cognitive development.

Implicit in the foundational work on intelligence, information processing, memory, and cognitive development was the question of whether adults could learn. And, depending on how learning was measured, it was discovered that they could learn as well as young people. Most of the research on these topics was—and still is—behaviorist in design, often placing adults in the same test conditions as children. More recently, however, these same topics have been investigated from a perspective that takes the adult’s life situation, life experiences, and social and cultural influences into consideration. Even the investigation of wisdom, considered by many to be the pinnacle of cognitive development and the culmination of a lifetime of learning, is being studied from a sociocultural perspective (Sternberg, 1990).

**THE DEVELOPMENT OF ADULT LEARNING THEORY**

Until about the 1950s, adult educators relied on research in psychology and educational psychology for an understanding of adult learning. But as part of the drive to professionalize the field, adult educators recognized the need to have their own unique knowledge base. Thus, a second period in the development of adult learning theory can be identified. In particular, it became important to differentiate the nature of adult learning and adult education from learning in childhood and from school-based education. By midcentury, attempts were being made to develop models, principles, and theories to explain adult learning as uniquely adult, needing its own instructional methods and strategies. Three major contributions—adultragogy, self-directed learning, and transformational learning—form the cornerstones of adult learning theory today.

**Andragogy**

Andragogy is probably the best-known theory of adult learning both within and outside the field of adult education. Proposed by Knowles in 1968 as “a new label and a new technology” (p. 351) by which to distinguish adult learning from preadult schooling, andragogy became a rallying point for adult educators wanting to distinguish their field from that of education in general. This new “art and science of helping adults
learn” (Knowles, 1980, p. 43) was based on five assumptions about the adult learner. An adult learner is someone who (a) has an independent self-concept and who can direct his or her own learning, (b) has accumulated a reservoir of life experiences that is a rich resource for learning, (c) has learning needs closely related to changing social roles, (d) is problem centered and interested in the immediate application of knowledge, and (e) is motivated to learn by internal rather than external factors. Working from these assumptions, Knowles (1980) proposed a program-planning model wherein students and facilitators jointly design, implement, and evaluate the educational experience. Knowles and Associates (1984) reported on what was by then the widespread appeal of andragogy, giving accounts of its use in diverse settings, ranging from General Electric and Lloyds Bank to the Archdiocese of Detroit to colleges and universities, continuing professional education, adult religious education, and ABE.

Much writing, debate, and discussion ensued about the validity of andragogy as a theory of adult learning. Davenport and Davenport (1985, p. 157) pointed out that andragogy has been variously classified “as a theory of adult education, theory of adult learning, theory of technology of adult learning, method of adult education, technique of adult education, and a set of assumptions.” Hartree (1984) questioned whether there was a theory at all, suggesting that perhaps these were just principles of good practice, or descriptions of “what the adult learner should be like” (p. 205). Knowles (1989) stated that andragogy is less a theory than “a model of assumptions about learning or a conceptual framework that serves as a basis for an emergent theory” (p. 112).

Andragogy has also been challenged on the basis of whether its assumptions are true only of adult learners. Some adults are not particularly self-directed, for example, and rely heavily on the teacher for structure and guidance; conversely, some children exhibit independence and self-direction in their learning. Adults and children can be internally or externally motivated to learn. Even the obvious difference—that adults have more life experience—does not necessarily translate into the learning situation. Knowles (1980) conceded that andragogy and pedagogy would be better thought of as poles on a continuum rather than opposing strategies and that each approach had value for both children and adults, depending on the situation.

Recent discussions in the literature on andragogy have centered on its philosophical underpinnings and usage worldwide, as well as on its lack of attention to the context in which learning takes place. For example, the term andragogy is widely used in eastern and central European countries
to mean what British and Americans broadly refer to as adult education (Draper, 1998). Knowles’ (1980) theory has come under the most severe attack for its emphasis on the individual learner as free, autonomous, and in control of his or her learning. There is no acknowledgment of the context in which learning takes place; a person’s history, culture, and surrounding social institutions and structures define the nature of the learning transaction. As Grace (1996) pointed out, Knowles never considered “the organizational and social impediments to adult learning; he never painted the ‘big picture.’ He chose the mechanistic over the meaningful” (p. 386).

Certainly andragogy is here to stay as one of the major landmarks in the development of adult learning theory. Although not really a theory of adult learning, andragogy captures general characteristics of adult learners, and it offers some guidelines for practice. As Pratt (1993) observed, “Andragogy has been adopted by legions of adult educators around the world. . . . Very likely, it will continue to be the window through which adult educators take their first look into the world of adult education.” However, “while andragogy may have contributed to our understanding of adults as learners, it has done little to expand or clarify our understanding of the process of learning,” and it has not achieved the status of a “theory of adult learning” (p. 21).

Self-Directed Learning

One of the assumptions underlying andragogy is that an adult has an independent self-concept and that with maturity he or she becomes increasingly self-directed. Knowles (1975) in fact wrote a book in which he explained self-directed learning and proposed the use of learning contracts as a way to implement it. However, the major impetus for this model of adult learning came from Tough’s (1971) research with Canadian adult learners. He found that 90% of the participants had engaged in an average of 100 hours of self-planned learning projects in the previous year. These projects dealt with specific tasks and problems on the job (e.g., a lawyer learning about aviation law), home and personal responsibilities (e.g., a home improvement project), and leisure time interests (e.g., playing a musical instrument). The uncovering and documenting of these learning projects—projects embedded in everyday life that involved planning but did not depend on an instructor or a classroom—generated one of the major thrusts of research in the field of adult learning.

Thirty years of research in the United States and Europe (Straka, 1997, 2000) on self-directed learning has focused on verifying its widespread
presence among adults, documenting the process by which it occurs, and developing assessment tools to measure the extent of individuals’ self-directedness. How one actually works through a self-directed learning experience has generated a number of models of the process. The first models, proposed by Tough (1971) and Knowles (1975), are the most linear. In these models the learner begins by self-diagnosing learning needs, then identifies resources and instructional formats, implements the plan, and, finally, evaluates the outcome. Models developed in the late 1980s and 1990s are less linear and more interactive, taking into account the learner, the context in which learning takes place, and the type of learning. Spear (1988), for example, presented a model that takes into account opportunities for learning found in one’s environment, past or new knowledge, and chance occurrences. These opportunities cluster into what Spear and Mocker (1984) called the “organizing circumstance.” As another example, Cavaliere (1992) studied how the Wright brothers learned to fly and identified five stages of their learning project. Critical to their success was recognizing and maximizing opportunities and resources within their own environment. The most recent model, proposed by Garrison (1997), incorporates dimensions of self-management (controlling the context), self-monitoring (a cognitive response), and motivational factors to explain the self-directed learning process.

In addition to research on the extent of self-directed learning and the process it involves, interest has centered on the desired goals of this type of learning. Implicit in both Tough’s (1971) and Knowles’ (1975) work is the humanist goal of personal growth and self-development. Others have suggested the goal should be learning that brings about a transformation in one’s thinking that is effected by critical reflection. “Such self-knowledge,” Mezirow (1985) argued, “is a prerequisite for autonomy in self-directed learning” (p. 27). Still others argued that self-directed learning should be employed as a means of emancipation and social action. An example is a recent study of the self-directed learning projects of women on welfare (Andruske, 2000). The author found that women became “political change agents as they attempt[ed] to control and to initiate change in their everyday worlds in response to oppressive external structures” (p. 11).

The development of self-directed learning theory is at a point of re-assessment. Despite annual symposiums on self-directed learning, Brockett’s (personal communication, September 28, 2000) analysis of the literature between 1980 and 1998 found a steady decline in the number of articles on the subject since the mid-1980s. He attributed this decline in part to the shift away from a focus on the individual learner to a greater
emphasis on the sociopolitical context of adult education. However, rather than abandoning 30 years of scholarship, Brockett suggested that researchers and educators focus on defining the quality of the learning experience, developing another instrument to measure self-directed learning, and investigating ethical questions about the use or misuse of self-directed learning. How ethical is it, for example, for a corporate training center to require workers to learn new skills outside of company time via self-directed learning packets?

Transformational Learning Theory

The third major theory-building effort in adult learning is transformational learning. Anecdotal and testimonial reports have long supported the notion that people can be profoundly changed through learning. However, it was not until Freire’s (1970) and, more recently, Mezirow’s (1991, 2000) work in this area that transformational learning has achieved the status of a major theory of adult learning. In fact, the 1990s might be called the transformational learning decade in terms of its move to center stage as the focus of scholarly activity in adult learning.

Andragogy, and to some extent self-directed learning, is largely about the personal attributes of adult learners as opposed to children. Transformational learning is more about the cognitive process of learning. The mental construction of experience, inner meaning, and reflection are common elements of this approach. Scholars and researchers are interested in documenting how we make meaning in our lives and how we come to change the cognitive structure through which we make meaning. Transformational learning is considered an adult learning theory as it is dependent on adult life experiences and a more mature level of cognitive development than is found in childhood.

Mezirow (1991, 2000) is considered the primary architect of transformational learning, although he readily acknowledged Freire’s influence on his thinking. Freire emphasized the need for this type of learning to deal with oppression and to bring about social action, but Mezirow focused more on delineating the process of transformation and its relationship to adult development. For Mezirow, the learning that takes place in adulthood is not just added on to what we already know. It is also “the process of using a prior interpretation to construe a new or a revised interpretation of the meaning of one’s experience in order to guide future action” (Mezirow, 1996, p. 162). In short, learning is making sense of our experiences, and to make sense of our experiences, we may need to make a change in one of
our beliefs or attitudes or in our entire perspective. A change in our entire perspective—the lenses through which we make sense of the world—is key to transformational learning. Both the process and the outcome of transformational learning are developmental. That is, the ability to reflect critically, which is mandatory to effecting a transformation, is itself developmental; the outcome, a changed perspective, is developmental in that we are able “to deal with a broader range of experience, to be more discriminating, to be more open to other perspectives” (Mezirow, 1990, p. 14; also see chapter 5 in this book, “Applying Constructive–Developmental Theories of Adult Development to ABE and ESOL Practices”).

Mezirow (1991) outlined a 10-step process that is initiated by a disorienting dilemma—that is, a life experience that evolves into a personal crisis. This crisis leads the individual to examine and critically reflect on the assumptions and beliefs that have guided meaning making in the past but no longer seem adequate. Such an assessment leads the person to explore new ways of dealing with the dilemma, often with help from others. It is at this point in the process that we test our new understandings, our new perspective, in dialogue with others. Mezirow (1995) drew heavily from German philosopher Jurgen Habermas’s notions of the ideal conditions for this dialogue or discourse, a discourse “that aims toward more sensitive, respectful, non-dominating, and non-distorting communication” (p. 54). A plan of action is then formulated and put into motion. The result is a new, transformed perspective. The new perspective is “more inclusive, discriminating, permeable, and integrative” (Mezirow, 1990, p. 14) than the previous perspective.

The burgeoning body of work in transformational learning is of two types: published papers that debate the theoretical underpinnings of the theory and empirical studies of some aspect of the theory itself. With regard to the theoretical discussion, Mezirow’s (2000) theory has been challenged for its lack of attention to context, its emphasis on rationality, its lack of a strong social action agenda, and the ethical issues involved in promoting this type of learning. These critiques are somewhat interrelated. For example, a social action agenda raises ethical questions about the role of the adult educator in tampering with the worldview of learners and about the sometimes unintended consequences of such an intervention. This body of research is also long on critique and short on illustrations of how to implement this type of learning in the instructional setting. Only recently have authors attended to practice to foster this type of learning (see, e.g., Cranton, 1996; E. W. Taylor, 2000b; and K. Taylor, Marienau, & Fiddler, 2000).
Empirical studies on transformational learning are expanding our understanding of adult learning in general. After reviewing published articles and more than 45 dissertations on Mezirow’s (2000) theory, E. W. Taylor (2000a) asserted that transformative learning theory “is much more complex and multifaceted than originally understood” (p. 287). Still to be investigated, Taylor believed, is the relationship of transformational learning to age, the role of emotions, the behavioral outcomes of a perspective transformation, the role of social support in working through transformations, the role of context and culture in shaping this type of learning, and ethical questions involved for both facilitators and learners.

To summarize this period of theory building in adult learning, andragogy and self-directed learning were the first two attempts by adult educators to define adult education as a unique field of practice in which adult learning could be differentiated from learning in general and to differentiate adult education from childhood education in particular. Freire’s (1970) seminal work and Mezirow’s (1978) early thinking on perspective transformation also appeared at this time. Currently, transformational learning theory holds center stage in terms of ongoing research and writing. However, andragogy and self-directed learning dominate in the real world of practice, perhaps because of their humanistic rather than critical theoretical underpinnings or because transformational learning, although powerful when it occurs, is more difficult to plan for, implement, and assess. All three theories have been criticized for a myopic focus on the individual learner at the expense of the larger sociopolitical context in which learning takes place. As explored in the next section, many of the newer additions to the adult learning knowledge base are more focused on the context of learning.

**RECENT CONTRIBUTIONS TO ADULT LEARNING THEORY**

Although the familiar theories of andragogy, self-directed learning, and transformational learning remain prominent features of the adult learning landscape, several new ways of thinking about adult learning are drawing attention to other aspects of the learning process. This third period of adult learning theory development is characterized in part by adult educators once again turning to other fields and disciplines to illuminate their understanding of adult learning. Discussed here are context-based learning;
critical perspectives on learning; and learning through emotions, body, and spirit.

**Context-Based Learning**

In moving from the individual learner to the context in which learning takes place, we come to understand learning as a social, constructed phenomenon. In a provocative article titled “Learning in School and Out,” Resnick (1987) highlighted ways the two learning environments differ. In school, she argued, each learner is evaluated on the basis of what he or she can do alone, whereas outside school, learning typically takes place in a social system, with the learner interacting with other people. In school one is expected to solve problems without the benefit of tools (e.g., maps, computers, printed materials) used in real-life problem solving. In school one deals with symbols of the real thing (e.g., numbers representing amounts). In real life we more often use objects found in the context of the learning. Finally, school learning is generalized, whereas learning outside school is situation specific.

Resnick’s (1987) thinking illustrates a theory of learning emerging from cognitive psychology that is known loosely as situated cognition. The theory suggests that learning cannot be understood only as an individual, internal cognitive process; rather, learning is what is constructed by the interaction of people in a particular situation with particular tools or artifacts (including language, signs, and symbols). Research (Lave, 1988, 1996; Lave & Wenger, 1991) has demonstrated that the context in which learning takes place is crucial to the nature of the learning, as are the tools in that setting and the social interaction with others. Understanding human cognition means examining it in situations of authentic activity, in which actual cognitive processes are required, rather than in situations of simulated activity typical of school. Lave’s (1988, 1996) experiments with grocery shoppers is a good example of the difference in learning in an authentic versus simulated activity. Study participants were considerably more accurate in efforts at comparison pricing when actually shopping (98% correct answers) than when doing identical calculations on a paper-and-pencil test in the classroom (59% correct answers).

The notion of situated cognition resonates well with what we already know about adult learning, from Lindeman’s (1926) statement that experience is “the adult learner’s living textbook . . . already there waiting to be appropriated” (p. 7) to Knowles’ (1980) principle of using an adult’s life experiences as learning resources. Locating learning in the real-life
experiences of adults has long been promoted as good adult education practice. Schön (1987, 1996) is noted for promoting contextually based reflective practice. Knowledge gained in school is not enough to make a reflective practitioner. One must also engage in the actual practice; it is in the doing of activities rather than the application of principles that one comes to know. This knowing in action goes beyond reflection on action. It is through reflection in action that our practice is reshaped (Schön, 1987). Others recommended apprenticeships, internships, and practicums where one can learn through modeling, coaching, trial and error, shadowing, site visits, and job-embedded learning activities.

Much of context-based learning occurs in the workplace where individuals enter into relationships with other learners, thereby becoming members of a learning community. This learning community can be considered a community of practice, a term coined by Lave and Wenger (1991) and recently further developed by Wenger (1998). Communities of practice are groups of people who share insights and ideas and who help one another solve problems and develop a common practice. All people belong to communities of practice through formal learning environments, civic organizations, or family structures. Most communities of practice do not have a name, but they are quite familiar to us. We know who belongs. The concepts of practice are both explicit and tacit. They include the language, documents, images, symbols, roles, procedures, regulations, subtle cues, rules of thumb, sensitivities, embodied understandings, underlying assumptions, and shared worldviews that are crucial to the success of the community.

Learners in a community of practice have different levels of mastery. Some have more knowledge than others and have been more effective in adopting the behaviors and attitudes, or norms, of the group; however, “mastery resides not in the master but in the organization of the community of practice of which the master is a part” (Lave & Wenger, 1991, p. 95). Newcomers, by engaging with others in the community, learn what they need to know to move from the periphery to the center of practice.

Communities of practice constitute a theoretical framework for understanding the information sharing that goes on in social practice and the ways in which this information sharing changes individuals’ level of participation and their identity within the community. Above all, according to Wenger (1998), belonging to such a community involves a learning process, a form of collective meaning making—of interpreting, acting, and reflecting on action. Meanings are negotiated through participation in the community. Communities of practice can be considered shared histories of learning.
Situated cognition posits that learning is context bound, tool dependent, and socially interactive. The place in which situated cognition occurs is the community of practice, which might be a family, a classroom, a workplace, an online community, a town, or a corporation. This approach contextualizes learning, uncoupling it from a preoccupation with the individual learner.

**Critical Perspectives**

Once the spotlight has moved away from the individual learner to the context in which learning takes place, numerous questions can be asked about this context, and that is precisely what those who come from a critical orientation do—they ask questions about the structural and historical conditions of society, the culture and institutions that shape learning, what counts as knowledge, who has power, and so on. For example, one might ask why medical doctors go on cruises for their continuing professional education, whereas public school teachers meet after hours in the school cafeteria. One might also ask why a certificate of general educational development is not valued as highly by employers as the traditional high school diploma, or why male students are called on more often than female students in classroom discussions. Questions such as these draw from philosophical and theoretical knowledge in critical theory, Marxist theory, multiculturalism, postmodernism, poststructuralism, and feminist theory. This questioning and assessing of the assumptions underlying the practice of adult education has major implications for the teaching–learning transaction.

The three themes that characterize the critical perspective are (a) race, class, and gender; (b) power and oppression; and (c) knowledge and truth (Merriam & Caffarella, 1999). These themes are interrelated in that it is impossible “to talk about racism, classism, sexism, and other ‘isms’ without reference to power and oppression; nor can power be considered apart from issues surrounding knowledge construction” (p. 342).

Several writers have used the critical perspective framework to explore the teaching–learning transaction. Ellsworth’s (1989) now famous article “Why Doesn’t This Feel Empowering? Working Through the Repressive Myths of Critical Pedagogy” recounted her experience in a college class designed to examine issues of race, privilege, power, and oppression. She discovered that these issues could not be examined in the abstract and that the class itself was reproducing the very power relationships she sought to critique. In another article, deMarrais (1991) used the hypothetical case of
John to illustrate the idea that no matter how much John himself tries to better his circumstances, social class norms and the educational system reinforce the relative unworthiness of his accomplishments. Similarly, Sandlin (2000) examined consumer education texts used in adult literacy programs and demonstrated that they promote current social class inequalities by “placing blame for financial failure on learners . . . ignoring larger social, political, and economic contexts” (p. 289). Analyses of the teaching–learning situation using race, class, and gender are also becoming more prevalent in the adult education literature (Brown, Cervero, & Johnson-Bailey, 2000; Fenwick, 2001; Johnson-Bailey & Cervero, 1998). Various feminist theories and critical race theory often frame these studies.

Backed by a voluminous literature in feminist theory, women’s learning has been a topic of interest in adult education, especially since the publication of *Women’s Ways of Knowing* (Belenky et al.) in 1986. This study identified five categories of knowledge construction ranging from silence, in which women are passive and defined by others, to constructed knowing, in which women see themselves as creators of knowledge. As an outgrowth of feminist theory, feminist pedagogy focuses on the experiences of women in the context of education. Tisdell (1995, 1998), in particular, forged a synthesis of the voluminous feminist theory literature and applied it to the learning context. Here, intellectual and emotional components of learning are seen as embedded in the larger sociopolitical framework of adult education practice. Hayes and Flannery (2000), in a recent in-depth exploration of women as learners, concluded that a case can be made for learning as gender related rather than gender specific—that is, most (but not all) women prefer to learn collaboratively, whereas most (but not all) men prefer to learn independently. These learning preferences appear to be related, but not exclusive, to gender.

Unlike much of critical theory and postmodern literature, the feminist pedagogy literature offers practical suggestions on how to manage learning activities (Hayes & Flannery, 2000). Tisdell (1995, 1998), for example, suggested attending to curriculum materials for implicit messages about women; adopting teaching strategies that decentralize oppressive forces such as patriarchy; designing courses in which the content deals explicitly with power relations based on gender, race, and class; and encouraging adult educators to examine the ways in which their own views and behaviors may be reinforcing or reproducing social inequities. Something as simple as openly acknowledging and addressing “the power disparity between the teacher/facilitator and the students” (Tisdell, 1995, p. 90) can be liberating.
Like the literature on learning in context, the critical literature considers the context in which learning takes place. However, rather than exploring the learning transaction per se, the critical perspective questions assumptions and givens about the sociocultural and historical conditions that shape the context in the first place. Diversity is acknowledged, the status quo is challenged, inclusion is a goal, and emancipation from oppressive social structures makes possible a context in which learning can thrive.

The Emotions, Body, and Spirit in Learning

The newest additions to the adult learning landscape are writings on the role of emotions in learning, on the body as a site of learning, and on the relationship between spirituality and adult learning. Each of these approaches holds potential for further expanding our understanding of adult learning as a holistic and complex phenomenon.

At least in the West, learning has become so connected with schooling that the activity of learning is almost always framed from a rational, cognitive perspective. It is commonly thought that we learn by processing information in the brain. By the time we are adults, learning has come to be understood as a formal and systematic process devoid of any emotional, physical, or spiritual trappings. Scholars writing in this area are attempting to explain and legitimize the role played by emotions, the body, and spiritual dimensions in learning.

Brain research is contributing to the understanding of the importance of emotions in learning. Instinctive behavior, emotions, and abstract coding of symbols, emanating from different parts of the brain, work together when an adult enters a classroom. As Ferro (1993) explained, if the adult experienced failure in school as a child, he or she has worked out behaviors that help protect him or her from that painful memory. “Memories triggered by any new experience include the memory of the feelings and emotions that accompanied the original experience.” Thus, if “the original experience caused anxiety or fear and triggered a fight-or-flight response, the reaction to the current situation will also be anxiety or fear” (p. 26).

In a review of emotions and adult learning, Dirkx (2001) argued that learning itself is inherently an imaginative, emotional act and that significant learning is inconceivable without emotion and feelings. It is through emotions that “deeply personal, meaningful connections” (p. 66) are made so that really significant learning can take place. These connections are of two kinds. First, there is the connection to one’s own inner experiences; emotions are “gateways to the unconscious and our emotional, feeling
selves” (p. 66). Second, emotions and feelings connect to the “shared ideas within the world” and are “reflected in big words or concepts, such as Truth, Power, Justice, and Love” (p. 64). We learn to understand or make meaning of our experience through engagement with these emotions and the images they evoke.

Somatic, or embodied, learning is closely related to emotional responses in learning. In somatic knowing, we learn through our bodies, as we do when we connect physical manifestations of stress to our psychological situation. The familiar phrase “listen to your body” reflects the idea that our bodies send us messages about various aspects of our lives. Pert (1997) argued that because receptors are found in the body’s nerves of all kinds, it follows that emotions can be stored and mediated by parts of the body other than just the brain. “These recent discoveries are important for appreciating how memories are stored not only in the brain but in a psychosomatic network extending into the body” (p. 141). Clark (2001) noted that the women’s movement in particular advanced the understanding of how the body can be a site for learning. “In consciousness-raising groups,” observed Clark, “issues related to the regulation of [women’s] bodies and their sexuality were addressed by women as part of their reflection on their oppression” (p. 85). Feminist scholars who conceptualize the body as central to women’s experience have advanced this practical work.

More than emotions or the body, the topic of spirituality and its connection to learning have attracted a number of writers in recent years. Spirituality is not the same as religion, which refers to an organized community of faith; rather, “spirituality is more about one’s personal belief and experience of a higher power or higher purpose” (Tisdell, 2000, p. 309). Spirituality is connected to adult learning through the construct of meaning making. Aktouf (1992) argued that “the human being is, by definition and necessity, a being whose destiny is meaning, intentions, and projects . . . a subject whose being is meaning and which has need of meaning” (p. 415). We are inveterate meaning makers. Tisdell (1999) made several points about the relationship between spirituality, meaning making, and adult learning. First, educators should recognize that “a search for or an acknowledgment of the spiritual in the lives of adult learners is connected to the search for meaning that gives our lives coherence. For all adults, this is connected to how we create meaning in our relationships with others. It is in our living and loving” (p. 93). It is also connected with “how we understand a higher power or a transcendent being” (p. 93). Second, adults come into classrooms with this agenda (meaning making) whether or not it is articulated. Third, meaning making is knowledge construction that uses
images and symbols that “often emanate from the deepest core of our being and can be accessed and manifested through art, music, or other creative work” (p. 93). Myths, symbols, images, even dreams, although culturally embedded, can be used in an adult learning environment in which students learn about culture and themselves (Dirkx, 1997).

How spirituality is linked to work and how it manifests itself in the workplace are currently popular topics in the organizational and human resource development literature. As with adult education, the purpose of bringing spirituality into the workplace “is not solely to rediscover God at our jobs but to find fulfillment in one’s work” (Fisher & Tompkins, 1999, p. 1). Finding fulfillment or meaning and purpose in work involves linking our inner lives to the outer context of the work setting through collaboration, participatory processes, and a sense of community. Spirituality at work is all about creating work environments that are open, friendly, and safe, where people feel connected to others and to their organization.

At the same time that spirituality is emerging as a means of framing meaningful work, others are concerned with effecting a global perspective of spirituality in the service of protecting our planet. Ecologists, feminists, educators, and theologians are calling for more attention to the interconnectedness of peoples across the globe, of humans and the nonhuman world, and of the earth and the universe. O’Sullivan (1999), for example, wrote that “we have lost our spiritual connection to the earth and we are diminishing the growth of our spirit. Our Western cultural horizon is destroying the spiritual dimension of our lives and because of expansive globalization we are destroying the spiritual development of other peoples by intruding ourselves into their cultures and their lives” (p. 262). Given the value placed on material goods and well-being, O’Sullivan said, there is a spiritual vacuum that is sometimes called a hunger of the spirit. “From an educational point of view,” he wrote, “our present state is in need of transformation” (p. 263).

The recent contributions to adult learning theory reviewed in this section suggest that adult learning is far richer and more complex than originally thought. Situated cognition has drawn our attention to how learning can be seen as a function of the learner interacting with the context of learning. Critical perspectives take yet another view of the context, asking how aspects of the context, such as race and gender, shape the learning context itself. Finally, in considering the emotional, physical, and spiritual dimensions of a learning experience, we come full circle, back to the learners themselves, who are at the center of the teaching–learning transaction.
ADULT LEARNING THEORY IS A WORK IN PROGRESS

This chapter has been a journey through the landscape of adult learning theory. There are familiar, easily recognizable shapes, such as behavioral learning theory, memory, intelligence, and cognitive development; there is andragogy, self-directed learning, and transformational learning. And there are newer, more tentative additions within the last 20 years: contextual learning (or situated cognition); critical perspectives, including critical theory, postmodernist theory, and feminist theory and pedagogy; and the role of emotions, the body, and spirituality in learning. The landscape of adult learning theory has changed significantly since the first research on adult learning in the 1920s. No longer is learning seen solely as a cognitive process taking place in the mind of the individual learner, and adult learning is not merely a laundry list of adult learner characteristics. Learning is all of this in conjunction with a better understanding of the cultural, social, economic, and political forces that together shape and inform the learning environment. Work in the role of emotions, the body, and spirituality is also resulting in a view of the adult learner as someone whose connection with learning and other learners is complex and multifaceted. Instructional applications for such learners would seem to be limited only by the imagination.

It is uncertain whether the newer concepts, models, or theories will achieve the status of earlier contributions. The theory-building process in adult learning is dynamic and evolving; some of the newer perspectives reviewed here will become commonplace, others will fade away, and still others will transform the landscape yet again. One thing is fairly certain: It is highly unlikely that there will ever be a single theory that can encompass all that we know about adult learning. A more important consideration is how the numerous approaches to adult learning expand our understanding of this complex phenomenon and how that understanding informs our practice.

REFERENCES

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