

The Literacy System: A Patchwork of Programs and Resources

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The literacy service delivery “system” is a heterogeneous and eclectic mix of funding sources, programs, administrative agencies, and service providers. Literacy programs range from individual tutors working one-on-one with learners in small voluntary programs to federally sponsored research efforts affecting thousands of learners. Instruction and services are provided by school districts, community colleges, employers, labor unions, community-based organizations, libraries, and churches. Programs take many different approaches: some focus on basic reading and writing skills; others on family-based literacy, workplace literacy, or on daily living skills; and some tackle literacy as an element of job training. This complex, diverse system is frequently criticized for being fragmented and inadequate. There is an almost universal sense that more can and should be done, and that it can and should be done better.

FINDINGS

- The providers of adult literacy services are diverse and do not form a comprehensive system for addressing the literacy needs of the Nation. Students seeking literacy assistance are confronted with a web of disconnected, often overlapping programs.
- There is no one best approach to providing adult literacy services, but some programs have been more successful in meeting learners’ needs than others. Success seems to reflect greater resources, secure funding, and a philosophy that responds to the learner’s individual needs.
- Data do not currently exist to enable the Office of Technology Assessment (OTA) to make any reasonable estimate of the



total funding devoted to adult literacy education. Public support is the most identifiable source. Federal funding has grown significantly in the last few years, and has provided leadership, leveraging other dollars toward adult literacy. However, the greatest growth over the last decade has been in State support, now outstripping Federal funding for literacy. As the major funders, Federal and State programs and policies largely define who is served and how and where they are served.

- The overall amount spent by business and industry on literacy training for their workers is expanding due to union and public perception of the links between literacy and economic competitiveness, but there is no aggregate data on these programs.
- A number of factors, including new Federal and State laws, a diverse population of learners, and changing technologies have combined to increase the variety of learning sites and public and private agencies funding and administering programs. Most importantly, new opportunities go beyond the traditional school-based programs run by local education agencies (LEAs).
- The content of adult basic education (ABE), adult secondary education, preparation for the general equivalency diploma (GED) examination, and English as a second language (ESL) instruction shows little variation across program sponsors. An increasing emphasis on matching curriculum **to the learner's** daily needs has led **to** more contextualized content, especially as workforce and family literacy programs gain in popularity.
- Most programs have been based on an open+entry/open-exit model, allowing students **to proceed at their own** pace and leave when they choose. While this approach is important for adults and assumes different motivational factors than those of schoolchildren, it also means that many **adults** do not remain in programs long enough to receive the full benefit of instruction.

Rapid turnover and high dropout rates lead **to limited** learning gains.

- Most instruction is provided by part-time or volunteer teachers. Certified teachers are generally K-12 educators without special training in the art and science of teaching adults. Volunteers receive little training and support for the challenges they are **expected to meet**.
- Funding is a constant concern. For most programs, unstable and short-term funding make it difficult to plan, **to** purchase necessary equipment or materials, or to develop professional staffing ladders. The instability of funding also gives **a** negative message to the clients.
- The use of technology in adult literacy programs is limited, but growing. Technology can offer benefits for individual learners and for program management. For today's labor-intensive system, technology is an alternative for overburdened programs unable to provide comprehensive individualized instruction to large numbers of students.
- The barriers to more effective use of **technology** are similar to those faced in K-12 education, but more severe in adult literacy programs. These barriers include funding limitations, staff unschooled in teaching with technological tools, administrators unaware of technology's potential, and uneven curriculum coverage in current software.

THE DELIVERY SYSTEM

The patchwork of the present system is best understood by answering these questions: who provides the funds, who administers the programs, who is being served, what kind of instruction do they receive, and who are the teachers?

Who Provides the Funds?

Money for programs comes from many sources: Federal, State, regional, and local government agencies on the public side and businesses, unions, foundations, charitable institutions, and individual donors on the private side. Estimating

a total amount of literacy funding is complicated because most programs receive support from multiple public and private sources, literacy services may be subsumed under broader funding categories, and data collection requirements of sponsors do not necessarily complement one another. OTA finds that it is impossible to specify the total amount spent on adult literacy services across the Nation.

It is clear, however, that the public sector is the most identifiable and largest source of support. Consequently, the public sector has an enormous effect on program administration.

Federal Programs and Dollars

The Federal Government supports adult literacy education through an assortment of targeted programs administered by several Federal agencies. These programs not only provide a base of funding for local literacy efforts, but also greatly influence State and local funding, administrative structures, priorities, target populations, services, and instructional approaches. These efforts are explored in more detail in chapter 5.

At least 29 different Federal programs in 7 agencies support adult literacy and basic skills education as one of their primary purposes, and many more include adult literacy as a peripheral goal. Chief among the Federal literacy programs is the Adult Education Act (AEA), administered by the U.S. Department of Education (ED). In fiscal year 1992, the AEA provided \$270 million for the following programs: State basic grants; State literacy resource centers; workplace literacy partnerships; English literacy programs; and national research, evaluation, and demonstration. ED also supports literacy education through special programs for adult prisoners, commercial drivers, homeless adults, Native American adults, and migrant adults, and through the Even Start Family Literacy Program, the Bilingual Family

Literacy Program, the Library Services and Construction Act, and the Student Literacy Corps.

Although ED continues to have primary responsibility for adult education, the influence of other agencies, particularly the Departments of Health and Human Services (HHS) and Labor (DOL), is growing. HHS administers the new Federal \$1-billion Job Opportunities and Basic Skills (JOBS) training program for welfare recipients, as well as programs for refugees and eligible legalized aliens and family literacy activities under the Head Start program. DOL has responsibility for the \$4-billion Job Training Partnership Act (JTPA), which authorizes basic skills education as a means toward its primary goal of workforce development for disadvantaged youth and adults. Other Federal programs with adult literacy and basic skills education as a major purpose are spread across other agencies, including the Departments of Defense, Justice, and Interior, and ACTION.

Because many Federal programs authorizing multiple activities do not require that obligations or expenditures for adult education activities be reported separately, available data is limited for estimating Federal funding.¹ At best, one can arrive at a partial, low-end estimate by totaling identifiable adult education and literacy obligations. Using this method, OTA estimates the fiscal year 1992 spending for adult literacy to be a *minimum* of \$362 million.²

State and Local Programs and Dollars

All States participate in the major Federal literacy-related programs, and most participate in several smaller Federal programs as well. In addition, States fund their own programs, both to fulfill their matching responsibilities under Federal programs and to carry out State-identified priorities. As a result, State-level activities and programs in support of literacy vary considerably.

¹ Judith A. Alamprese and Donna M. Hughes, Study of *Federal Funding Sources and Services for Adult Education* (Washington DC: Cosmos Corp., 1990), p. vi.

² See ch. 5 for further discussion.

Box 4-A—Baltimore: The City That Reads¹

Of all the things I might be able to accomplish as Mayor of our city, it would make me proudest if one day it could be said of Baltimore that this is the city that reads.²

“The City That Reads” is Baltimore’s slogan, emblazoned on park benches, trash trucks, and billboards throughout the city. Moving from rhetoric to reality has been a major challenge in a city where an estimated 200,000 of its 736,000 residents live with functional illiteracy. The Mayor’s first step was forming a collaboration with United Way of Central Maryland, creating two linked but significantly different organizations:

- *Baltimore City Literacy Corp. (BCLC)*: A “quasi-governmental” agency under the mayor’s office that works with other governmental agencies and is principally responsible for developing the city’s literacy initiatives.
- *Baltimore Reads, Inc. (BRI)*: a private, nonprofit corporation, with responsibility for fund-raising and coordinating the partnership. The director of BCLC also directs BRI, although it has its own independent board of directors drawn from the business community, United Way, schools, AFL-CIO, newspapers, the Junior League, YMCA, churches, social service agencies, and political leaders.

The political clout of the new mayor produced quick results. Within 6 months, a variety of agencies with literacy interests but no previous history of collaboration—the Job Training Partnership Act (JTPA), the Community College’s adult basic education program, the public library, and community-based organizations—came together to create a strategic plan. BCLC would develop several new literacy centers that were to become self-sustaining, and BRI would coordinate the efforts of a number of existing community-based programs. The Mayor’s Office and the United Way each contributed \$75,000 to these efforts.

One early challenge was building consensus in the literacy provider community. It was helpful to have a director with skills in community organizing with no vested literacy interests; her “neutrality” helped create a working partnership among the many factions. The continuing support of the mayor, in combination with the United Way,

¹ This box is based on OTA site visits and a case study by J.D. Eveland et al., Claremont Graduate School, “Case Studies of Technology Use in Adult Literacy Programs,” OTA contractor report, June 1991, pp. 77-101.

² Mayor Kurt Schmoke, Inaugural Address, 1987.

New Jersey, for example, administers 63 different basic skills and literacy programs through 6 different State agencies; Illinois reports 33 different funding sources.³

Many State agencies are involved in the administration of literacy-related programs. Although State administrative structures roughly track the Federal structured funds flow to State education agencies, JOBS funds to welfare

agencies, library funds to State libraries—there are important variations by State. In many States, the agency with responsibility for elementary and secondary education programs also administers adult education.⁴ Other States place adult education in agencies responsible for vocational education, community colleges, or job training.

To bring coherence to literacy efforts, 40 States have created State-level coalitions to coordinate

³ U.S. Department of Education, *A Summary Report: National Forums on the Adult Education Delivery System* (Washington, DC: U.S. Government Printing Office, 1991), p. 15.

⁴ Critics have charged that this arrangement, which has historical precedent in the AEA, has contributed to the “second-class status” of the adult basic education program. See William F. Pierce, “A Redefined Role in Adult Literacy: Integrated Policies, Programs, and Procedures,” background paper for the Project on Adult Literacy, Southport Institute, 1988, p. 16.

provided a strong foundation for the program to evolve. Baltimore Reads also received considerable publicity and financial support from the family of baseball star Cal Ripken.³

“Baltimore Reads” has become an integrated system of citywide literacy programs and includes a hotline, literacy hubs and satellites, technical support and assistant, and research into challenges faced by adult learners. The original six community-based literacy programs have expanded to 21 programs. Baltimore’s literacy efforts leverage Federal, State, and local monies, as well as business and foundation support. The city’s share of Federal Adult Education Act funds, administered at present through the community college, are supplemented by Federal library service funds, \$800,000 from city-administered JTPA funds, State welfare reform, and a separate State Literacy Works Program.

The BCLC/BRI program provides curriculum expertise and technological support to local literacy efforts. A curriculum specialist helps programs identify useful materials and instructional approaches, and maintain contact with the professional literacy community. One of BRI’s major goals is to experiment with and evaluate new technologies to provide technical assistance and a “technology vision” to local programs. Since most programs have neither the resources to acquire hardware and software nor the expertise to install and maintain it, BRI’s technical specialist—the Indiana Jones of used computers—plays a variety of roles, from “computer guru,” to part-time classroom teacher, to software evaluator. A used computer donation program has increased the installed hardware base; e.g., when a city department changed its system, BRI received the 10 computers that were being replaced.

Various technologies have been installed in different centers. For example, in the Ripken Center a computer laboratory with an integrated learning system supplements classroom instruction. Students can listen to lessons on headphones, which helps those with low reading skills. One student noted: “The headphones give instruction, put reading on the brain.” Baltimore’s public library system plans to open small computing centers in four of its local branches to allow computer access for area residents, with assistance from BRI’s technical specialist. The Ripken Center is also a test site for software under development by the Educational Testing Service, an interactive video and computing system used to teach problem-solving strategies in the areas of document, text, and numerical literacy.

³ Ripken, a Baltimore local and Orioles baseball team hero, appears in public service announcements, does baseball card signing to support BRI, and, through the program “Reading, Runs, and Ripken,” money is donated to BRI based on the home runs hit by Ripken over the season. He and his wife have been leading financial backers and literacy advocates for the city. One of BRI’s new literacy centers is named “The Cat Ripken, Jr. Literacy Center.”

literacy agencies and organizations.⁵ Some are placed under the Governor’s Office,⁶ while others are placed under the Department of Education⁷ or another existing agency such as the Office of Community Colleges,⁸ Public Library Office,⁹ or Department of Commerce.¹⁰ These coalitions serve predominantly as public information re-

sources; few are able to coordinate programs and policy for all the relevant service providers in their State.

Many cities and localities also provide public funding for literacy services and solicit funding from local industry and philanthropic sources (see box 4-A). Most major cities have literacy councils

⁵ Robert A. Silvanik, *Toward Integrated Adult Learning Systems: The Status of State Literacy Efforts* (Washington, DC: National Governors’ Association, 1991), p. vii.

⁶ Arkansas, Florida, Hawaii, Indiana, Maryland, Massachusetts, Mississippi, Nevada, New York, and North Carolina.

⁷ Arizona, Colorado, Connecticut, Iowa, Maine, Michigan, Rhode Island, and Utah.

⁸ Oregon.

⁹ Alabama, District of Columbia, and Wyoming.

¹⁰ Texas.

that provide public information on literacy resources, coordinate efforts to connect learners with programs, and provide technical assistance, training, and funding assistance.

It is difficult to determine how much funding for adult education comes from all State and local sources, especially as compared to the Federal share. States face the same problems as the Federal Government in accurately estimating contributions from all relevant sources, especially from programs in which basic skills education is just one of many allowable activities. Local literacy programs generally keep detailed data on receipts and expenditures, in categories defined for their own needs.

Statistics are available on State and local matching contributions under the AEA, the major source of Federal funding for adult literacy in many States. These statistics show that State and local matching expenditures for adult education have mushroomed in the past several years and now outstrip Federal AEA contributions. For example, while Federal expenditures for adult education rose from \$100 to \$158 million between 1980 and 1990, during the same time period State and local expenditures went from \$74 to \$622 million.¹¹ (See figure 4-1.)

Care must be taken in interpreting estimates of AEA matching funds. First, aggregate data mask wide variations among States and localities (see table 4-1). Most of the growth in State and local matching funds is attributable to large increases

in a handful of States,¹² with several States providing only the minimum match required by law or slightly more.¹³ One 1990 study of nine geographically diverse local programs found that in five sites, State and local dollars provided the majority of support, ranging from 67 to 95 percent of the total, while in the other four Federal funding predominated.¹⁴ In addition, AEA matching funds may not be a reliable proxy for total State spending, since past studies have found that States may underreport their true AEA contributions.¹⁵ Moreover, these AEA matching expenditures are only part of the picture. State and local matching under other Federal programs—such as JOBS, public library programs, and Even Start—is increasing the pool of total literacy funding, as are expenditures for State-initiated literacy programs. Finally, the growth in State funding may be slowing as some States confront fiscal crises.

In sum, while aggregate State and local funding has grown—and likely exceeds aggregate Federal funding from all sources—the Federal Government remains the leading partner in some States, an essential partner in the rest, and a catalyst for funding in all.

Private Support

Private support for literacy comes from many sources: foundations, United Way contributions, businesses, unions, and individuals. While there are a few corporations and foundations supporting literacy efforts nationwide—the United Par-

¹¹ **Federal Basic Grants to States under the Adult Education Act** were \$100 million in fiscal year 1980 and \$157.8 million in fiscal year 1990 (actual dollars). This represents a 57.8 percent increase since 1980. State and local expenditures were \$74.3 million in fiscal year 1980 and \$622.1 million (actual dollars) in fiscal year 1990, a 737.4 percent increase since 1980. Figure 4-1 shows this growth in adjusted dollars. **R.S. Pugsley, Office of Vocational and Adult Education, Division of Adult Education and Literacy, U.S. Department of Education, personal communication, October 1992.**

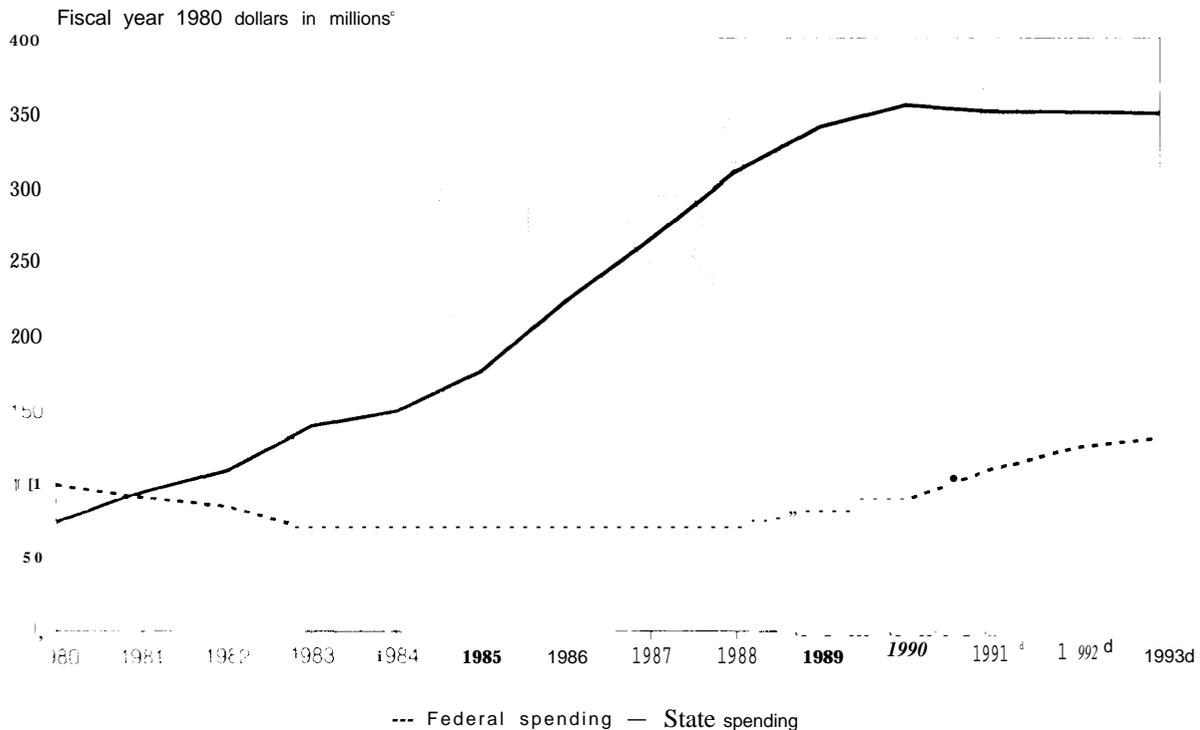
¹² **Joan Y. Seamon, director, Division of Adult Education and Literacy, U.S. Department of Education, personal communication, Apr. 1, 1992.**

¹³ The State minimum acceptable match increased from 10 to 15 percent for fiscal year 1990, to 20 percent for fiscal year 1991, and to 25 percent for fiscal year 1992.

¹⁴ **Mark A. Kutner et al., *Adult Education Programs and Services: A View From Nine Programs* (Washington, DC: Pelavin Associates, 1990), p. iii.**

¹⁵ **Ibid.** The incentive to underreport likely stems from a desire to have more flexibility in the use of State funding, since funds that are not reported as matching are not governed by AEA planning and other requirements.

Figure 4-1—A Comparison of Federal^a and State/Local^b Expenditures for Adult Education, Fiscal Years 1980-93



^aFederal dollars are Federal basic grants to states under the Adult Education Act.
^bState/local expenditures for 1991, 1992, and 1993 are estimates by the U.S. Department of Education.
^cFiscal year 1980 dollars were calculated using the Congressional Research Service's Implicit Deflator for State and Local Government Purchases of Services.
^dEstimated State/local expenditure.
 SOURCE: R. S. Pugsley, U.S. Department of Education, Division of Adult Education and Literacy, Office of Vocational and Adult Education, unpublished data, October 1992.

cel Service Foundation, Coors Brewing Co., and Toyota Motor Corp., to name three of the largest efforts—many more companies support efforts benefiting literacy activities in the communities where their employees live and work (see table 4-2). Industries spend millions of dollars training their own employees in basic skills,¹⁶ as well as supporting overall literacy efforts in their communities. Unions have provided support for literacy out of general dues or, in some cases, on a shared basis with industry (see box 4-B).

Who Administers Programs and Provides the Services?

In the literacy world, distinctions must be made among the entities that provide the funding, those that administer the programs, and those that deliver the actual services to adults. Often these entities are different. For example, a local service provider, such as a community-based organization (CBO), may receive funding from several different Federal and State programs and private

¹⁶ The total spent by employers, government agencies, and unions on improving employee basic skills is not known precisely, but probably does not greatly exceed \$1 billion per year. U.S. Congress, Office of Technology Assessment, *Worker Training: Competing in the New International Economy*, OTA-ITE-457 (Washington DC: U.S. Government Printing Office, September 1990), p. 154.

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Table 4-I-Fiscal Year 1990 Expenditures and Enrollments Under the Adult Education Act, State-by-State Comparison

State or other area	Total Federal expenditures	Total State/local expenditures	Total expenditures	State match	1990 total enrollment	Cost per student
Alabama	\$2,777,200	\$2,800,304	\$5,577,504	50.21%	40,177	\$159
Alaska	378,254	1,760,960	2,139,214	82.32	5,067	406
Arizona	1,487,000	2,725,057	4,212,057	64.70	33,805	90
Arkansas	1,782,390	7,442,486	9,224,876	80.68	29,065	305
California	9,196,782	216,952,480	226,149,262	95.93	1,021,227	238
Colorado	1,343,385	357,748	1,701,133	21.03	12,183	82
Connecticut	1,772,830	11,921,606	13,694,436	87.05	46,434	220
Delaware	544,735	230,091	774,826	29.70	2,662	260
District of Columbia	604,801	4,220,535	4,825,336	87.47	19,586	401
Florida	5,611,296	52,679,924	58,291,220	90.37	419,429	372
Georgia	3,742,737	2,601,315	6,344,052	41.00	69,580	54
Hawaii	571,644	1,388,706	1,960,350	70.84	52,012	53
Idaho	648,262	180,000	828,262	21.73	11,171	61
Illinois	6,290,817	7,304,958	13,595,775	53.73	87,121	151
Indiana	3,132,164	21,748,771	24,880,935	87.41	44,166	427
Iowa	1,588,770	3,329,586	4,918,356	67.70	41,507	103
Kansas	1,288,997	287,351	1,576,348	18.23	10,274	148
Kentucky	2,509,184	263,625	2,792,809	10.16	26,090	231
Louisiana	2,838,563	6,244,123	9,082,686	68.75	40,039	174
Maine	814,526	4,351,264	5,165,790	84.23	14,964	89
Maryland	2,458,855	3,601,401	6,060,256	59.43	41,230	100
Massachusetts	2,877,406	9,621,265	12,498,671	76.98	34,220	313
Michigan	4,904,768	123,452,005	128,356,773	96.18	194,178	1,415
Minnesota	2,025,941	10,714,081	12,740,022	84.10	45,648	493
Mississippi	1,902,422	335,722	2,238,144	15.00	18,957	101
Missouri	3,056,131	1,606,738	4,662,869	34.46	31,815	143
Montana	584,101	403,231	1,077,422	45.78	6,071	162
Nebraska	924,073	190,258	1,114,331	17.07	6,158	84
Nevada	591,838	465,856	1,057,694	44.04	17,262	331
New Hampshire	666,701	536,041	1,202,742	44.57	7,198	151
New Jersey	4,083,836	19,519,833	23,603,671	82.70	64,080	108
New Mexico	886,496	1,357,127	2,243,623	60.49	30,236	72
New York	9,719,848	26,777,640	36,497,488	73.37	156,611	231
North Carolina	4,219,967	19,311,736	23,531,703	82.07	109,740	235
North Dakota	574,554	257,777	832,331	30.97	3,587	394
Ohio	5,836,288	6,471,483	12,307,771	52.58	95,476	126
Oklahoma	1,830,980	285,600	2,116,580	13.49	24,307	73
Oregon	1,217,964	7,345,449	8,563,413	85.78	37,075	206
Pennsylvania	6,784,560	1,214,589	7,999,149	15.18	52,444	152
Rhode Island	821,483	1,400,943	2,222,426	63.04	7,347	240
South Carolina	2,351,279	7,789,840	10,141,119	76.81	81,200	121
South Dakota	590,200	164,098	754,298	21.76	3,184	166
Tennessee	3,113,800	525,977	3,369,777	14.45	41,721	90
Texas	8,437,165	7,608,691	16,045,856	47.42	218,747	70
Utah	722,932	3,484,000	4,206,932	82.82	24,841	169
Vermont	484,168	2,086,009	2,570,177	81.16	4,808	505
Virginia	3,394,170	3,210,757	6,604,927	48.61	31,649	203
Washington	1,631,503	5,208,345	6,839,848	76.15	31,776	201
West Virginia	1,528,239	1,286,216	2,814,455	45.70	21,186	106
Wisconsin	2,513,690	6,360,491	8,874,181	71.67	61,081	217
Wyoming	412,459	267,329	679,788	39.33	3,578	166
Puerto Rico	2,630,440	308,337	2,938,777	10.49	28,436	98
Guam	149,021	0	149,021	0.00	1,311	81
No. Mariana Is.	99,943	0	99,943	0.00	160	382
United States	\$132,951,650	\$622,069,755	\$755,021,405	82.39%	3,565,877	\$217^a

^a Average.

SOURCE: U.S. Department of Education, Division of Adult Education and Literacy, Office of Vocational and Adult Education, n.d.

Table 4-2-Examples of Private Sector Support for Literacy

Donor foundation or company	Recent grants (amount and date)	Description of literacy support
<i>Barbara Bush Foundation for Family Literacy</i>	1 990: \$500,000 1991 : \$500,000 1992: \$500,000	Grants to 10-15 organizations (for up to \$50,000 each) to establish community family literacy programs, train teachers, and publish and disseminate materials documenting successful programs.
<i>Bell Atlantic</i>	1989-91 : \$595,000 1992-95: \$500,000	In cooperation with American Library Association, establishes library-based family literacy programs in local libraries in mid-Atlantic States.
<i>Black and Decker Stanley Tools</i>	1991: \$100,000 in tools, manuals, and other job materials	In partnership with HomeBuilders Institute and U.S. Department of Education, to upgrade education and skills for construction workers.
<i>Coors Brewing Co.</i>	1990: 5-year, \$40-million grant	"Literacy. Pass It On" program commitment to provide literacy services to 500,000 adults through literacy hotline, support to volunteer organizations, and an advertising campaign to raise awareness of the literacy needs of women.
<i>William H. Dormer Foundation</i>	1990: \$336,000 1991 : \$96,500	Multiyear grants to support innovative literacy projects in community-based organizations (CBOs), for young first offenders in a work camp in Tennessee, and for unemployed ex-offenders on release from correctional institutions.
<i>John S. and James L. Knight Foundation</i>	1 990: \$309,000 1991 : \$233,000 1992: \$597,000	Supports projects in 26 urban and rural communities where Knight-Ridder newspapers operate. Recent grants supported hiring staff, creating computer labs, establishing hotlines, and purchasing and creating texts and software for a range of literacy programs.
<i>Southland Corp. (7-Eleven Stores)</i>	1 991:\$1 20,000	Grants to 77 community literacy organizations in Maryland, Virginia, West Virginia and the District of Columbia.
<i>Toyota Motor Corp.</i>	1991: 3-year, \$2-million grant	Grant to National Center for Family Literacy to establish intergenerational literacy programs in five cities under national grant competition.
<i>United Parcel Service Foundation</i>	Phase I-1989: \$2.25 million Phase II—1992: \$1.51 million	Grants to United Way of America, Association for Community Based Education, Literacy South, Manpower Demonstration Research Corp., U.S. Basics, and local literacy volunteer agencies for capacity building, training instructors and staff in CBOs, and developing new family literacy projects.

SOURCE: Office of Technology Assessment, 1993, based on reports from Business Council for Effective Literacy, U.S. Department of Education, Foundation and Corporate Grants Alert, and personal communications.

sources, and may have to adhere to the requirements of the several different agencies or organizations that administer these programs. Conversely, a Federal agency may channel funding to a State administrative institution, which in turn makes grants to several different types of local service providers.

Several different types of organizations administer local programs, including LEAs, CBOs, libraries, community colleges, regional administrative units, and others. Numerous entities also

provide the actual literacy services, among them schools, community colleges, businesses and industries, correctional facilities, and community and volunteer agencies. Federal administrative structures and funding streams seem to have a major influence on who administers funds and provides services at the local level: JTPA services tend to be provided by CBOs, library literacy services by libraries, and AEA services by LEAs. Because AEA is the largest and most influential program, education agencies are the predominant

Box 4-B—Ford's Skills Enhancement Program¹

"Doug" is typical of Ford Motor Company's 100,000 employees at over 80 sites. Fifty-two years old, he's worked at the Walton Hills stamping plant in northeast Ohio ever since dropping out of school after the 11th grade to go to work.² Although he's not far from retirement, Doug fears being laid off before then. "At my age, and with my seniority, where can I get a job with this pay?" (\$35,000). Doug is unnerved by the technological changes in the plant, but when the union encouraged members to attend classes, he hesitated. "I spent 3 weeks coming up to the door, trying to build the courage to come in. I wasn't sure if maybe people would find out I can't read so great and then it might look bad for me on my job."

Ford's Skills Enhancement program (SEP) was setup under a United Auto Workers-Ford collective-bargaining agreement in 1982. The program is funded under Ford's Education, Development and Training Program (EDTP) serving hourly employees nationwide. Company contributions, based on hours worked per employee, generate approximately \$40 million per year for the program.

Since EDTP activities are on the employees' own time and supported by monies that would otherwise go to worker wages, the union is careful to distinguish the EDTP programs from job training activities that are Ford's responsibility to provide to employees during working hours. The SEP is one of the several EDTP 'Avenues for Growth,' including: 1) tuition for personal development courses; 2) college tuition assistance and onsite classes; 3) retirement counseling; 4) financial planning; and 5) advisers for general life/education planning. SEP began in 1983 as basic skills enhancement with offerings in adult basic education, general equivalency diploma (GED), high school completion, and English as a second language. In 1987, the word 'basic' was dropped from the title because of the stigma it created; at the same time, more upper-level classes were added to improve the image of the program. Confidentiality is central to the program. "People see me in the lab and don't know if I'm learning basic fractions or math for statistical process control. There isn't the sense of being dumb if you are in there."

Central features of SEP include individual assessment, academic advising, open-entry/open-exit participation, competency-based instruction, and varied instructional techniques, using a considerable amount of computer-aided instruction. Having the program onsite reduces some of the negative associations with school that some workers have not shaken from their younger days, and makes it possible for workers to come in at breaks or before or after shifts. Using an integrated learning system, employees can pickup exactly where they left off, eliminating a lot of otherwise wasted time trying to get started. "It's totally pressure free. I can go back over and over the material until I get it. And besides, it's fun. You can't just pickup a history book and keep reading. You'd fall asleep. The computer keeps you interested, keeps you going."

Walton Hills is more heavily computer-oriented than other centers for another practical reason: space at the plant is at a premium. The 30- by 10-foot classroom has space for computers along three of the walls, a few cabinets, and two small tables that seat about six people each. There is very little group instruction; rather, students **walk in**, pick up their assignment sheets, and go to work on their own, using the teacher as a resource. Placement testing is available, but some learners, like Doug, are afraid of tests. "I'd rather start at the beginning and, if that's too easy, I can always move ahead."

Instruction is provided by the United Technologies Center (UTC), a self-supporting arm of nearby Cayahoga Community College. Walton Hills contracted with UTC because of its extensive resources and experience with computer-aided instruction. The UTC manager at Walton Hills is a full-time instructor and three other teachers, now retired, share two and one-half part-time positions in the program. The participants are typical of the 2,000 hourly employees at the plant, but there is a much higher participation rate among women than men.

Seven of Doug's fellow classmates have passed the GED, but, even though his teacher thinks he's ready, Doug's been hesitating. "I'm not sure-tests and I don't get along. It costs a lot more to take the test here at work, but I'm not sure about taking it at the high school. Just walking in the door there, the smells, everything about that place makes me feel bad all over again. But here at work I like being a student."

¹ This box is based on an OTA site visit and a case study by J.D. Eveland et al., Claremont Graduate School, "Case Studies of Technology Use in Adult Literacy Programs," OTA contractor report, June 1992, pp. 135-161. "Doug" is a fictitious name.

² About half of Ford's hourly employees have completed only high school; the other half is equally divided between those with some college and those who never finished high school.

administering agency and also the primary service deliverer, and schools the most common site of service delivery. Currently, 60 percent of the funding under the AEA State grant program goes to LEAs; the remainder goes to higher education institutions (22 percent), and a mix of intermediate agencies, other State agencies, and CBOs.¹⁷

Within these general trends, States have developed various delivery systems, taking greater or lesser advantage of the latitude that exists in most Federal laws for using a range of local service providers. For example, Massachusetts distributes AEA funds through a direct competitive grant process that puts CBOs and other nonschool providers on equal footing with LEAs; as a result, CBOs receive about one-half the AEA funding.¹⁸ Texas—a populous State covering a vast geographic area—has used a unique regional approach to deliver adult education services. Texas channels adult education funding from several sources (including the AEA, the State adult education program, State Legalization Impact Assistance Grants (SLIAG), and JOBS) through 60 regional cooperatives, headed by a locally designated fiscal agent. Most of the fiscal agents are independent school districts, but some are education service centers and public community colleges or universities. Each cooperative in turn arranges for services to be delivered through a network of public, private, and volunteer agencies and organizations in the local community. *9

As a result of recent amendments to the AEA encouraging funding for nonschool providers and new emphases like workplace literacy and family literacy, a shift may be occurring from LEA and school-based programs to nontraditional and voluntary literacy providers. CBOs are playing a larger role. A recent study showed that, overall, CBOs receive about two-thirds of their funds from government sources²⁰ and the remaining one-third from nongovernment sources.²¹ Many are affiliated with another organization—the public library, public school system, volunteer organization, or other institution—with whom they may share space, tutors or teachers, instructional materials or training, fund-raising efforts, or other arrangements for joint program operation.²²

Volunteer programs also play an important role, especially in reaching the most disadvantaged learners. The two major volunteer organizations, Literacy Volunteers of America (LVA) and the Laubach Literacy Action (LLA) are training more volunteer tutors and serving an increasing number of learners (see box 4-C). Together the two organizations serve over 200,000 learners in over 1,500 programs nationwide.²³ Some of their 150,000 volunteers work one-on-one with learners as private tutors, while others perform administrative assistance or assist teachers in ABE programs.²⁴ Both LVA and LLA support their efforts largely through sales of adult education

¹⁷ U.S. Department of Education, *Distribution of State-Administered Federal Education Funds: Thirteenth Annual Report* (Washington, DC: 1989), p. 54.

¹⁸ Robert Bickerton, director, Bureau of Adult Education, Massachusetts Department of Education, personal communication, January 1992.

¹⁹ Pavlos Roussos, Texas Education Agency program director for adult education, notes that the cooperative system is an effective approach because it reduces duplication, paperwork, and costs; improves accountability and facilitates coordination of programs at the local level; and enables the State to provide some level of service in most communities. Personal communication, January 1992.

²⁰ An average of 50 percent from Statesources; 30 percent from Federal sources, and 20 percent from local government sources. Association for Community Based Education, *National Directory of Community Based Adult Literacy Programs* (Washington DC: 1989), p. 71.

²¹ Averaging almost \$20,000, of which 26 percent comes from foundations, 18 percent from corporations, 17 percent from United Way, 12 percent from religious organizations, 6 percent from tuition, and 22 percent from miscellaneous other sources. *Ibid.*, p. 71.

²² *Ibid.*, p. 71.

²³ Ellen Tannenbaum and William Strang, *The Major National Adult Literacy Volunteer Organizations. Final Report, Volume 1: A Descriptive Review*, prepared for the U.S. Department of Education, (Rockville, MD: Westat, Inc., 1992), pp. 57-58.

²⁴ *Ibid.*, p. vii.

Box 4-C—Literacy Volunteer Organizations

Volunteers are the lifeblood of many adult literacy programs. Without their commitment of time, talent, and support for adult learners on a one-to-one basis, the Nation's adult literacy efforts would be greatly impoverished.¹ Most volunteers are affiliated with one of the two major volunteer agencies, Literacy Volunteers of America (LVA) and Laubach Literacy Action (LLA) (see table).

The organizations have much in common. Both organizations have been strong advocates for adult literacy legislation and support. In many communities, volunteer programs and adult education service providers work together informally. Adult basic education (ABE) programs often refer students who need one-on-one tutoring to LVA or LLA; they in turn often send their "graduating" students on to ABE, job training, and other programs.

Volunteer tutors are given 10 to 21 hours of training in literacy instruction by the LVA or LLA and work with learners twice a week for 1 to 2 hours per session. When progress is slow, as it generally is with learners whose literacy skills are limited, it is not uncommon for either the volunteer or the learner to drop out. Many volunteers burn out and do not stay even a year.² Considerable effort and resources are devoted to recruiting, preparing, tracking, coordinating, and retaining volunteers. Although recruitment has become more difficult with greater numbers of women working outside the home, increased commitments of two-career families, and greater childcare and eldercare responsibilities, both LLA and LVA continue to grow. Both programs continue to seek better ways to match tutors to learners, in order to improve the learning outcomes.

Volunteers and professional staff need supervision, assistance, and evaluation, but monitoring is limited and evaluations take time, money, and expertise. LVA and LLA are working to increase professionalism in local programs through more structured training, data collection, and recordkeeping. They are creating joint training programs for trainers of tutors and local literacy program managers. One new training emphasis is tutoring in small groups, especially for ESL instruction.

Technology use is limited by lack of funding, limited technological expertise, and concern that technology could reduce personal contact between learners and tutors. While the number of LVA affiliates using computers is growing, many continue to use them for program management only. Several computer database management systems have been developed to help programs track volunteers and students.

Both organizations recognize technology's potential to extend the range of the tutor's expertise, give learners practice time beyond tutorial sessions, and train tutors. Videotapes are increasingly used to enable tutors to study professional teaching techniques on their own time. Programs are experimenting with teleconferences to link local affiliates for training and discussion.³ Dedicated computer networks could expand connections between programs, as well as allow learners to share their writing or work in collaborative projects with learners across the room or across the country.⁴ One rural program plans to make portable laptop computers available to students at home.⁵ Handheld devices could be loaned to learners so they can extend their learning time to "downtime" at home, on public transportation, and during breaks on the job. Partnerships can extend the range of small programs; for example, an LVA affiliate joined with several other adult literacy agencies in their area to raise funds for a comprehensive integrated learning system. As a result of this collaboration, the LVA office gained visibility, and its expertise enabled it to become the central resource center for adult literacy in the region.⁶

¹ One study showed that 94 percent of local adult literacy programs used volunteers, as did 51 percent of federally funded State-administered adult education programs. U.S. Department of Education, National Center for Education Statistics, *Adult Literacy Programs: Services, Persons Served, and Volunteers*, OERI Bulletin (Washington DC: 1986).

² V.K. Lawson et al., *Literacy Volunteers of America, Syracuse, NY*, "Evaluation Study of Program Effectiveness," January 1990, pp. 4-5.

³ For example, the Correctional Education Association and the American Correctional Association, in cooperation with LVA and LLA, hosted several national interactive videoconferences on the subject of literacy programs for the incarcerated.

⁴ An adult literacy forum, operated by the New York State LVA office on the private telecommunications link, "America Online," links volunteer programs throughout the State and participating programs around the country.

⁵ Preston Miller, Literacy Volunteers of Franklin County, Malone, NY, personal communication, November 1992.

⁶ Gaye Tolman, executive director, Literacy Volunteers of Maricopa County, AZ, personal communication, November 1992.

Organization	Laubach Literacy Action (LLA)	Literacy Volunteers of America(LVA)
Established	1968 In Syracuse, New York by Frank C . . - h	1962 in Syracuse, New York, by Ruth Colvin
Size:		
Number of local affiliates	1,023 (45 States)	434 (41 States)
Number of volunteers	98,271	51,437
Number of learners	147,087	52,338
Characteristics		
Volunteers	Not available	80% female, 50%, are 45+ years of age, 75% white, 40% have attended or graduated from college, and 40% work full time.
Learners:	50% female, nearly all are over 18, two-thirds are literacy/basic reading and one-third are English as a second language (ESL) students.	50% female, most are under 45, 33% white, 21% black, 22% Hispanic, 40% report having a 9th- to 12th grade education, and 10% report having less than a 5th-grade education.
Budget and sources	\$8.7 million was received at the national level (\$7.5 million from the sale of publications and \$1.2 million in public or private support). Expenditures: of \$8.5 million in national expenses, \$5.6 million was spent on publications, \$1.4 million on LLA operations, and the remainder went to international literacy operations.	\$2.2 million was received at the national level; 40% from the sale of LVA publications and the remainder from public or private donations. Expenditures: of the \$1.9 million in national expenses, one-half went to programs, services, and conferences; \$662,000 was spent on publishing materials.
Philosophy and approach	Promotes local choices among instructional methods on learners' personal goals, including the Laubach Way to Reading series of skill books based on a phonetic approach.	Eclectic following the goals and interests of the individual student. Specific and uniform initial training of tutors is required
Instructional method	One-on-one tutoring and some small-group instruction in basic literacy skills and ESL	One-on-one tutoring and some small-group instruction in basic literacy skills and ESL
Training content and commitment	10 to 18 hours of training over 3 to 4 sessions, nominal materials fee (\$10), guidance and reference materials, in-service training.	18 to 21 hours of training over 4 to 6 sessions, nominal materials fee, and a 1-year commitment to tutor 21-hour sessions per week in service training, guidance and reference materials.
Retention and attrition		
Tutors	Information not available at this time.	About 50% stay a full year or more. 1988-89 data indicates that 32% left after less than 1 year.
Learners	Information under development	40% leave before 25 hours of instruction; about 25% of learners stay 50 or more hours.
<p>NOTE: The Laubach Literacy Action profile is based on 1990 data and the Literacy Volunteers of America, Inc. profile is based on 1SS1 data</p> <p>SOURCE: Ellen Tenenbaum and William Strand, Westat, Inc. "The Major National Adult Literacy Volunteer Organizations—Draft Final Report, Volume 1: A Descriptive Review," prepared for the U.S. Department of Education, Office of Policy and Planning, 1SS2.</p>		



Many literacy programs have recognized the need to “go where the learners are” to attract participants. This learning center is in a shopping mall.

publications created to assist tutors and local programs.

Volunteer organizations face several significant challenges. LVA and LLA serve learners with very limited literacy skills. These clients tend to be “. . . more needy, have more cognitive limitations, or have more traumatic learning histories that may have caused them to fail at ABE or shy away from the ABE system.”²⁵ Yet volunteers, who typically have 10 to 21 hours of preservice literacy training, are expected to teach these challenging students. While all programs seek to provide more training, they are often hindered by the lack of staff to develop or conduct training, resources to purchase commercially developed training packages, or money to send volunteers to conferences for continuing educa-

tion. Many also find it difficult to schedule training that meets the needs of volunteers who work and live throughout a large area.

Location of Services

Most programs²⁶ offer service at several sites; the most common sites are public high schools (70 percent) and adult learning centers (40 percent).²⁷ Approximately one-quarter of programs offer services at correctional facilities, workplaces, community colleges, and community centers. These AEA service delivery sites have shifted over the last decade, from locations at public high schools, vocational schools, libraries, and churches, toward a higher incidence of workplace sites, adult learning centers, commu-

~ Ibid., p. 19.

²⁶ “Programs” are organizations that receive Federal literacy grants through a State; many programs distribute funds to subunits or grantees. Thus, there are many more literacy program sites (24,325) than programs (2,819). Malcolm Young, project director, Development Associates, Inc., personal communication, February 1993. Development Associates, Inc., “National Evaluation of Adult Education Programs: Profiles of Service Providers,” First Interim Report to the U.S. Department of Education, March 1992.

²⁷ An adult learning center refers to a building or section of a building used exclusively for adult education. Often these buildings are public schools no longer used for K-12 classes and converted for use as adult education facilities. Young, op. cit., footnote 26.

nity colleges, and correctional facilities²⁸ (see figure 4-2). (See box 4-D.)

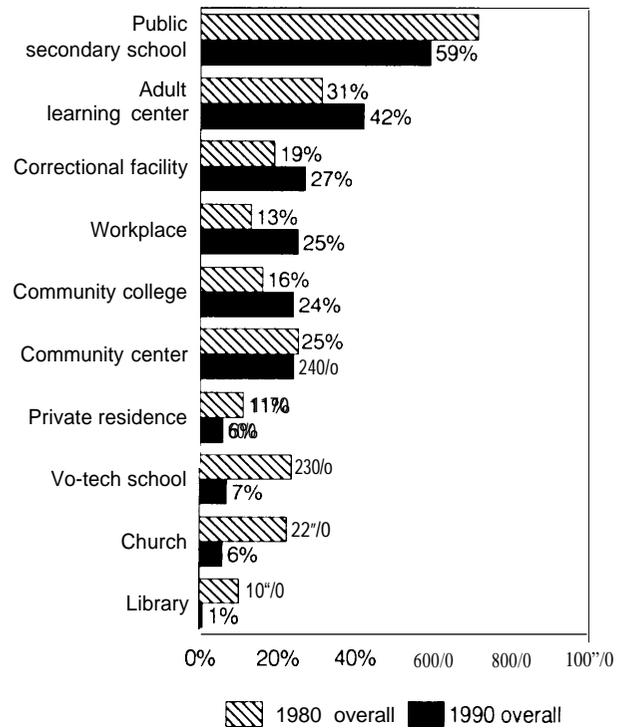
Who Is Being Served?

Adult learners may be workers, job seekers, welfare recipients, immigrants, inmates, high school dropouts, or any others whose past skills do not match their current needs. They come from all ethnic and racial groups. As described further in chapter 5, targeted Federal and State programs have focused attention on new groups of learners served at new sites: e.g., welfare recipients in JOBS and JTPA programs, inmates in Federal prisons, the homeless in shelters and community centers, and workers at their job sites. For some of these learners—in particular, welfare recipients and incarcerated adults—participation may be mandated rather than voluntary. While the providers serving these new groups may remain the same, these new emphases affect the type of programs offered.

No count has been taken of the total number of learners served by combined Federal, State, local, and private sector efforts. Participant counts are confounded by the fact that many learners span several categories or are targeted by several program funding sources: e.g., a welfare recipient may be both a high school dropout and a recent immigrant; an incarcerated youth may also receive basic skills in a job training program. In addition, the same adult may enter and leave one or more programs several times over a period of years.

The most complete data have been collected through the AEA. These data suggest that the 2,800 programs supported by the AEA served a total of 3,565,877 clients in 1990.²⁹ Data on numbers of clients served is subject to debate, however. For Federal reporting purposes, clients

Figure 4-2—Percent of Adult Literacy Programs Using Various Locations, 1980 and 1990



NOTE: Totals exceed 100 percent because many programs use multiple sites to deliver services.

SOURCE: Development Associates, Inc., "National Evaluation of Adult Education Programs, Profiles of Service Providers," First Interim Report for the U.S. Department of Education, March 1992.

served are those who have completed 12 hours or more in an AEA-funded program; however, for State reporting purposes, many local programs count all who go through the intake process (testing and placement into appropriate classes) whether or not the learner attends for the minimum of 12 hours of instruction.

A recent study³⁰ indicates that between 15 and 20 percent of all clients who go through the intake process never actually receive any instruction.

²⁸ Development Associates, Inc., *op. cit.*, footnote 26, P. 13.

²⁹ U.S. Department of Education, Division Of Adult Education and Literacy, Office of Vocational and Adult Education, "Adult Education Program Facts—FY 1990," fact sheet, January 1992.

³⁰ Development Associates, Inc., "National Evaluation of Adult Education Programs: Second Interim Report, Profiles of Client Characteristics," draft report, 1993.

Box 4-D—New York Public Library Centers for Reading and Writing

"You know you go through life so long . . . bluffing," explains Winston,¹ a 60-year-old maintenance worker who has become a regular at the Mott Haven Public Library's Center for Reading and Writing. "The average person around you don't know that you don't know [how to read well], but you've got enough street sense to bluff your way practically through anything." Last year, Winston finally gathered the courage to do something more for himself. "One day you decide, 'well, I'm an older man now. . . . I really don't have anything to bluff anymore for.' " Six months later, Winston says he's proud of meeting his goals. "I don't know if anybody else can see the progress," he states, "but I can. I can see my progress."

The Mott Haven Public Library is one of the Centers for Reading and Writing in the New York City Public Library system. Adults from many walks of life come there to spend afternoons, evenings, and Saturdays in literacy tutorials and classes. In groups of two to five, they use computer and video technologies to engage in collaborative reading exercises, share learning strategies, discuss current events, keep personal journals, and document life experiences. While practicing skills in the context of materials based around their daily activities, learners help each other work through their personal learning challenges.

For many participants, initial interest in the program was sparked by their desire to learn to use computers. They see technology around them in their everyday lives, but do not understand it, according to the Centers' learning technologies specialist. "They want to be a part of the Computer Age," she notes.²

At Mott Haven, computers and other technologies are an integral part of improving literacy. For example, learners use word processors to write and publish personal journals and stories. Through their writings, they communicate with peers at other library centers. They are encouraged to focus on key ideas, organize their writing, and think of effective ways to communicate with their audience. The reading and language skills required for writing are taught and practiced as needed. When learners leave the program, they often have a finished product—a portfolio of work to show friends, family, and potential employers.

Small group tutorials and workshops can be expensive, but the Library Centers have managed to turn small budgets into a goldmine of learning resources. In 1985, substantial funding came from a windfall from maturing bonds issued by the New York Municipal Assistance Corporation in the 1970s. A grant for \$1.08 million was used to "beef up" the program. In each subsequent year, the city has budgeted about \$75,000 for printed materials and \$20,000 for software and video. The centers have stretched their dollars to enroll about 1,400 students every year: approximately 600 in the reading and writing classes and Saturday writing workshops, and 800 in tutorials. Some also participate in a federally funded training program. For a per-student expenditure of about \$200, the program has dramatically changed the lives of participants, according to teachers, volunteer tutors, and learners themselves.

Public libraries have always played a pivotal role in self-directed learning. Like Mott Haven, many libraries want to provide access to information and learning with the new technologies. However, libraries' ability to continue to provide the services that the public expects is dependent on more costly resources—hardware as well as software—at a time when many local public budgets are shrinking. Serious budget cutbacks threaten expansion or even continued use of technology for New York's Library Reading and Writing Centers. The 12 Macintosh computers in 8 sites are falling into disrepair: 2 are broken with no money to fix them. The software, used by hundreds of students, is dated. Funding for technical assistance and equipment maintenance is in short supply. The lack of funds for dedicated phone lines has curtailed full implementation of an experiment in online communications between students and teachers that was piloted in two of the centers. Plans to purchase a scanner to input pictures, drawings, and text into the students' journals may never come to pass if current funding trends continue.

¹ "Winston" is a fictional name. OTA site visit, Nov. 19, 1991.

² Bryna Diamond, technologies specialist, New York Public Library Centers for Reading and Writing, personal communication, 1992.

Furthermore, after 40 weeks, only about 12.5 percent of those who actually begin attending are still active. When these adjustments are considered, the number of those actually served to any significant degree in AEA programs in fiscal year 1990 may be as low as 2.2 million. Participant counts for literacy activities reported by other Federal agencies may also be included in this total, since many individuals counted under other program categories actually receive literacy services through AEA programs. For example, in 1990, 313,671 adults in institutionalized settings (correctional institutions, rehabilitation facilities, hospitals, and mental institutions) received full-time adult education and literacy instruction through Federal and State funding.³¹ DOL analysts estimate that 170,000 individuals received some basic skills instruction through DOL programs in 1991.³² The HHS JOBS program reported 118,621 participants in education programs.³³ And 18,000 homeless individuals participated in basic educational services under the Stewart B. McKinney Homeless Assistance Act from summer 1988 to 1989.³⁴ Many of these learners are counted in the AEA totals.

An analysis of learners by program sponsor shows that different types of sponsors tend to reach different adult populations. For example,

data on entrants to programs supported under the AEA for the 1-year period ending April 1992 indicate that 42 percent of the learners were white, with the remaining 57 percent minorities.³⁵ CBOs serve a higher subset of minorities; nearly three-quarters of participants are minorities.³⁶ Gender distribution suggests that more women than men are served in both AEA-funded programs³⁷ and CBOs,³⁸ but volunteer programs serve men and women in equal numbers.³⁹

What Kinds of Instruction Do They Receive?

Although adult literacy programs are often commonly referred to as 'adult basic education, this is a misnomer. Several types and levels of instruction are offered in these programs. Program levels generally correspond to elementary and secondary school grade levels; learners are placed into classes based on their literacy skills as measured on such tests as the Test of Adult Basic Education or the Adult Basic Learning Examination. These standardized norm-referenced tests provide norms for adults, and are used to interpret scores in grade levels (based on K-12 school norms) and in relation to test performance of other

³¹ Funding for programs for adults in institutionalized settings was \$24 million in 1990. U.S. Department of Education, *ALL Points Bulletin*, vol. 4, No. 1, February 1992, p. 1.

³² Actual figures have not been compiled. This estimate is taken from Maria Schwarz, "Television and Adult Literacy: Potential for Access to Learning for an Unserved Population," report prepared for The Ford Foundation, June 1992, p. 6.

³³ Educational activities are those "... directed at attaining a high school diploma or its equivalent, another basic education program, basic and remedial education or education in English proficiency." U.S. Department of Health and Human Services, Family Support Administration, "Average Monthly Number of JOBS Participants by Component, FY 1991," instructions for completing Form FSA-104, 1990, p. 3.

³⁴ U.S. Department of Education, *Education for Homeless Adults: The First Year* (Washington, DC: December 1990), p. 1.

³⁵ Racial and ethnic identity of learners was: white, 42 percent; Hispanic, 31 percent; black, 15 percent; Asian or Pacific Islander, 9 percent; and Native American or Alaskan Native, 2 percent. Mark Morgan, Development Associates, Inc., personal communication February 1993.

^{36A} 1989 survey of ~@ reported that ethnic and racial identity of learners was: Hispanic, 30 percent; white, 26 percent; black, 26 percent; Asian, 13 percent; Native American, 3 percent; and other racial and ethnic groups, 4 percent. (The figure for whites was not given, but extrapolated from the other percentages listed.) Association for Community Based Education, op. cit., footnote 20, p. 69.

³⁷ Forty-two percent of participants were male; 58 percent, female. Morgan, op. cit., footnote 35.

³⁸ In the Association for Community Based Education survey, 56 percent of participants were female; 44 percent male. Association for Community Based Education, op. cit., footnote 20, p. 69.

^{39A} 1991 LVA learner profile lists 49.2 percent female and 50.8 percent male; LLA data for 1990 report learners 50 percent male and 50 percent female.

adults.⁴⁰ Critics of this approach suggest that adults' learning ability is more complex than statistical grade-level measures reflected in standardized test scores.

The most common types of adult education include:

- *Adult Basic Education*: Sometimes referred to as “below the 8th-grade level,”⁴¹ ABE is typically divided into three levels: level 1 refers to students functioning at reading grade levels 0 to 3; level 2 for those at the 4th-to 6th-reading grade levels, and level 3 for the 6th- to 8th-reading grade level. Since most ABE instruction is roughly equivalent to the 4th-through 8th-grade levels, and the characteristics of programs serving level 1 students are different than those serving the level 2 and 3 students, OTA refers separately to level 1 as *Beginning Literacy*.

- *Adult Secondary Education*: ASE refers to instruction for adults whose skills are at the secondary (high school) level. The focus is generally on attaining a high school diploma either by completing course work or passing the GED examination,⁴²

*English as a Second Language; ESL instruction teaches English (reading, writing, and speaking) to non-English speakers.*⁴³ As will be discussed below, ESL is complicated by the fact that it includes learners with a range of literacy levels in their own language.

A majority (60 percent) of federally supported adult education programs provide at least some instruction of all three types-ABE, ASE, and ESL. The percentage of programs providing ABE (92.3 percent) and ASE (85 percent) is higher than those offering ESL (68.9 percent). Nevertheless, ESL students makeup the largest group of clients (35.2 percent of clients are in ESL programs, versus 35 percent in ABE and 29.8 percent in ASE),⁴⁴ suggesting that ESL programs are those with the largest numbers of students, or the ones most likely to have waiting lists.

A range of learning environments is used in adult literacy instruction. As shown in figure 4-3, individual instruction and small group instruction are the most common. Computer-aided instruction or learning laboratories are used in only 14 percent of federally supported ABE programs,⁴⁵

Beginning Literacy

A sizable number of adults who seek literacy assistance function below the 4th-grade level. While some LEA programs serve learners at this level, volunteer programs and community-based programs traditionally concentrate their efforts on this group.⁴⁶

Beginning literacy programs typically provide one-on-one private instruction by volunteer tutors who meet with learners 2 to 4 hours a week. Materials are developed locally or provided by

⁴⁰ Thomas G. Sticht, Applied Behavioral & Cognitive Sciences, Inc., “**TMing** and Assessment in Adult Basic **Education** and English as a Second Language Programs,” report for the U.S. Department of Education, January 1990, p. 6.

⁴¹ **Development Associates**, op. cit., footnote 26, **glossary**, P. **xi**.

⁴² **Ibid.**, **glossary**, p. **xi**.

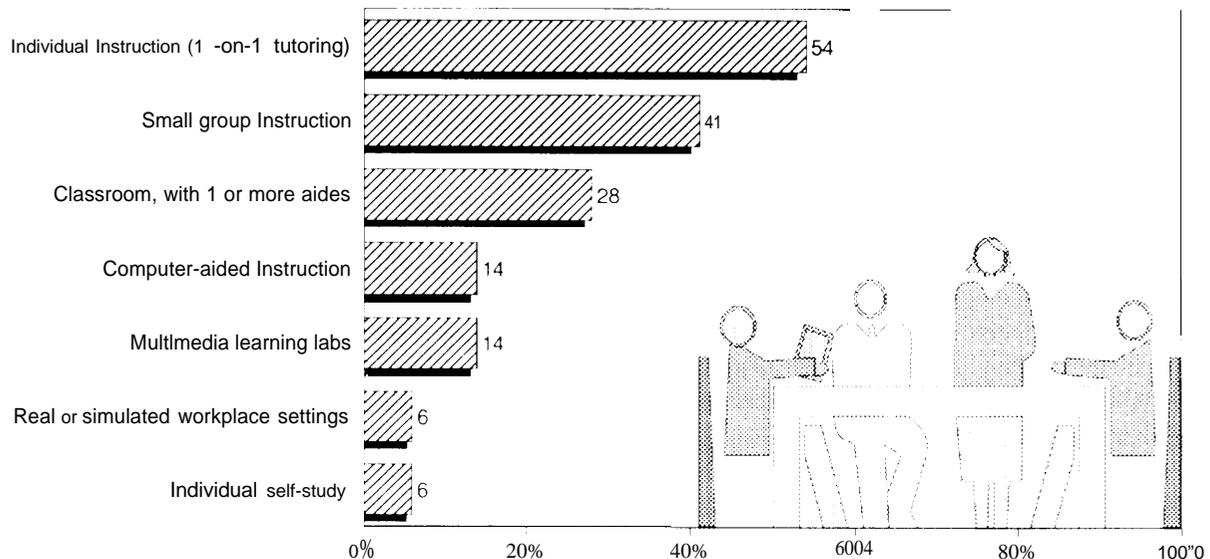
⁴³ **Ibid.**, **glossary**, p. **xi**.

⁴⁴ **Ibid.**, pp. 14-15,

⁴⁵ **Today, the total number of computers in elementary and secondary school instruction is over 3 million, with over 90 percent** Of all elementary and secondary schools using computers for instruction. Although the total **number** of computers used in adult basic education is **unknown**, it is clearly far behind comparable use for K-12 education.

⁴⁶ **One study of CBOs noted that 57 percent of students enter with reading skills at less than the 5th-grade level, and another 27 percent** with skills at the 5th-or 6th-grade level. **Association for Community Based Education**, op. cit., footnote 20, p. 69.

Figure 4-3—Learning Environments Used in Adult Education Programs



NOTE: Scale represents percentage of programs using specified learning environment for approximately one-third of instructional time or more. Totals exceed 100 percent because many programs use more than one type of learning environment.

SOURCE: Development Associates, Inc., "National Evaluation of Adult Education Programs, Profiles of Service Providers," First Interim Report to the U.S. Department of Education, March 1992

literacy volunteer organizations or commercial publishers,⁴⁷ The Laubach Way to Reading series, for example, takes students through a series of levels based on a phonics approach. These levels correspond, in general, with levels measured on the Test of Adult Basic Education. Tutors supplement these materials with audiotapes, flash cards, word games, and beginning reading exercises. LLA encourages tutors to adopt flexible approaches in using their materials.

LVA programs use a "whole language" approach, focusing on material tied to a learner's goals and interests, or "language experience" where learners dictate or write paragraphs based

on their lives and interests, using these words as the basis for developing a vocabulary. Decoding skills (learning symbol and sound relationships and word patterns) are taught in the context of printed materials meaningful to the learner.

Computer use in beginning literacy programs is limited. Although the number of adult literacy software titles is quite extensive, there is very little software aimed at beginning readers. Few software applications use audio, an essential feature for nonreaders.⁴⁸ Moreover, most early reading programs are geared explicitly to children and include features that may "turn off many adults."⁴⁹

⁴⁷ The Association for Community Based Education study showed 61 percent of CBOs use materials developed by their own program and 46 percent use material developed by other literacy programs. Furthermore, 25 percent use other materials such as newspapers, letters, and Life-skills materials. *Ibid.*, p. 69.

⁴⁸ Only 23 of all ABE level 1 products (9.3 percent) take advantage of human speech. Jay Sivin-Kachala and Ellen Bialo, *Interactive Educational Systems Design, Inc.*, "Software for Adult Literacy," OTA contractor report, June 1992, p. 6.

⁴⁹ *Ibid.*, p. 6.

Adult Basic Education

ABE programs focus on learners who have some reading skills. Instructors are certified in elementary and secondary education and generally teach part time. Students typically participate in small classes several hours a week. Volunteer tutors often assist as classroom aides or provide supplemental personal tutoring to accompany ABE instruction. Courseware includes textbooks developed by commercial publishers, LVA or LLA materials, or materials created by teachers to fit the needs and interests of their students. A small but growing number of ABE programs use computer software, often networked integrated learning systems. Allowing a student to move through a range of instructional content and levels. ABE programs use a vast range of software titles, some created for children and others created especially for adult learners.⁵⁰

Adult Secondary Education Programs: High School Completion and the GED

Some people believe that the most important goal for adult literacy students at all levels is to attain high school certification in one form or another.⁵¹ A high school degree has become a necessary passport to many jobs, as well as to vocational and higher education programs. The 1970 amendments to the AEA added adult secondary education as a part of the AEA grants to States. Although the AEA has traditionally emphasized programs for adults with a 5th-grade equivalency level or lower, State ABE programs have tried to get the most ‘bang for the buck’ by concentrating funds on the learners who were

easiest to reach and serve—those with a base of skills to build on in seeking the more easily attainable GED or high school diploma. Therefore, although the act stipulates that not more than 20 percent of each State’s basic grant maybe used for programs of equivalency for a certificate of graduation from secondary school,⁵² States continue to emphasize ASE programs with their own money.

While enrollment in ABE remained relatively constant from 1980 to 1990, ASE growth was more dramatic. In 1990, ASE students numbered 1.1 million, more than 30 percent of the total 3.6 million adults enrolled in adult education,⁵³ and 103 percent higher than the comparable percentage of a decade earlier.⁵⁴

There are three types of ASE programs: high school completion programs, the external diploma program, and preparation for the GED examination. Of the ASE students in fiscal year 1990 programs funded by the AEA, 206,952 passed the GED and another 67,000 obtained adult high school diplomas.⁵⁵

High school completion programs are most like a traditional high school program and are designed and offered through local school systems. The requirements are based on the number of Carnegie Units required for graduation in the particular State where the learner resides. Classes are usually offered through the local school districts, in schools and after hours, and must be taught by certified teachers. Students must attend for the prescribed number of hours of instruction and testing is often the measure of satisfactory completion.

⁵⁰ Ibid., p. 6.

⁵¹ Hal Beder, *Adult Literacy: Issues for Policy and Practice* (Melbourne, FL: Krieger Publishing Co., 1991), p. 114.

⁵² Section 322 of the AEA.

⁵³ U.S. Department of Education, op. cit., footnote 29, “State Administered Adult Education Program 1990 Enrollment,” table.

⁵⁴ U.S. Department of Education, *A.L.L. Points Bulletin*, vol. 4, No. 2, April 1992, p. 1. This number barely touches the total of potential clients—39 million U.S. adults ages 25 or older who lack a high school diploma. In addition, there are about 4 million people ages 16 to 24 who had not graduated from high school and were not enrolled in 1991 in any school. U.S. Department of Education, National Center for Education Statistics, *Dropout Rates in the United States: 1991* (Washington, DC: U.S. Government Printing Office, September 1992)

⁵⁵ U.S. Department of Education, op. cit., footnote 29, p. 2.

The External Diploma Program is administered by the American Council on Education, the professional organization also responsible for the GED. External diplomas are granted based on a combination of demonstrated capabilities including oral and written communication, computation, and the analysis and manipulation of data in context. Assessment does not include standardized paper-and-pencil tests, but rather is based on performance in simulations that parallel situations found on the job or in personal life. This is the smallest of the high school credentialing programs; in 1990, 3,000 adults received external diplomas from local schools in 10 States.⁵⁶

The *GED Certificate Program* is the most common vehicle for ASE students to obtain a high school diploma. GED content corresponds to what graduating high school seniors are expected to know in the areas of writing, social studies, science, literature, the arts, and mathematics.⁵⁷ The minimum score required for passing each of the five subtests is set by each State. Most participants in GED preparation courses are targeted at the 7th- to 9th-grade reading level, although participants range from the 6th- to the 11th-grade reading level. GED preparation classes focus on language and computational skills, but also cover test-taking skills and other subjects. Because the content of these classes is test driven, classes tend to be structured and use commercially published materials. Programs often use computers to provide additional independent practice for GED students. As students may be weak in one area and strong in others, software



Houston READ Commission

More than 750,000 learners took the GED examination in 1991. Odelia Cantu celebrates her success at a graduation ceremony.

programs offer students an opportunity to concentrate on a specific area of the test, and practice and move at their own speed until mastery is achieved.⁵⁸

Over 800,000 students took the GED tests in 1991, a 6-percent increase from the previous year; the percent passing also increased, from 70 to 72 percent. There was also an 8-percent rise in the number taking the Spanish-language GED tests.⁵⁹ Not all adults working toward the GED certificate are enrolled in GED preparation classes. One of the largest GED preparation programs in the country is offered over public television. GED on TV, sponsored by Kentucky Educational Television (KET), offers assistance and encouragement to students both in classes and at home as they prepare for the examination. An estimated 1.2 million students in Kentucky and throughout the Nation have passed the GED examination after viewing the KET/GED series.⁶⁰

⁵⁶ U.S. Department of Education, *ALL Points Bulletin*, op. cit., footnote 54, p. 3.

⁵⁷ Janet Baldwin, 'Schooling, Study, and Academic Goals: The Education of GED Candidates,' *GED Profiles: Adults in Transition*, No. 2, January 1991, p. 5.

⁵⁸ A review of adult literacy software found that the smallest percentage (19.3 percent) of titles are suitable for the GED submarket. However, unlike many of those in the larger category of ABE (81.8 percent of all adult literacy titles), GED preparation software is popular among students and programs because these products are written for adults and not children. See Sivin-Kachala and Bialo, op. cit., footnote 48, p. 6.

⁵⁹ GED Testing Service of the American Council on Education, *1991 Statistical Report* (Washington, DC:1992), p. 2.

⁶⁰ KET, *The Kentucky Network, 1991 Annual Report* (Lexington, KY: n.d.), p. 5. See also ch. 7.

English as a Second Language

ESL is literacy's coat of many colors—a program that is offered in the workplace, community colleges, community programs, prisons, and LEAs. The learners have one thing in common—a need to learn how to speak, understand, read, and write in English. Beyond this, they range across the spectrum, from refugees⁶¹ and recent immigrants⁶² to long-term residents, including many non-English speakers who are U.S. citizens. ESL students span a range of languages, levels of English proficiency, and literacy in the native language. It can be a great challenge serving this diverse and complex audience of learners (see chapter 3, box 3-A). Computer software for ESL instruction offers great promise for individualizing instruction, especially when speech and audio are included to help students develop their English skills. However, ESL software for adults is limited despite great demand. Better instructional approaches and materials that provide bilingual assists to students across the curriculum, especially in writing skills, mathematics, vocational skills, and GED preparation, are needed.⁶³

ESL accounts for the fastest growing and largest portion of the adult literacy program in the United States. ESL enrollment in Federal AEA programs nearly tripled between 1980 and 1989, when it exceeded 1 million students; currently

one in every three students enrolled in adult education participates in ESL instruction.⁶⁴ It is estimated that, by the year 2000, 17.4 million limited-English-proficient (LEP) adults will be living in the United States, and immigrants will make up 29 percent of the new entrants into the labor force between now and then.⁶⁵ Many programs have waiting lists as long as several years, and could easily fill all their ABE slots with ESL students.

Two pieces of Federal legislation have been influential in creating this ESL demand. The Immigration Reform and Control Act provided amnesty for millions of illegal immigrants already living in the United States, and required that all applicants demonstrate minimal proficiency in English and U.S. history/government by taking a test or providing a certificate of enrollment in approved courses.⁶⁶ The second piece of legislation was the Immigration Act of 1990, which created a demand for ESL in adult literacy by allowing greater immigration.⁶⁷ ESL programs for adults are also supported by the AEA and several other Federal literacy programs (see chapter 5). Many ESL programs are offered in the workplace, often tied to vocational skill development, for those already employed but constrained in their advancement by limited English skills.

⁶¹ A "refugee" is defined as a person who is outside his or her native country and is unable or unwilling to return for fear of persecution on the basis of race, religion, nationality, membership in a particular social group, or political opinion. 8 U.S.C. 1101 (a) (42).

⁶² An "immigrant" is defined as any alien (including refugees) except those that belong to certain specified classes, such as foreign government officials, tourists, or students. 8 U.S.C. 1101 (a) (15).

⁶³ Sivin-Kachala and Bialo, *op. cit.*, footnote 48, p. 40.

⁶⁴ U.S. Department of Education, Office of Vocational and Adult Education, *Teaching Adults With Limited English Skills: Progress and Challenges* (Washington, DC: 1991), p. 7. ESL instruction is more intensive than other AEA-funded programs; ESL clients average 5.9 hours of instruction per week versus 4.4 hours for ABE and 4.2 hours for ASE. Morgan, *op. cit.*, footnote 35.

⁶⁵ U.S. Department of Education, *op. cit.*, footnote 64, p. 10.

⁶⁶ There were 3 million applicants for legalization as a result of these amnesty provisions; about 55 percent live in California. Comprehensive Adult Student Assessment System, "A Survey of Newly Legalized Persons in California," report prepared for the California Health and Welfare Agency, 1989, pp. 1-2.

⁶⁷ Except for several classes of immigrants, from 1980 to 1990 the number of immigrants admitted to the United States was limited to 270,000 per year, with a maximum of 20,000 from any one country. 8 U.S.C. 1151 (a), 1152 (a). The 1990 act provided for an increase in total immigration per year, stinting with approximately 700,000 per year from fiscal years 1992-94 and leveling off at an annual total of at least 675,000 immigrants beginning fiscal year 1995. Refugees are not included in this total. Joyce Violet and Larry Eig, "Immigration Act of 1990 (P.L. 101-649)," CRS Report for Congress, Dec. 14, 1990, p. 2.

Who Are the Teachers?

The personnel who work in adult literacy programs are overwhelmingly volunteer rather than paid, and part time rather than full time. The ratio of volunteers to full-time professional teachers in federally supported AEA programs nationwide is almost 8-to-1⁶⁸ and only 1 in 4 paid staff members is full time. In community-based and volunteer programs, the ratio of volunteers to paid staff, and part-time to full-time instructors, is higher.

Most paid staff were, or still are, K- 12 teachers. Slightly less than one-fifth of full-time instructors in AEA programs are certified in adult education; 13 percent of full-time instructors hold no teacher certification.⁶⁹ Furthermore, only 7 percent of part-time instructors in AEA programs are certified in adult education but 81 percent of part-time staff earned other types of teaching certificates.⁷⁰ Most States do not require special certification in adult education for those who teach in literacy programs; some States have no certification requirements of any kind (see chapter 6, figure 6-3). Forty-five percent of federally funded AEA programs do not have a single staff person certified in adult education, a single full-time instructor or administrator, or a directed inservice training effort.⁷¹

NEW EMPHASES IN LITERACY PROGRAMS

The delivery of services is changing as the definition of literacy expands, public awareness grows, new players enter the field, and new partnerships form. While ABE, ASE, and ESL instruction remain the “meat and potatoes” of adult literacy programs, several new types of

literacy programs are growing in importance. Chief among these are workplace literacy and family literacy programs. These programs recognize that literacy needs are changing as the demands of the workplace and demands placed on families increase. A third type of program increasing in frequency is literacy for incarcerated adults.

Workplace Literacy

Literacy requirements change as employment demands change. In the past, when manufacturing, mining, farming, and forestry jobs formed the traditional base of the workforce, those who lacked a high school diploma could get by because of the jobs they had and the supervision they received. But workers’ necessary skills are changing as the economy shifts from manufacturing to a service-based workforce.⁷² Furthermore, new skills are needed as industries purchase new technologies and adopt statistical quality control, team-based work, and participatory management processes. A worker in a pulp and paper mill where modernization has changed his job sums up his anxiety:

With computerization I am further away from my job than I have ever been before. I used to listen to the sounds the boiler makes and know just how it was running. I could look at the fire in the furnace and tell by its color how it was burning. I knew what kinds of adjustment were needed by the shades of color I saw. . . there were smells that told you different things about how it was running. I feel uncomfortable being away from those sights and smells. Now I have only numbers

⁶⁸ Development Associates, Inc., op. cit., footnote 26, p. 18.

⁶⁹ Ibid., p. 77.

⁷⁰ Ibid., p. 77.

⁷¹ National Evaluation of Adult Education Programs, Bulletin No. 3, December 1991, p. 5.

⁷² “One telling measure of the change ahead is that the trade and service sectors will add more jobs between 1985 and the year 2000 than now exist in all U.S. manufacturing.” William B. Johnston and Arnold H. Packer, *Workforce 2000: Work and Workers for the 21st Century* (Indianapolis, IN: Hudson Institute, 1987), p. 59.

to go by. I am scared of that boiler, and I feel that I should be closer to it in order to control it.⁷³

As a host of studies have pointed out, the United States is unlikely to remain an economic power without improving the basic skills of its workers.⁷⁴ Companies may not realize the extent of their employees' basic skills deficiencies until they attempt to make a major change that requires training, then find that their employees lack the basic skills to read the texts or understand the computations required.

Schools have an important role to play, but with 75 percent of the workers for the year 2000 already out of school and on the job, the immediate task is up to the employer. Only a few employers have taken up this challenge; today only 1 in 10 employees receives formal training of any kind from his or her employer, and this training is typically focused on executives, managers, and highly skilled technicians, not front-line workers.⁷⁵ Helping employees acquire basic skills is not a priority with most companies.⁷⁶ The problem is particularly acute for small companies (under 100 employees), which together employ 35 percent of the total U.S. workforce.⁷⁷ Despite the fact that they are more likely to employ workers with less education, small companies do

not have the expertise to offer training in-house, the resources to contract for training, or the numbers of employees to make a focused effort profitable.⁷⁸

Workplace literacy programs are one response to the need for improved worker skills. These programs upgrade the job-related basic skills of employees or prepare job seekers for work in specific industries. Usually they are offered through partnerships of business, labor, unions, schools, private industry councils, and government agencies; partnerships are especially attractive for small businesses unable to mount programs alone⁷⁹ (see box 4-E). Workplace literacy programs, often conducted at or near job sites using work-related tasks and materials, can improve morale, customer satisfaction, error rates, productivity, and profits.⁸⁰

States have been important sources of support for workplace literacy, using economic development funds or other State funds, or Federal AEA basic grants. The Federal Government also specifically encourages employer-sponsored workforce literacy programs through the National Workplace Literacy Partnerships Program of the U.S. Department of Education. An evaluation of this program concluded that these projects have maintained high student retention rates—higher

⁷³ s. Zuboff, *In t&@ of the Smart Machine: The Future of Work and Power* (New York NY: Basic BOO@ 1988), p. 63.

⁷⁴ National Center for Adult Literacy, *Adult Learning and Work: A Focus on Incentives*, conference papers (Philadelphia, PA: Nov. 4-5, 1991); Johnston and Packer, op. cit., footnote 72; U.S. Department of Labor and U.S. Department of Education, *The Bottom Line: Basic Skills in the Workplace* (Washington, DC: U.S. Department of Labor, 1988); National Center on Education and the Economy, *America's Choice: High Skills or Low Wages!* (Rochester, NY: 1990); Office of Technology Assessment, op. cit., footnote 16; and Anthony Carnevale, *America and the New Economy* (Alexandria, VA: American Society for Training and Development, 1991).

⁷⁵ Anthony Carnevale and Leiber Gainer, American Society for Training and Development, "The Learning Enterprise," prepared for the U.S. Department of Labor, February 1989, p. 48.

⁷⁶ Several studies of employer involvement in workplace basic literacy skills programs showed a range of from 3 to 26 percent of respondents saying they offered remedial education for their employees. Office of Technology Assessment, op. cit., footnote 16, p. 168.

⁷⁷ The Small Business Administration defines "small businesses" as under 500 employees. Using this figure, there are over 5 million small businesses in the United States; they employ 57 percent of the workforce. Forrest P. Chismar, *The Missing Link: Workplace Education in Small Business* (Washington, DC: Southport Institute for Policy Analysis, 1992), p. 1.

⁷⁸ Laurie J. Bassi, *Smart Workers, Smart Work: A Survey of Small Businesses on Workplace Education and the Reorganization of Work* (Washington, DC: The Southport Institute for Policy Analysis, 1992).

⁷⁹ A survey of 107 workplace literacy programs revealed that 92 percent involved 2 Or more partners. Larry Mikulecky, "Workplace Literacy programs: Organization and Incentives," in National Center for Adult Literacy, op. cit., footnote 74, p. 7.

so Bassi, op. cit., footnote 78, p. 52.

than any other type of adult education programs.⁸¹ The program's success has been attributed to a number of factors, including the close involvement of public and private partners, convenient worksite locations, work-related content, incentives such as work-release time, and supportive, nonstigmatizing environments.⁸² Many of these features are shared by privately sponsored workforce literacy programs.

Increasingly, unions are negotiating workplace education into labor contracts. Unions encourage voluntary programs with open-entry/open-exit approaches to increase worker flexibility and choice. Programs are rarely labeled "basic skills" because of the stigma attached; instead, most attempt to offer courses across a range of levels so that training is seen as important to all employees. Confidentiality is often tightly maintained, as employees fear that if their educational deficiencies are made public, they may be used against them by management. For example, in one program involving a coalition of local industries and educational providers, a difficult issue arose when the coalition offered GED courses to employees, many of whom, it was discovered, had lied on their original application forms about having a high school diploma. Ordinarily, this would be grounds for dismissal, but to overcome this dilemma, the employer offered an "amnesty" to those who agreed to take the GED.⁸³

Technology in Workplace Literacy Programs

Several of the challenges faced by workplace literacy programs are particularly amenable to technological solutions. Computers are often selected for these programs because they offer self-pacing and confidential records of student progress. One employee need not be aware of what another employee is studying on the computer. Furthermore, when computer laboratories are a central component, a teacher need not



Workplace literacy and training programs are growing in importance as workers at all levels increasingly must use technology, analyze information, and work in teams.

always be present to enable an employee to study. During breaks or between shifts, students can "pick up where they left off," especially when integrated learning systems with recordkeeping capabilities allow easy entrance to the instructional system. Finally, the very use of computers attracts many students. Many enter programs that use computers with the assumption that technology training will help them keep current jobs or enable them to find other employment if necessary.

Research suggests that the most successful way of teaching adults literacy skills is to put the material into a meaningful context. Most workplace literacy programs conduct a job-site analysis to link literacy skills to actual on-the-job tasks. Typically, a local community college or school district conducts a learner and workplace analysis as a basis for the overall program. Curriculum materials incorporate worksite vo-

⁸¹ U.S. Department of Education, *Workplace Literacy: Reshaping the American Workforce* (Washington, DC: May 1992), p. 9.

⁸² Pelavin Associates, Inc., "A Review of the National Workplace Literacy Program," unpublished report, 1990, pp. 32-33.

⁸³ OTA site visit, Tulsa Training Coalition, Inc., Tulsa, OK, July 23, 1992.

Box 4-E—A Partnership for Literacy: Dalton, Georgia¹

"Bobby" is typical of many of Dalton's workforce. He quit school after the 6th grade, married at 14, started working in the mills at 16, became a foreman at age 17, and has been a supervisor and valued worker for 40 years. His company, faced with increasing foreign competition, modernized and streamlined the manufacturing process, using a sophisticated computerized photospectrometer to monitor the production line activity. Workers are required to read the printouts and make on-the-spot adjustments. Bobby was offered a promotion to supervise the new system, but there was a problem: Bobby couldn't read the printouts, the manuals explaining the machinery, or memos sent by management to describe the new work he was supposed to supervise. He can't read at all, although no one ever knew it in the old job; he'd always carried a newspaper with him to work to mask his problem. "You gotta find someone else; I can't do this job," he told his boss, and said he'd quit rather than have people discover his secret.

Sixty-five percent of the carpet manufactured in the United States is produced in Dalton, Georgia, the "Carpet Capital of the World." The textile mills of Dalton-Whitfield County in southern Appalachia have traditionally made the area a mecca for high-wage, low-skills jobs. However, job skills requirements are changing rapidly as the carpet industry relies more on computer-aided technology. This "skills mismatch" is a real problem for the local community, where fewer than one-half of the adults in the county have a high school education.² One carpet manufacturer surveyed its hourly employees and found that only 8 percent had the skills the company projected it needed to remain competitive. Another small, family-owned company in the area had invested hundreds of thousands of dollars in state-of-the-art manufacturing equipment and saw productivity drop rather than improve. The owner discovered that all the hourly employees assigned to use the equipment were functionally illiterate.

Local industry could not survive without finding a way to keep the "Bobbys" of the workforce productive, but the problem was too large for the adult education program in the area to handle alone. In July 1990, the Dalton-Whitfield business community and the Chamber of Commerce created the nonprofit Education is Essential Foundation, Inc. (EIF). The goal of the foundation was to go beyond traditional "paper-and-pencil" literacy programs, already overbooked and meeting limited success in filling the educational needs of the community. Since computers were driving the changes in the workplace, they looked to computers to provide a solution to the learning gap. Initial grants of \$30,000 from the Tennessee Valley Authority and \$10,000 from the Appalachian Regional Commission leveraged another \$120,000 in local contributions from the United Way, businesses, civic groups, and individuals.

The first year the foundation placed 12 multimedia personal computers using an integrated learning system (ILS)³ in the public adult education literacy centers. Then, recognizing that 95 percent of the local welfare recipients lacked a high school degree, and noting that literacy program attendance had tripled at the sites where computer systems were installed, the foundation established a computer laboratory in the local welfare office in a joint project with the Department of Family and Children Services. Under Georgia's PEACH program (Positive Education and Community Health), welfare clients had previously attended mandated classes at the adult learning centers, but now meet as a class 4 hours every morning at the welfare office, a more convenient location. Attendance and gains are monitored on the computer, and one-half of the instructional time is computer-based. Attendance has improved, and learners are moving ahead more quickly, registering gains of one full grade level for every 18 hours logged on the system. The computers have been a real attraction for learners, who are proud to be "learning computers;" nowadays lines begin forming at the welfare office before the doors open—not people waiting for the checks, but learners wanting access to the learning system.

Heartened by experience with public sector programs, the foundation bought several ILSs and loaned them to companies, to make them available for employees on their own, before or after a workshift. "People are too tired

¹ Information in this box, except where noted, is from Janet Bolen, coordinator, Education is Essential Foundation, Inc., personal communication, December 1992. "Bobby" is a fictitious name.

² The 1980 census data indicated that 56 percent of the adults in the county did not have a high school diploma. By 1992, this figure had dropped to 40 percent. Bolen, op. cit., footnote 1.

³ Computer Curriculum Corp. Integrated Learning System software includes 2,800 hours of multimedia instruction in K-12 and more than 3,000 hours of skills coursework.

after work to go to classes, and the one-on-one sessions with tutors were just too slow for most people.”⁴ By the fall of 1992, 10 companies had purchased their own units for workplace learning laboratories. Currently, 35 ILS workstations are in place at 21 business and community sites throughout the county, with an average of 2 new laboratory installations each month. “There’s a healthy competitive spirit among the local businesses now. No one wants to be out of step,” says the foundation coordinator. Participation now includes all sizes and types of industries, from the largest carpet manufacturer, with 7,500 employees, to a small catering company. EIE coordinates group classes and training on the system, assembles meetings among “users groups,” and seeks new sites for setting up systems, like day-care centers where parents and children can take turns learning with a range of software.

By the fall of 1992, over \$300,000 had been raised to support EIE literacy efforts. While the initial grants from national and regional public entities formed the basis on which the program has been built, private sector support and enthusiasm must carry the burden to keep the program viable. The State of Georgia encourages private support through a \$150 per-employee tax credit to employers who provide or sponsor adult basic skills education for their employees. The foundation sponsored a luncheon to explain to employers how to apply for the tax credits, and described the workplace and computer-aided literacy programs currently available in the community, encouraging more to participate.

The number of learners passing the GED grew from 200 in 1990 to close to 350 in 1992, the equivalent of another high school class graduating each year.⁵ The impact on the local K-12 system, which once had one of the highest dropout rates in the Nation, also has been positive. Adults attending school provide role models for their children, and high school dropout rates have been cut by 13 percent. And Bobby has that new job at the mill, but he no longer just carries a newspaper to work—now he reads it.

⁴ Lynne Peer, director of Marketing Services, J&J Industries, Dalton, GA, personal communication, December 1992.

⁵ While not all of these have used the computer-based instruction, the computers have been a big attraction, bringing people into programs.

cabulary, procedures, and context. While this can be accomplished with traditional training programs, computer-based systems make it easier to create customized materials and individualize learning plans that match basic skills content with workplace context.

Family Literacy

The hand that rocks the cradle also tells the family stones, reads the books, asks “What did you do at school today?”⁸⁴

Another example of the shifting view of literacy is the growth in family literacy programs. Research has shown that the education level of the mother is the strongest variable affecting a child’s school achievement;⁸⁵ parents can increase children’s chances to succeed in school through such means as reading to children or modeling good reading habits.⁸⁶ But if the parents themselves are unable to read, the children miss this extra boost.

Family literacy or intergenerational literacy refers to the goal of reaching all members of a

⁸⁴ Anne C. Lewis, *Listening to Mothers’ Voices: A Reporter’s Guide to Family Literacy* (Washington, DC: Education Writers Association, 1992), p. 1.

⁸⁵ Some suggest that funds for compensatory education for children would be better spent if they directly focused on improving the literacy of mothers instead. Ibid., p. 1. Also see, for example, Sandra Van Fossen and Thomas G. Sticht, *Teach the Mother and Reach the Child: Results of the Intergenerational Literacy Action Project of Wider Opportunities for Women* (Washington DC: Wider Opportunities for Women, July 1991).

⁸⁶ See, for example, T.G. Sticht and B.A. McDonald, *Making the Nation Smarter: The Intergenerational Transfer of Cognitive Ability* (San Diego, CA: Applied Behavioral and Cognitive Sciences, Inc., 1989); and Ruth Nikase, Boston University, “The Noises of Literacy: An Overview of Intergenerational and Family Literacy Programs,” prepared for the U.S. Department of Education Office of the Secretary, Mar. 3, 1989.

family with literacy activities. program providers can be private or public or a combination of several sources. The major source of Federal support has been ED and HHS, which fund the Even Start Program, the Bilingual Family English Literacy Program, and the Head Start Family Literacy Initiatives. Many States have established family literacy programs using their 10-percent AEA set-aside for innovative and coordinated approaches.

Family literacy programs run the gamut from family story hours at the public library to comprehensive programs that offer instruction to both children and adults. One model-Parent and Child Education (PACE)-was developed in Kentucky and replicated nationally as the Kenan Trust Family Literacy Program. This program has four components: early childhood education; adult basic education and pre-vocational skills; a support group for parents to discuss common parenting issues and concerns; and an intergenerational activity called PACT-parent and child together time.⁸⁷ Over 50 sites nationwide have been trained in this model by the National Center for Family Literacy in Louisville, Kentucky.

Experiences with the Federal Even Start program suggest some of the challenges faced by family literacy programs.⁸⁸ One challenge is high turnover⁸⁹: a family may move out of the service area or lose eligibility⁹⁰ or may be dissatisfied and drop out of the voluntary program. Additionally, some programs are structured for short-term interventions in order to recruit more eligible families in subsequent years. Finally, family literacy programs face the difficult choice of

whether to focus resources on the “ready to learn” family in which parents attend ABE classes, children attend early childhood education programs, and parents learn about parenting; or on the families with the lowest skill levels and most severe problems, who may need crisis intervention and several months of extensive social services until the family is indeed “ready to learn.”⁹¹

Technology in Family Literacy Programs

Some family literacy programs use the computer as a vehicle to draw parents and children together, attract participants, or make reluctant parents more comfortable in a school setting and more likely to connect with their child’s education. For example, in programs supported under a partnership between Apple Computer and the National Center for Family Literacy, the computer was used as a “. . . literacy tool: a pencil, typewriter, paint brush, crayon, recorder, scissors, and eraser (thank goodness!) all rolled into one easy-to-use machine. ’ Parents and children were encouraged to create materials to take home and share, using word processing and print capabilities to make posters, banners, greeting cards, and other items both children and parents could take pride in. Stories written by parents went home for reading aloud to children. Parents were also encouraged to preview children’s software. These activities sought to help remove parents’ fear of computers and help them consider ways to help their children learn. A telecommunications system linked the seven projects, enabling

⁸⁷ Rebecca K@ *Using Computers in Family Literacy Programs* (Louisville, KY: National Center for Family Literacy, 1992).

⁸⁸ Robert G. St. Pierre, “Early Findings From the National Evaluation of the Even Start Family Literacy Program,” paper presented at the First National Conference on Family Literacy, University of North Carolina, Chapel Hill, NC, Apr. 12-14, 1992, p. 2.

⁸⁹ Almost 74 percent of the families that participated in Even Start during 1989-90 did not continue in the second year of the project. Ibid., p. 6.

⁹⁰ To be eligible, a family must have an adult in need of adult basic skills training and eligible for adult basic education programs, have a child less than 8 years of age, and must live in a Chapter 1 elementary school attendance area. Ibid., p. 1.

⁹¹ Ibid., p. 9.

⁹² King, op. cit., footnote *7, p. 2.



Family literacy programs encourage parents to read with their children. CD-ROM technology brings animation, music, and talking characters to the onscreen pages of this “living book,” with Spanish and Japanese translations in the same program.

them to share lessons, products, and ideas with one another.⁹³

Programs for Incarcerated Adults

On any given day, over 1.2 million Americans are behind bars. Their literacy problems are severe. Four out of five do not have a high school diploma, and more than 75 percent lack basic reading and mathematics skills.⁹⁴ Other estimates suggest that 85 percent of juveniles who come before the courts are functionally illiterate and 60 percent of incarcerated juveniles read below the 5th-grade level.⁹⁵ Overall, the literacy problems

of the criminal offender population are three times as severe as those of the general population.⁹⁶

Although educational programs have long been offered in jails and prisons, these programs are becoming more important with new Federal and State directives mandating participation and with additional funding targeted specifically on literacy for prisoners. The literacy policy for Federal prisoners mandates minimum participation and provides economic incentives to continue beyond the minimum level. The Federal Bureau of Prisons now requires all inmates, regardless of

⁹³ Ibid., p. 3.

⁹⁴ U.S. Department of Education, op. cit., footnote 31, p. 1.

⁹⁵ Anabel Powell Newman et al., “Prison Literacy: A Survey of the Literature,” *Final Report Year 1, Volume IV: Working Papers*, National Center on Adult Literacy at the University of Pennsylvania (cd.) (Philadelphia PA: November 1991), p. 158.

⁹⁶ Ibid., p. 158.

their educational attainment, to be tested when they enter a Federal facility; with a few specific exemptions (e.g., reportable aliens), all who test below 8th-grade equivalency on any of the six subtests must enroll in adult education for 120 days or until a GED is achieved. Those with limited English skills must attend an ESL program until they function at the 8th-grade level of competency skills on the Comprehensive Adult Student Assessment System (CASAS) test. Although inmates may opt out of the ABE program after the minimum mandatory period, if they do not continue to the specified level they cannot be promoted in prison industries above the entry job level.

Mandated participation for inmates has required increased financial commitment to literacy. With implementation of mandated GED and ESL standards, the Federal Bureau of Prison's budget for literacy services jumped from 25 percent of its total budget in fiscal year 1988 to 40 percent in fiscal year 1991.⁹⁷ Teachers in Federal prisons are generally full-time civil service educators; they have either teaching degrees or college degrees plus teaching experience, or have passed the National Teachers Exam.⁹⁸

These Federal policies directly affect only 5 percent of the inmate population.⁹⁹ Almost three-quarters of all incarcerated offenders—750,000—are in long-term prisons and reformatories run by States; another 424,000 are in jails run by cities, counties, and local law enforcement agencies.¹⁰⁰ In 1990, 944 (78 percent) State correctional

facilities operated onsite ABE programs for inmates. Even more (962) operated secondary **academic programs**.¹⁰¹ Many of **these** are **mandated** literacy programs: in 1992, 17 States and the District of Columbia required literacy programs in their prisons.¹⁰² Most of the remaining States have nonmandatory literacy programs. Of the States reporting mandatory literacy programs, the level of literacy ranged from a low of the 4th grade to a high of 9th grade in all subjects. Staff in State and local facilities are generally part-time teachers from the K-12 sector, but some facilities hire their own full-time teaching staff.¹⁰³ Many inmate literacy programs use the services of volunteer groups like LVA and LLA.

Most State and local correctional education activities are supported predominantly by State and local funding. However, literacy programs in nonfederal facilities are also supported through two new Federal grant programs under the 1991 National Literacy Act. Although authorized at \$10 million, appropriations were \$5 million for fiscal year 1992. The legislation authorized competitive grants to State or local correctional agencies for either programs in functional literacy or programs to develop and improve prisoners' life skills to reduce recidivism.

While prisons provide a "captive" audience for literacy programs, they create unique challenges. The overcrowding found in many prisons reduces availability of classroom space. Classes are often overbooked, library resources are limited, and hours and space available to inmates for

⁹⁷ Nancy Kober, "Profiles of Major Federal Literacy Programs," OTA contractor report, July 1992.

⁹⁸ Sylvia McCollum, Federal Bureau of Prisons, U.S. Department of Justice, personal communication, February 1993.

⁹⁹ In 1991, an estimated 823,414 men and women were under the jurisdiction of State or Federal correctional authorities. U.S. Department of Justice, "Prisoners in 1991," Bureau of Justice Statistics Bulletin, May 1992, p. 2.

¹⁰⁰ Ibid.

¹⁰¹ U.S. Department of Justice, Bureau of Justice Statistics, *Census of State and Federal Correctional Facilities, 1990* (Washington, DC: U.S. Government Printing Office, December 1992).

¹⁰² Heidi Lawyer, *Survey of Mandatory Literacy Programs in State Prison Systems* (Richmond, VA: Virginia Department of Correctional Education, March 1992).

¹⁰³ For example, a study of education in California county jails found that 96 percent of teachers are part time. Barry Stern, "Baseline Study: Education in County Jails," report to the California State Department of Education, March 1990, p. 25.

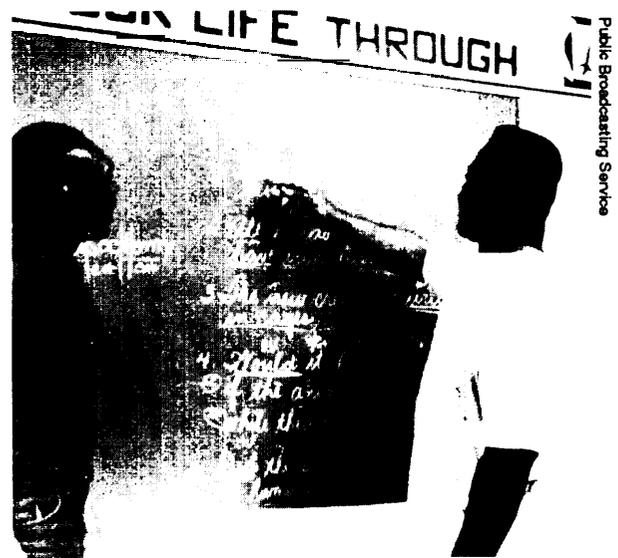
study or tutoring in private are restricted. Prison routines and work time often conflict with class time. Students may be moved from one institution to another without regard for their academic programs and with few mechanisms for transferring educational records, credits, or maintaining continuity with teachers or tutors in new facilities. Disciplinary actions can remove a prisoner from an academic program and those housed in maximum security settings are often unable to participate in classes or tutoring. When crises occur, “lock downs” can mean the indefinite cancellation of classes for all inmates, with little or no notice to teachers.

The transient nature of jail populations creates special problems; most jail inmates are moved out within 2 weeks, and almost all within 6 months,¹⁰⁴ making education programs difficult to structure. However, many consider jails a critical time to reach offenders and start them on alternate paths before they become hardened criminals.

Technology in Literacy Programs for Inmates

Early applications of technology in prisons were disappointing. In the 1970s, mainframe computers were linked by telephone lines to “dumb” terminals onsite in several Federal correctional institutions, but the cost of leases and monthly telephone charges, the inflexibility of the system, and limited courseware all led to dissatisfaction.¹⁰⁵ However, more powerful, flexible, and engaging technologies have led to renewed interest in technology.

New mandates for literacy in prisons have made correctional institutions an appealing technology market for several reasons, including the collective purchasing power of large correctional systems and the opportunities they provide for



A series of interactive satellite teleconferences jointly produced by PBS, correctional educators, and literacy volunteer organizations provided information on literacy programs for incarcerated adults.

linking software across servers. In 1990, the Federal prison system initiated a competitive bidding process for an audio-based integrated learning system (ILS). The ILS that was selected¹⁰⁶ has been placed in 24 Federal facilities, with an average of 12 terminals at each site. Students typically spend approximately one-half hour of their 6-hour instructional day working on their own on the system. Teachers have found the range of software gives them an efficient way to manage and individualize instruction, since they typically have no two students working on the same subject at the same level at the same time.¹⁰⁷

A number of State prison systems also have purchased various ILSs on a statewide basis to get a competitive price and to assure that teachers throughout the prison system will benefit from the technology training provided by the vendors.

¹⁰⁴ A survey of seven county jails in California found that approximately one-half the inmates are released within 3 days after booking, 57 percent within 1 week, 63 percent within 2 weeks, and 96 percent within 6 months. Ibid., p. 23.

¹⁰⁵ Sylvia McCollum, “Computers Can Help,” *Federal Probation*, vol. 49, September 1985, p. 35.

¹⁰⁶ The Plato System, manufactured by The Roach Corp.

¹⁰⁷ McCollum, op. cit., footnote 98, 1993.

Box 4-F—Literacy in the Los Angeles County Jail System¹

In the Santa Loma Women's facility, "Carole,"² four months pregnant and awaiting trial on a charge of cocaine distribution, sits in class staring at a video showing the transfer of drugs from a mother's bloodstream to that of her fetus. "What Mother Takes, Baby Gets" makes the private act of taking drugs no longer private. She's taking the parenting class because her public defender told her it might help her chances for parole. Carole's beginning to see that it also might help her chances of having a healthy baby.

The Los Angeles County jail system, ironically described as "the largest jail in the Free World," houses over 23,000 men and women in 11 facilities. Over the course of a year, more than 250,000 people pass through the system: most are awaiting trial, sentencing, or transfer but some are serving sentences of up to 1 year.

The Correctional Education Division (CED) of the Sheriff's Department contracts with the Hacienda-La Puente Unified School District to provide educational programs in each facility. Over 40 different courses, which vary from site to site, include general equivalency diploma (GED) preparation, course work for the high school diploma, English as a second language (ESL), employability skills, life skills, vocational training, parenting programs, and AIDS education, as well as rehabilitation counseling covering child abuse, substance abuse, and victim awareness. A special initiative under the Job Training Partnership Act expands job-readiness skills. Because many of the courses are limited in size, there are waiting lists for some classes. Many courses, like the AIDS awareness seminar, are designed as 1-day programs to accommodate the transient client population. Legislation limits instruction to 3 hours per day, and classes are scheduled whenever the sheriff indicates there is free time in the inmates' schedules, including late at night—for vocational education in office cleaning.

Instructors use a variety of methods, including videotapes with small group discussion and computer-based instruction, to meet the needs and preferences of students. A customized program of individual study is the only possible approach for some inmates. On first entering the schools, inmates are given an aptitude test and set up with a tutoring program on the computer. When inmates feel ready to move on, an instructor works with them to assess their progress before giving them additional learning materials. Most educational activities are voluntary and inmates can choose what to study—a manifestation of CED's philosophy of empowering the inmates.

CED can request students' transcripts from school districts in California and other custodial facilities. Many inmates take advantage of the opportunity to continue their education at other facilities when transferred: in 1990, approximately 4,000 transcripts were transferred in and out of the Los Angeles jail system.

The Media Services program, with about 180 computers installed in 12 sites and a VCR in each classroom, uses an approach described as "an open architecture in a closed environment." "Open architecture" refers to the use

¹ This box is based on an OTA site visit and a case study by J.D. Eveland et al., Claremont Graduate School, "Case Studies of Technology Use in Adult Literacy Programs," OTA contractor report, June 1992, pp. 57-75.

² "Carole" is a fictional composite of actual inmates.

Texas recently purchased a different ILS¹⁰⁸ for correctional facilities throughout the State; 36 prisons now have computer laboratories equipped with 20 workstations each. Included in the overall purchase price is a training package that supports several days of intensive instruction at a central training facility for two or three instructors; when they return they are "local experts" and train other prison instructors in technology use.¹⁰⁹

Several other States have made or are considering similar systemwide technology purchases for these reasons.

Other technology configurations have also been adopted. For example, the computer training facility in the Los Angeles County jails uses an open architecture in a closed environment (see box 4-F). The 12 jail sites housing some 25,000 inmates contain about 180 computers, mainly

¹⁰⁸ INVEST, by Jostens Learning Corp.

¹⁰⁹ Margaret Smith, Texas Department of Corrections, personal communication, February 1993.

of stand-alone computers equipped with a variety of courseware packages. The “closed environment” refers both to the nature of jails and to the Sheriff’s Department’s concerns for data security. In one instance, an entire jail was “locked down,” because a student prisoner had stolen a diskette on which he had written his life story. Media Services is trying to network all sites in a way that allays fears about possible data security, while at the same time providing internal connectivity.

In 1981, CED began an aggressive and innovative program of internal courseware development that has extended into newer multimedia technologies. The “Mac Literacy Project” developed reading materials for inmates at the 3rd- and 4th-grade reading levels using vocabulary, topics, and idioms frequently used in the jails. Another software development effort employs text, animation, and synthesized speech to help students use the “mouse” so they can become self-sufficient in using the computer. ESL lessons involve realistic adult living situations and students can record and playback their attempts to imitate the target sounds. CED has also produced innovative software for use in vocational training programs, including carpet laying, commercial painting, tile setting, and dog grooming. Most of these programs employ “hot text,” so that learners can click the mouse on unfamiliar words and hear them spoken, a valuable assist for many learners.

Video instruction has always been the primary emphasis of the Media Services Laboratory, and CED’s video production facilities are extensive. The laboratory produces short “single-concept videos” to illustrate a particular concept or skill—e.g., the safe use of hand tools—and longer videos for more general use. For example, a series on the successful ESL teaching methods has been used in teacher inservice training. The Media Services program supports itself through the sale of videos and courseware, some of which are developed under contract for other literacy organizations. Media Services also provides technology training and support to CED teachers. Video has been extensively used in teacher training, helping to overcome the difficulties associated with a large instructional service area.

Despite the high profile CED gives technology-based instruction and the consensus that it is the wave of the future, information technology is just one of many tools used by CED. Instruction is still provided primarily through traditional educational approaches and materials. High inmate turnover and prohibitions on contact with released inmates stymie evaluation efforts. The director maintains a positive outlook:

The ultimate goal is to have the inmates leave the jail better than when they entered. . . . Many feel that county jail facilities provide the best opportunity to change people around, because the crimes and circumstances involving these inmates are not as bad as those in State and Federal facilities. There is a strong need to increase these individuals’ self-esteem and motivation, and have them understand that they are in charge of their own destiny.³

³ Ernestine Schulle, Corrections Education Division, Hacienda-LaPuente Adult Education, LaPuente, CA.

Apple Macintoshes, a result of the educational coordinator’s personal collaboration with Apple in developing program materials. Much of the software used at the jails has been developed by the teachers themselves, including literacy materials incorporating vocabulary and idioms frequently used at the jail.

Many of the features that make interactive technology viable for adult learners are especially useful for inmates. Allowing material to be individualized and paced at the learner’s speed is important for prison populations with variable

educational backgrounds and ranges of literacy needs. Working on a computer offers privacy for learning and a sense of control—features generally missing in prison life and therefore highly valued. Furthermore, group interaction with some applications develops important social skills that many inmates lack. Technology is seen as a tool for the future and using computers improves prisoners’ sense of self-worth.

Prison walls can be scaled via the technology—telephone/computer links can connect inmates with teachers or tutors outside the walls of the

prison, while prison libraries, often woefully understocked, can be upgraded through links with libraries on the outside, databases, and other information resources. In youth correctional facilities, incarcerated juveniles can finish high school programs and participate in classes through linkups with local high schools, community colleges, or technical institutes. For the inmate who must be isolated, education can still take place even though he or she cannot “attend” class—via personal lessons on a computer, watching a televised class or tapes, or participating in a distance learning class via audiographics, satellite, cable, or other available technology. Since teachers and tutors in prison are available on a part-time basis and are often affected by security restrictions, technology can be a personal “secure” tutor.

POLICY IMPLICATIONS

It is not surprising that this patchwork of programs and providers has been unable to meet the challenges of providing comprehensive, intensive, long-term adult literacy service to the growing numbers of adults in need. With their

limited resources and capabilities, predominantly part-time or unpaid staff, unstable funding, and lack of coordination, America’s adult literacy programs serve at best less than 10 percent of the target population each year with low-intensity services of quality ranging from excellent to poor. High-quality adult literacy programs, of which there are many, are all the more impressive for the limitations under which they must operate, and the difficulties of the multiple demands and pressures adult learners face.

Despite the diversity of programs and services, a number of common issues appear, including: the need to enhance the professional status of adult literacy staff; the problems of providing comprehensive services; concerns with accountability and assessment of progress; the need for a research base on effective practices; the potential for encouraging partnerships and vehicles for coordination; and the promise of technology as a tool for more intensive individualized instruction as well as for better teacher training, recordkeeping, and information sharing. These issues are described in chapter 6.