OVERVIEW

Leapfrogging Over the Status Quo:

E-Learning and the Challenge of Adult Literacy

88 Broad Street
Boston, MA 02110
www.jff.org

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"E-learning isn't about technology, it's about a cultural revolution. We've entered an era where we're going to be bringing learning to people instead of people to learning."—

Michael Parmentier, Director of Readiness and Training, Policy Programs in the Office of the Secretary of Defense[1]

Introduction

"Learning in the Digital Age" examines the potential of technology—specifically, e-learning technologies—in two areas:

- Responding to the challenges of adult literacy and skill development; and
- Stimulating significant, effective change in the systems providing education and basic workforce preparation services to low-skill adults.

This Overview summarizes "Leapfrogging Over the Status Quo," by Mary McCain, and its accompanying snapshots of program models. The documents were prepared as background for Jobs for the Future's November 2002 convening, "Building Literacy Skills through E-Learning."

Learning in the Digital Age

At a time when economic competitiveness in the global economy depends upon a skilled workforce, our nation faces a critical challenge. Currently, almost half of the adults who are employed in the U.S have no education beyond high school. Yet 80 percent of family-sustaining jobs require college-level skills.[2] Nearly half the *total* adult population in the United States—about 90 million people—does

[1] Michael Parmentier, Director of Readiness and Training Policy and Programs, Office of the Deputy Undersecretary of Defense, U.S. Dept. of Defense. *Federal Computer Week*, December 18, 2001, www.fcw.com.

[2] Robert H. McCabe. *No One to Waste: A Report to Public Decision-Makers and Community College Leaders*. Washington, DC: Community College Press, a division of the American Association of Community Colleges. 2000.

not possess the level of literacy required to perform the jobs of the new economy. Looking to the future, a recent report predicts that the skills gap is likely to get worse, not better, as the available workers in future years are unlikely to have the skills and education needed for an increasingly technology-driven workplace.[3]

The existing and projected skills gap is further complicated by demographics. Much of the projected future growth in the labor force will be from immigrant populations. These workers often need significant help in overcoming language and skill barriers that prevent them from contributing at their potential in the labor market.

Low levels of literacy, skill, and education among current and future workers will put a brake on our nation's economic development. Further, they limit the ability of these adults to secure jobs and careers that pay wages sufficient to sustain a decent standard of living. Of equal importance, illiteracy hampers the ability of these individuals to participate fully in their communities, in a democratic society, and in the digital age.

Given the scale and urgency of this challenge, our country's systems for developing the skills of low-literacy adults are woefully inadequate. Employer-based training programs largely ignore low-skilled adults. Publicly funded adult education and workforce development providers—including community colleges—lack the capacity to provide services to the large numbers who need them. At any given time, only 3 percent of U.S. adults in need of adult education and literacy preparation are enrolled in such programs receiving federal or state support. The combined state and federal funding per adult *enrolled* in an adult education or literacy program is only about $400.

Given today's economic and policy environment, the United States is unlikely to make a major investment in expanding the reach or effectiveness of the public and private systems that now assist low-literacy adults. Our choice is to make incremental change through the traditional levers of public policy and service providers, or to consider the advice often given to developing countries: use technology to "leapfrog" from the status quo to radically more effective systems.

E-learning technologies have the potential to help our systems break through challenges of limited capacity and meet—in new, more effective ways—the diverse learning needs of large numbers of low-level adult learners. Although tapping the power of existing and emerging technologies for this population of learners is not without its own challenges, the potential payoff—to individuals, employers, and our society at large—is significant.

[3] Robin D. Schatz. "The Worker Gap: A Talk with David Ellwood," *Ford Foundation Report,* Fall 2001.

Drawing from the research summarized in "Leapfrogging Over the Status Quo: E-Learning and the Challenge of Adult Literacy" and the accompanying snapshots, this overview seeks to shed light on the following questions:

- Are learning technologies available and in use that can be effective in raising the literacy and skill levels of adult learners who need basic skills or English language instruction?
- What are the significant barriers to more extensive development and use of technology-enabled learning products and tools?
- What strategies could be employed to accelerate the use of e-learning technologies to benefit adult learners and develop the skills of our workforce?

The Potential of E-Learning

Our review of a range of existing and emerging e-learning technologies indicates that effective strategies and tools are available for raising the literacy and skill levels of adult learners who need basic skills or English language instruction. Moreover, strategies and tools are also available for expanding and enhancing the effectiveness of classroom instructors.

A key question is the ability of e-learning technologies to contribute to effective learning, which encompasses:

- Individualized support for particular learning styles;
- Opportunities to work and solve problems in groups;
- Exposure to the world of work and employers; and
- Progressive and engaging, but not intimidating, learning experiences.

Our review suggests that well-designed simulations, interactive multi-media, and other technology-enabled tools can mimic many of these functions, expanding and enhancing the reach of the finest instructor and making up for some of the deficiencies of the poor teacher. And because effective e-learning technologies enable and support interactive, customized instruction, they could help to overcome shortcomings of many traditional provider organizations.

Technology can be transformative. It can make possible an entirely new experience of learning that goes well beyond the classroom, curricula, and text-based formats to which we are accustomed. The Internet, the World Wide Web, wireless technologies, sophisticated simulations, "intelligent tutors," and access to virtual environments—including various types of workplace—can enable individuals to expand their lives and the learning experiences available to them.

E-learning technologies have the potential to address a number of challenges our systems face in meeting the needs of large numbers of adult learners. They can provide:

- *Expanded access to and delivery channels for instruction*, through engaging formats with which many learners are familiar, such as television, the Web, CD-ROMs, DVDs, video or computer games, and hand-held organizers;
- *Flexibility in both the time and the place for learning*, both of which are critical in meeting the needs of learners who are balancing work/family demands;
- *An ability to accommodate a variety of learning needs, including instruction customized for various skill levels* through multi-dimensional, interactive learning experiences that go beyond text-based instruction and tap multiple forms of intelligence;
- *Increased control for adult learners over their own learning experiences*, through built-in opportunities for them to repeat learning drills at their own pace, embedded assessments that help them track their progress, language translation capabilities, and support from intelligent tutors; and
- *Opportunities for individuals to work by themselves or as part of a team, using hands-on instructional strategies that are engaging and experiential.*

E-learning technologies can supplement regular classroom instruction, help students assess their progress and prepare for new coursework or training programs, and offer opportunities for stand-alone, self-directed learning. They can be integrated with other computerized programs that help learners pursue job searches and link to community resources**.**

E-learning technologies can also be used to help meet the professional development needs of the staff and volunteers who deliver training and education to adult learners. For example, e-learning programs can be used to provide standardized pre-service and in-service training and curricular materials to staff and volunteers of various programs or to deliver ongoing mentoring to new instructors or volunteers. A variety of easily accessible resources for instructors provide lesson plans and curriculum support tools, networks for communication with peers, and training and support in using technology. As with any technology, the effectiveness of e-learning technologies for instruction and training depends in large part on the ability of program staff and volunteers to incorporate and support them well.

In addressing the potential for e-learning technologies to improve skill development opportunities for low-literacy adults, it is important to be clear about

terminology and underlying assumptions. When we use the term "e-learning" in this overview, we assume the following:

- The most effective technology enhanced learning involves "blended instruction"—that is, a combination of instruction by a human teacher or coach with the use of technology. This is true for all learners, and it is especially true for low-literacy learners.

- E-learning in its traditional form (primarily automated text or e-reading) is most effective for individuals who: have previous success in classroom learning; have the ability to use computers or the Internet; are self-directed and willing to ask questions; and are in a learning environment that reinforces attention through incentives or penalties in the form of degrees/promotions or failing grades/employment consequences. It is poorly suited to low-skilled adults, who rarely have these capabilities or environments.

- The most effective e-learning technologies for low-skilled adults are "high-end" technologies, including such features as simulations, voice recognition, and intelligent tutors. In addition, these technologies are most effective when delivered in environments that address the adults' full range of needs, including their backgrounds and practical issues (e.g., housing, health, child care). In other words, the context of delivery matters.

The attached "Matrix of Selected E-Learning Programs" provides a sampling of cutting-edge e-learning tools currently in use.

Moving to Scale

Multiple, interrelated challenges need to be addressed in order to begin using the most appropriate e-learning technologies at any significant scale as an instructional mode for low-skill adult learners. These challenges fall in three areas:

- Low demand for e-learning technologies geared to low-literacy learners;

- Absence of a defined market that would spur new product development; and

- Underdeveloped capacity of both low-skill individuals and provider institutions to use technology well.

Low demand for e-learning technologies geared to low-literacy learners

There is little current demand for e-learning technologies among the organizations providing services to low-literacy populations. This appears to be due to several factors:

- *Limited awareness of the potential of these technologies*: At present, there is little dissemination of information about e-learning products appropriate for low-literacy populations, and there is limited distribution of the products themselves. In itself, this is a significant barrier to awareness and use. High turnover among adult basic education teachers and volunteer instructors exacerbates this problem.

- *Lack of clear evidence that e-learning strategies yield concrete benefits for education and skill development:* Compelling evidence of the learning gains associated with the use of technology would motivate the adoption of e-learning strategies on a wider scale. However, to date there has been little research on or evaluation of the use of such strategies in basic education, ESL, or skill development for low-literacy adults. Most e-learning products designed for these purposes are new; therefore, most of the evaluations rely on relatively few pilot sites. Moreover, almost all instances of e-learning continue to take place within the context of a traditional instructor-led, classroom environment.

  As a result, the available data offers conclusions about the use of technology as an "add on." This creates a vicious cycle: the lack of research and evaluation on the best practices and environments for using technology successfully with low-skill adults prevents greater use of technology, which in turn inhibits effective research.

- *Few easy ways to document or credential any learning outcomes*: The same issues about certification that bedevil business, online universities, and other organizations interested in demonstrated skill are of concern in considering a widespread use of e-learning for adult learning. The market value of education in the economy increasingly depends on certification and degrees. While assessing what was learned online in preparation for the GED or other articulated assessments is a straightforward proposition of taking the test, other kinds of learning are not so easily captured.

  A further complication is that financial aid, under both federal and state policies, is "institution based" rather learning- or competency-based. That is, financial aid can only be used at accredited institutions, which is problematic in the case of using many e-learning products and services. Until e-learning can be certified, or until financial aid policies are modified, this will pose a disincentive for individuals to access e-

learning technologies as an alternative to traditional classroom instruction.

Absence of a defined market that would spur new product development

The lack of a defined and cohesive target market among either individual consumers or organizational providers of adult education and training hinders business interest in developing products for low-literacy adults. There are few market-based incentives for expanded product development and dissemination. The continued lack of successful business models for Web-based products and services in all markets exacerbates this issue.

Further, even if there were a defined market, financing product development remains a challenge. The cost of developing and maintaining effective, technology-enabled tools and programs is not insignificant. The Panel on Transforming Learning of the President's Information Technology Advisory Committee estimated that it could take as many as 200 hours to develop effective interactive software. By the same token, many highly effective and useful tools and products are developed for no more than several hundred thousand dollars. While this is not insignificant, neither is it prohibitive.

To date, most programs have been funded by the U.S. Department of Education's Office of Adult and Vocational education, by consortia of state and local governments, or by corporate foundations. The quality, creativity, and reach of these products demonstrates the value of these funding commitments. However, few of the grants have included funds beyond development, pilot tests, and evaluations of the pilot sites. The challenge remains in obtaining resources necessary to bring the technology to scale and promote, distribute, and support its use and practice.

Underdeveloped capacity to use and incorporate technology

Expanding usage of e-learning technologies in the adult education and training systems is further limited by the fact that many low-skill adult learners, particularly those who are older, have limited familiarity with and low comfort levels about using computers and the Internet. In addition, many instructors and volunteers lack the training, equipment, and resources needed to incorporate and sustain e-learning effectively in their instructional strategies. The cost of maintaining and upgrading technology-enabled tools is not insignificant, and few providers have access on a regular basis to financial resources that make it possible to stay current with technology. Until provider organizations have sufficient resources to capitalize on technological tools, this resource shortfall will also contribute to the low demand for e-learning technologies.

It is clearly a matter of public good to ensure that community-based organizations, educational institutions, and other nonprofits can build an up-to-date technological capacity, given the important role they play as points of

access and support for socio-economically disadvantaged individuals and families.

Recommended Strategies

The experience of product development thus far suggests a number of strategies that could be employed to address the challenges identified and harness the potential of e-learning for improving adult literacy rates and growing the skills of the U.S. workforce. We have organized the seven strategies below into three overall categories:

- Creating a viable market for development and dissemination of e-learning technologies for low-literacy learners;
- Stimulating demand for e-learning products among the target markets; and
- Investing in building the technological awareness and capacity of targeted institutions providing education and training services to low-skill adults.

Creating a viable market for development and dissemination of e-learning technologies for low-literacy learners

Expanding the market will require simultaneous actions on multiple levels, in each case seeking to "aggregate demand" within specific potential groups of users: targeting those user groups for which demand can be aggregated; leveraging federal policy to spur product development; and disseminating information through efficient channels.

1. Expand the market by focusing on target user groups.

Strategies to support the use of e-learning technologies at scale will be most effective if they engage the publicly funded adult basic education and workforce development systems, employers of low-skilled workers, and community colleges. In each of these three "systems," demand for instructional tools can be aggregated and the need for technology-enhanced learning is high. And for each of these potential users—or developers of e-learning products—the effective use of technology-enhanced instruction at scale could dramatically improve learning outcomes and skill development for low-skill learners.

- *The publicly funded adult basic education and workforce development systems:* These systems are critical access points for low-literacy adults seeking additional training, yet they currently have limited capacity to serve the large numbers of adults in need of their services. Because they are fragmented and under-resourced, more effective integration of technological tools could substantially boost their

capacity. While publicly funded adult basic education and workforce development systems are unlikely to take a lead role in driving the creation of a market for e-learning technologies, they are critical partners for developing, testing, and disseminating new products.

- *Employers of low-skilled workers:* The employer community represents a major potential market for e-learning technologies. While many employers offer e-learning tools to skilled employees, few have transferred these technologies to enhance skill development for their low-literacy workers. Two key factors will make the need for e-learning technologies rise in importance for employers: the skill shortage, which is projected to get worse over the coming years, and the fact that immigrants with ABE/ESL needs will be the key sources of workers for the future.

- *Community colleges:* While community colleges continue to offer access to degree-granting educational programs for low-literacy adults, in recent years they have dramatically increased the scope of non-credit skill development and customized training programs, including those designed for employers of low-skilled workers. The non-credit divisions of these colleges may well view e-learning technologies as a route to providing more innovative, more efficient training services to the private sector and to low-literacy learners whom they serve. Community colleges in regions with large numbers of immigrant workers, where incentives to improve workforce performance are high, may well be interested partners in the development of innovative e-learning strategies.

2. Leverage the public policy/federal role.

Public policy can play a strong role in driving market development for targeted user groups, accelerating the development and dissemination of products that target low-level learners. The federal government has played, and must continue to play, a major role in encouraging product development and "stimulating a market." At present, most of the products developed for low-level learners are funded by the U.S. Department of Education (alone or in partnership with states) and by foundations. These investments have largely led to "one-of-a-kind" developments. However, grants for new products rarely include the cost of distribution, maintenance, and upgrading, leading to problems with wider adoption and sustainability.

To spur product development, the federal government could adopt a number of action steps:

- *Provide incentives to expand and establish strategic public/private partnerships for product development that will provide intellectual as well as financial resources.* For example, the U.S. Departments of

Defense, Labor, Education, and Commerce could partner with leading-edge product development groups, such as the M.I.T. Media Lab, to explore ways that their ideas and products can be used by low-skill adults.

- *Motivate the formation of collaborative partnerships for prototype development and beta-testing.* Because the effectiveness of technology for low-literacy adults depends strongly on the context for delivery, the best product development often occurs through collaborative partnerships among developers or technology experts, community colleges, and community-based provider organizations.

- *Explore ways to leverage the extensive research, development, and implementation of e-learning by the U.S. Department of Defense,* including the department's experience in developing products according to learning object-oriented standards.

- *Engage community colleges in partnerships to establish accessible and technology-enabled learning options for the adult learner.* One promising model is the "satellite" learning center—in a mall, library, community technology center, or other site—that is linked virtually to the colleges. In general, it is important to enhance the capacity of community colleges as an institution for expanding access to technology and technology-enabled learning options.

- *Develop financing strategies to sustain and subsidize privately-developed e-learning products so they become relatively inexpensive for use by low-skill adults and their service providers.* It is essential to tap the creativity and expertise of the private sector. While government, educational institutions, and community organizations are necessary partners for product development, more flexible private sector institutions—companies and venture capitalists, as well as foundations—may be better able to spur the path-breaking efforts that are required.

3. Strengthen dissemination channels.

To design strategies for the active marketing and dissemination of existing products, bring foundations, corporations, federal agencies, and other national organizations that fund the development and piloting of e-learning technologies together with the decision-makers for major distribution channels to various adult basic education systems.

Stimulating demand for e-learning products among the target markets

The expansion of e-learning technology is hindered by a lack of demand, stemming from a lack of awareness, a weak evidence base, and limited access to few products. Addressing these challenges is critical. As more users learn

about and gain access to these tools, more information on the effectiveness of various e-learning techniques can be obtained. More effective tools will result, creating a stronger demand for the products.

4. *Efforts to reach scale and expand markets must address the limited awareness among potential users of the potential value of e-learning products.*

One effective strategy to build awareness would be to publicize existing local models of successful cooperation among employers, community-based organizations, and other non-profit organizations that are using technology to respond to the needs of adult learners and job seekers. A second strategy is to support and publicize portal sites like Tech21.org, both within and outside the adult basic education community. A third strategy is to build the capacity of providers to establish a more widespread infrastructure for access to and delivery of e-learning instruction, such as programs that loan laptop computers for the entire period during which individuals participate in technology and learning programs.

5. *Encourage the federal government to design and fund short-term action research initiatives and demonstration projects in order to build a stronger base of evidence supporting the most promising applications of e-learning technologies for low-wage skill learners in these targeted markets.*

Some potential initiatives could include:

- *Working with national non-profit organizations that have local chapters or offices* (e.g., Goodwill, National Urban League) *to develop an active, integrated, technology-enabled program*, install it across the country, and document learning outcomes;

- *Testing new ways of delivering adult basic education and English as a Second Language services that incorporate e-learning technologies* to increase the efficiency and reach of community-based adult education programs;

- *Working with the Educational Testing Service and other organizations to help develop and build support for online testing and assessment tools* for adult basic skills, ESL, SCANS, and other certifications that can help to document the learning outcomes of e-learning applications; and

- *Assisting these organizations in facilitating the use of their centers and other locations to offer this testing.*

6. Provide incentives for user groups to pilot new products.

Incentives for providers to innovate could include policy models such as California's 5 percent Distance Learning Project, which allows adult education programs to use up to 5 percent of their block entitlement for innovative techniques and non-traditional instructional methods with new technologies.

Firms also need incentives to encourage employer-provided training opportunities for non-college workers. However, small businesses, in particular, may face financial constraints; some states have developed successful customized programs that provide financial incentives.

7. Increase financial resources available for individuals to access e-learning opportunities, through Pell Grants, the Higher Education Act, and individual loan programs.

- *Pell Grants and the Higher Education Act:* The major sources of federal funds for individual education and training are the Pell Grant program and various loan programs authorized by the Higher Education Act. However, the resources and regulations associated with these sources will not, in their current state, support expanded use of e-learning strategies. The rules of the Higher Education Act do not allow funds to cover new learning opportunities for modular (or part-time) learning programs and will not cover new providers of education and learning that arise to serve this population. Nor are state funding rules for community colleges and higher education institutions geared toward full-time students; they, too, may discourage serving a broader population.

- *Individually supported training***:** Dislocated workers and other adults seeking greater training opportunities may support the costs of their education programs through loans. Regulations associated with other educational loan programs should be reviewed to assess how they can support part-time students using non-traditional learning strategies. Asset-building approaches and Individual Development Accounts may also be ways that individuals can accumulate the needed income to support their education.

Investing in building the technological awareness and capacity of targeted institutions providing education and training services to low-skill adults

Building capacity is as necessary as expanding R&D. Both the necessary technology infrastructure and the capacity of instructors to use technology require significant upgrading. Meeting these challenges will require the innovative thinking of many partners, including federal and state government leaders, employers, community colleges, education systems, foundations, and other

community organizations. Developing recommendations in this area will be an important next step in the effort to develop e-learning's potential.

Matrix of Selected E-Learning Programs

The programs presented below are a sampling of the cutting-edge e-learning tools currently in use. Each of these programs has at least some of the following characteristics:

- They are multi-media.
- They mimic through simulation or stories a real-time/real-place learning situation.
- They offer tailored responses to an individual's answers or choices.
- They provide opportunity for repetition and practice.
- They reference or take place within a workplace or real life context.
- They are supported with print materials.
- They are aligned, when relevant, with state or federal education, language, or other standards (e.g., SCANS, CASAS).
- They are engaging and non-threatening.
- They focus on possibility (in outcomes, jobs, and abilities) rather than on limitations (low literacy, unemployment).

The programs are clustered to provide examples of the types of skill development e-learning offers (Table 1) and the methods used to develop those skills (Table 2).[4]

These tables are based on the appendix to "Leapfrogging the Status Quo," by Mary McCain, which contains 37 Snapshots of programs, products, and resources available for e-learning.

[4] Jobs for the Future is researching three additional categories for inclusion on this matrix at a later date: challenges, cost of development, and impact/outcomes.

Table 1:
What Kinds of Skill Development Does E-Learning Provide?

Skill Developed	Example 1	Example 2	Example 3
Language and Basic Skills Development	**The Beehive** *Description:* Useful, culturally diverse content at a literacy level and in a language that target users can understand. The site is available in English and Spanish and both aggregates and develops content. *Type:* Internet portal *Population:* English language and low level learners *Web site:* www.beehive.org *Organization:* One Economy Corporation. www.one-economy.com	**TV411** *Description:* Ongoing television and video series that centers on recurring characters in workplace and community circumstances that are relevant for the typical student in literacy and ESL education. *Type:* TV and video *Population:* English language and low-level learners *Web site:* www.tv411.org *Organization:* Adult Literacy Media Alliance, a project of Education Development Center, Inc.	**English for All** *Description:* 15-minute episodes featuring a multi-ethnic cast and a friendly wizard who explains language and skill content throughout the story. The lessons track to the student's answers as well as to the episodes, which become progressively more difficult. *Type:* Web-based and CD-ROM *Population:* English language learners *Web site:* www.myefa.org *Organization:* Cyberstep Partnership of the Sacramento County Office of Education, Los Angeles Unified School District, the Adult Literacy Media Alliance, and Aguirre International
Skills for Navigating the Workplace	**Entertech** *Description:* Provides 45 hours of programming designed for potential entry-level workers in high-tech manufacturing; developed as an alternative to high-tech manufacturing apprenticeships. *Type:* Computer simulation *Population:* Potential entry-level workers in high-tech manufacturing *Web site:* www.entertech.org *Organization:* Developed at IC2 at the University of Texas at Austin	**America's Army** *Description:* Two games designed to encourage recruitment to the U.S. Army among young adults. One game allows players to take on the roles of U.S. soldiers teaming up to battle terrorists. The other game allows the individual to progress through a virtual career in the Army. *Type:* Free download or CD-ROM *Population:* Potential military recruits *Web site:* www.americasarmy.com *Organization:* U.S. Army	**TV411** (see above)

Table continues on next page

Table 1 (Continued): What Kinds of Skill Development Does E-Learning Provide?

Skill Developed	Example 1	Example 2	Example 3
Specific Skill Development	**The Learning Edge** *Description:* Designed to expose learners to the capabilities, opportunities, and pitfalls of the Internet, the site opens with simultaneous audio, animation, and text explanation and introduction to the "front page" with no need to log in or choose from a menu. There are options for online chats, story contributions. and lessons in reading, writing, and math. *Type:* Web-based tool *Population:* Anyone who wants to develop Internet skills. *Web site:* www.thewclc.ca/edge *Organization:* Wellington County Learning Centre (Canada)	**Smarthinking** *Description:* "Live tutor" system in which carefully screened and specially trained subject-matter experts are available 24/7 to coach students who have questions or need other kinds of help—including math and writing. An organization buys a certain number of hours of tutor time and individuals draw down on it as needed. *Type:* Online *Population Target:* Self-directed learners *Web site:* www.smarthinking.com *Organization:* SMARTHINKING	

Table 2: How Does E-Learning Provide Skill Development?

Potential	Example 1	Example 2	Example 3
Customized/Interactive Learning	**The Reading Partner** *Description:* Combines traditional "practice and drill" techniques with customized audio and text developed by instructors or managers; provides audio text recorded by instructors as well as the interactive capability to record the student's voice as she/he responds to questions. *Type:* IBM-developed speech recognition technology and authoring tool *Population Target:* Adults who need to improve reading and English speaking abilities *Web site:* N/A *Organization:* IBM	**Job Link Interactive Learning Series** *Description:* A self-paced learning application or for additional practice after classroom instruction. Structured with the new learner in mind, providing clear, simple explanations with a strong focus on hands-on practice; and accommodates multiple learning styles, including text-based and audio/visual explanations and extensive exercises and quizzes. *Type:* Series of five DVDs *Population Target:* New learners *Web site:* www.bavc.org *Organization:* Bay Area Video Coalition	**Smarthinking** (see above)
Tutorial	**The Reading Partner** (see above)	**Job Link Interactive Learning Series** (see above)	**PBS Workplace Essential Skills and GED Connect** *Description:* Produced by PBS Literacy Link, these two programs offer access to teachers recruited by PBS from schools around the country. The service is free. Students send completed work to the remote teacher for correction and feedback. *Type:* Internet *Population:* Independent learners in pursuit of a GED and workplace skills. *Web site:* www.pbs.org/literacy *Organization:* PBS literacy link