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Brief descriptions are provided of 16 model literacy initiatives undertaken by community colleges in conjunction with local businesses or community groups. Following introductory comments by Barbara Bush, Tony Zeiss, H. James Owen, and Roy Romer, "Literacy: America's Great Deficit," by Earnestine Thomas-Wilson-Robertson and Tony Zeiss, reviews trends affecting the workforce including demographic changes, population migration, access to education and jobs, workplace diversity, women and minorities in the workforce, and urban problems. The bulk of the report consists of project descriptions, outlining the unique features, funding sources, operations, and outcomes of the following programs: (1) Developmental English and the Reading Center (C. S. Mott Community College, Michigan); (2) Targeted Learning Center (Clackamas Community College, Oregon); (3) People Educating People and Basic Education Skills Training (College of DuPage, Illinois); (4) Project SPHERE and Project ABLE (Community College of Rhode Island); (5) FOCUS (Delaware County Community College); (6) Center for Basic and Pre-Technical Education (Hawkeye Institute of Technology, Iowa); (7) Center for Adult Basic Education and Literacy (Joilet Junior College, Illinois); (8) Flenne's Workplace Education Project (Massachusetts Bay Community College); (9) Regina Workplace Literacy Program (Mississippi Gulf Coast Community College); (10) Workplace Literacy Skill Builders Program (Mt. Hood Community College, Oregon); (11) Initiative for Work Force Excellence (Piedmont Technical College, South Carolina); (12) Columbia-Willamette Workplace Literacy Consortium (Portland Community College, Oregon); (13) Vision 2000 Learning Centers (Pueblo Community College, Colorado); (14) Academic Assistance Program (Quincy Junior College, Massachusetts); (15) Learning Development Center/Stein Initiative (Red Rocks Community College, Colorado); and (16) Perdue Self Development Project (Vincennes University, Indiana).

In the concluding chapters, Tony Zeiss and Robert M. Ady consider literacy and workforce development as major national challenges.
CREATING A LITERATE SOCIETY

COLLEGE-BUSINESS-COMMUNITY PARTNERSHIPS

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In the more than 10 years since I became interested in efforts to build a more literate America, so much has been said and written about our country's need for educational reform. There is a steadily growing national awareness of our literacy problems and how they affect the quality of life for all Americans.

It is especially good to know that the literature on literacy is beginning to include more books that focus on trying to solve the problem. This book highlights 16 literacy initiatives that identify and meet the literacy needs of their communities. Grassroots initiatives like these are at the heart of our national literacy effort, and I applaud those in our community, junior and technical colleges who have taken on this important and necessary educational work.

These community-based colleges have responded in creative ways to the learning needs of adults in most instances, through partnership arrangements with local businesses and school districts. Many have made special efforts to raise additional support for their initiatives from a variety of private and public sources. These are the kinds of cooperative local ventures that we must encourage all across the country.

This book offers examples of how to help adults learn through corrective intervention, but we know that it is also essential to prevent problems from arising in the first place. In a sense, these initiatives can be seen as preventive as well, since we know that literate adults are more likely to raise children who will grow up literate.

America is rich in so many ways, but our human capital is our greatest resource. We must be committed to investing in effective education for everyone.

We all have a stake in greater literacy, and it's time for all of us -- educators, businesspeople, government officials, civic and church group members, and concerned citizens -- to respond to the challenge. By working together to make this a national priority, by doing whatever we can to support community initiatives like those in this book, we will leave our children and our grandchildren the splendid legacy of a truly literate society.

— Barbara Bush
The educational challenges facing our society are numerous and threatening, but we can overcome them if we clearly understand the problems and make a commitment to solve them. The challenges facing business and industry are equally foreboding, yet we can overcome them as well. The principle common foe of both educators and the business community is illiteracy. It is the purpose of this monograph to help establish the problem of illiteracy clearly and to present some remarkably successful initiatives that are committed to solving this problem. The National Commission on Excellence in Education brought national attention to the problem by publishing *A Nation at Risk* in 1983. Since then, scores of publications have reported upon the seriousness of this growing social menace. Practically every businessperson, politician, and educator in the country can quote the alarming statistics regarding adult literacy and the work force demands for better-educated workers. Little, however, has been presented on what is being done to address the problem.

This monograph features some outstanding adult and young adult literacy initiatives that have been implemented by selected community, junior, and technical colleges throughout the country. This presentation of effective literacy training programs provides a variety of successful methods for eradicating illiteracy among adults. These human development programs are aimed at the very core of our society's economic base. Without a learned population, no society can hope to compete in this global marketplace. Basic literacy training is economic development in its purest sense. Education is truly everybody's business.

Essentially, we must educate well to live well. The choice is quite simple: we must educate our people or be prepared to support them. Our nation's community, junior, and technical colleges have risen to the challenge. This great investment is returning high dividends as evidenced by the successful initiatives featured in this book.

I am particularly pleased that First Lady Barbara Bush, Colorado Governor Roy Romer, and PHH Fantus President Bob Ady agreed to contribute to this work. Their remarks present a learned and national perspective that is invaluable.

Tony Zeiss  
*Pueblo Community College*
A direct relationship exists between the level of adult literacy and the quality of the work force in the United States. The need for increased basic and technical literacy among adults has only recently been viewed purely as an economic development issue. In the past it was mainly thought to be an important activity, but one without a direct link to economic development, quality, and productivity.

Since its inception in 1974, COMBASE has supported model initiatives by community colleges. In fact, the first COMBASE monograph, published in 1977, was titled *Five Community-Based Programs That Work*.

This present monograph is in concert with COMBASE objectives. Sixteen community outreach initiatives are reviewed that address the problem of adult illiteracy and show the role of community colleges in helping to overcome this tremendous social problem. We must expand the literacy level in our work force, because of the increasing complexity of tasks coupled with the addition to the work force of new immigrants and others who lack the needed skills. The United States stacks up poorly with other industrialized nations in work force training. This issue must be addressed with a preparedness policy at the national level if we are to survive as a world power into the 21st century.

My sincere thanks to Tony Zeiss, Earnestine Thomas-Wilson-Robertson, and the many colleges that contributed to this monograph. It should serve as a road map for future action.

*H. James Owen*  
*COMBASE president 1989 1991*
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INTRODUCTION

Roy Romer, Governor of Colorado

As chair of the National Education Goals Panel, I am especially pleased for the opportunity to introduce this milestone book. At the 1989 historic education summit in Charlottesville, Virginia, President George Bush and the nation's governors stated for the first time in U.S. history their intention to establish clear national performance goals — goals that will make us internationally competitive. The community and workplace literacy initiatives featured in this publication represent the very spirit of our resolve to improve American education. Indeed, one of our six goals reads, "By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in the global economy and exercise the rights and responsibilities of citizenship."

This book presents a variety of effective approaches toward achieving this challenging goal. The featured community, junior, and technical colleges are to be commended for their efforts to empower people with the literacy skills needed to be competitive. The American Association of Community and Junior Colleges and COMBASE also should receive our commendations for developing and publishing these initiatives. It is hoped that colleges and human development agencies across the nation will choose to develop programs or fine-tune existing community-based literacy programs after reading about the successful models presented here.

As you read this collection of success stories, I hope you will view them in the context of a larger picture. That is, our human resource is our greatest resource, and we cannot afford to squander it. Truly, the most important business in America is education. Our citizens, all of them, have the right to receive an effective and useful education that will allow them to earn a respectable living and to compete in the world's workplace. The most valuable capital in any society is its people. Our ability to educate them will ultimately determine whether we can compete internationally and whether we can maintain a reasonable standard of living.

In honesty, we must admit that in this great country, thousands of adults are living on the fringes of society, unable to compete for jobs and provide adequately for their families. The Colorado Adult Literacy Commission conducted a series of public hearings throughout our state in the fall of 1990. It discovered the terrible toll illiteracy has taken on the lives of those without skills, on our workforce, on our businesses, and on the general welfare of our citizens.
The low literacy level held by many American workers threatens our standard of living. Only as American workers are able to fulfill the requirements of high technology companies and handle jobs that require multiple skills will we be able to keep jobs from being exported to other countries.

Small businesses, the life's blood of the economy in many states, can survive and thrive only if each employee can read and perform math skills proficiently. Employees must know how to learn new skills and to work well with co-workers to get the job done.

Social service professionals testified at the Colorado hearings on the link between illiteracy and mental illness, substance abuse, and battering. One shelter director talked of women who felt trapped in abusive situations because they lacked the basic literacy skills needed to obtain and keep jobs. A counselor from a drug-treatment center said limited funding made it necessary to rely on printed materials about drug and alcohol abuse to reinforce group counseling sessions. Those who lacked the ability to read and think critically were much less likely to confront their own addiction and conquer it.

The hearings also dramatically illustrated that parents with low literacy levels tend to have children who fail and drop out of school. While much public school reform tries to increase parental involvement in their child's education, these efforts are likely to fail with parents who lack basic skills. It is obvious that more must be done to help parents with low skills if the students who are most at-risk are to be helped.

But the picture is not all bleak. As the examples in this book illustrate, there are many adult education programs making a difference in people's lives. Once adults are successfully reading, or they have improved their other skills, they gain self-confidence. This new confidence enables them to further achieve. Adult literacy teachers speak of a transformation in their students.

I am convinced we can revolutionize our educational system into the most pro-active, effective, and responsible system the world has ever known. But it won't come overnight, it won't be easy, and it certainly won't come by itself. We need to take on this challenge with total commitment, and we must have the drive to succeed. In the end, I believe we'll be victorious, not because of a grand national remedy, but because of committed local efforts such as those featured in this book. In time, I hope we can see a series of publications that focus on the solutions to our educational challenges. This publication is a good beginning.
I.

LITERACY: AMERICA'S GREAT DEFICIT

Earnestine Thomas-Wilson-Robertson and Tony Zeiss

Each era mandates its unique set of work force competencies—competencies that sustain the economy of communities, states, and the nation. To continue competing in the global marketplace, we must first ensure that our citizens are learning the basic skills of reading, communication, and mathematics. These basic skills are essential before the higher-level technical skills of the workplace can be mastered. Kent Hughes, president of the Council on Competitiveness, underscores the need for more effective education to produce a high-quality work force: "Location strategies vary industry by industry. For example, there was a period back when firms were leaving New England and going south. The focus was on wages back in 1984-85. And, for a while, the focus was on low taxes. Our CEOs are saying that now the focus is on the quality of the work force and the quality of education" (Nachman-Hunt, 1991). Indeed, US West Corporation has recognized the importance of having a totally literate population and has sponsored many literacy education programs throughout a 14-state region. We know the technical skills needed for the current information age and service era, but the illiteracy problem has made it increasingly difficult to meet the work force needs of business and industry. Consider the following:

- Every fifth person hired in American industry is functionally illiterate and innumerate
- Seventy-five percent of American workers will need retraining by the end of this decade, according to the American Society for Training and Development (Brademas, 1990)
- In 1985, 27 million adult Americans could not read, as reported by Project Literacy United States (Hall, 1990)

Correcting this knowledge deficit will be a difficult chore, but it could be community colleges' opportunity. Certainly most Americans are concerned about the $3 trillion deficit of this country's treasury. It is no mystery to most of us that we cannot continue to spend our reserves. The fiscal deficit is frightening. However, our knowledge deficit can have far more catastrophic consequences. If our people are not equipped with the basic
literacy skills to make informed choices or to be productive in the workplace, our fiscal deficit will continue to grow. As a nation, we will receive continued pressure to support those who cannot gain productive employment, and our ability to compete in the international marketplace will stall. Truly, the potential costs attributed to our illiterate adult population, coupled with the personal tragedy involved for each of these people, makes illiteracy a major national issue.

During the era of an agriculture-based economy, completion of an eighth-grade education was a norm reference for literacy. Today, even a high school education does not necessarily constitute literacy. Recently, a majority of the applicants for entry-level positions with the New York City Telephone Company failed the required employment examination. Of the thousands of people who failed this test, the majority possessed high school diplomas. Although this occurred in the nation’s largest metropolitan area, it is merely one example of a mounting nationwide problem with an annual cost in excess of $6 billion, as described in Directions in Adult Education (Hall, 1990). Clearly, the high school diploma no longer guarantees literacy. Literacy initiatives must include our K-12 schools, but the need for correcting the literacy problems of adults is equally important.

Illiteracy retards individual employability, impedes job performance, incurs duplicated costs to the employer via worker mistakes, and imposes tremendous financial costs for retraining. Given the nature of the literacy problem, the excessive expense to business and industry, and the current and potential catastrophic impairments to the national economy, community colleges must briskly respond. To do this mammoth job correctly, we will have to consider the changing dynamics of our society.

Demographic Changes

Based on U.S. Census Bureau projections, the United States population will rise from 246 million today to a peak of 302 million by the year 2038, and then fall to 292 million by the year 2080. The elderly will increase 22 percent by the year 2030, while the under-35 age group will drop to 41 percent by the same year. The work force age population will be decreasing while the older population will be increasing. The 20-year low birth rate of Anglo-Americans figured into the equation shows a White population declining from 85 percent currently to 77 percent by the year 2040. African-Americans currently comprise 12 percent of the population and will increase to 15 percent by the year 2040.

Other races—Asians, Pacific Islanders, and Native Americans—will grow from 8 million to 24 million by the year 2040. The Hispanic population could jump to 13 percent as early as the year 2025 (La Franchi, 1989).
The increasing elderly population will be using Social Security and other services that will need to be paid for by a shrinking work force. How can we get along with a decreasing percentage of young people who are unable to function in an increasingly technical society? In addition, the shrinking White male population means we will have to depend more and more on women and minorities to satisfy the demands of the work force. These people must be trained to run an increasingly complex society, not just for their own good, but for the good of the country.

This is the challenge: we must build basic skills, provide competency-based learning with critical thinking skills, and provide quality education for all segments of our mosaic society.

Population Migration

A demographic trend to be considered in a local context is migration. Demographic studies show 18 percent of the population is on the move annually. Migration trends and patterns cause concern for urban, social, economic, and educational planners.

While urban centers are havens for migrants seeking work, a mass exodus in excess of one and a half million people left large cities for rural areas during 1970 through 1974 (Coates, 1989). The rural population growth rate of 5.6 percent contrasts sharply with a 4 percent rate of growth for the whole nation. The planning alone to accommodate the change is cumbersome. It is an even greater chore to convert this into economic development when no proactive strategic planning has been done. One can reasonably anticipate surges in population for which the local communities will be totally unprepared.

Interestingly, there has been a long-term trend toward the equalization of regional incomes. In the early 1980s, regional income varied from 50 percent below the national average to 50 percent above average. In 1974 this range had narrowed to between 15 and 20 percent. This trend toward income equalization may reduce regional differences in support for quality education and funds available per person on a statewide basis (Coates, 1990). This may provide an opportunity for regions with traditionally low literacy rates to catch up with the rest of the nation.

Migration into urban centers includes largely minority populations while the exodus is increasingly White middle class. Community colleges can satisfy the needs created by such population shifts.

Modern community colleges, both rural and urban, are re-examining training sites. Training can now be found in factories, offices, sales establishments, or anywhere actual work is being performed. In creating a well-trained work force, community colleges have
moved off the campus in many instances to provide on-the-job training, using the latest techniques and equipment, usually paid for by the employer. Two-year colleges have moved into specialized job training in the modern community college setting. Presently, we have training courses in manufacturing plants, agricultural centers, corporate offices, and machine shops, to name a few. This is a long way from the old machine shop training facilities that we used to use on campus (Maxwell, 1989).

**Access to Education and Jobs**

Low-income communities typically have a high level of illiteracy and little access to education, skills training, public services, and the financial support needed to raise the level of literacy. And industry is becoming less inclined to maintain operations in communities where there is not a literate, numerate, and trained personnel pool to take the jobs.

In contrast, more economically sound communities have a greater market for personal and professional services, a larger demand for manufactured goods, better access to training, higher secondary school completion rates, and a larger personnel pool for business and industry. Economically distressed communities have lower rates of college transfer, program completion, and employment; generally higher rates of crime and illiteracy; and higher numbers of high school drop-outs.

Unfortunately, the workplace is in need of skills and competency training that might be physically remote and inaccessible to those who most need it. Community colleges must take the classroom to the people, match the services with the need, and bridge the access problem with creative initiatives. Neighborhood-based family literacy centers appear to be a realistic delivery system for meeting this need.

Three forces are combining to increase the skill level required by the workplace. First, advanced technology needs operators with high reading and math capabilities. If there is a high rate of literacy, millions of jobs go unfilled while the army of the unskilled remains unemployed. As Berristein puts it, "the nation is facing a monumental mismatch between jobs and the ability of Americans to do them" (1988). Secondly, fast job growth is expected in high-skilled occupations, both in the service and the manufacturing sectors. And finally, a new management and production culture is developing in the United States. This new culture, based on the Japanese concept of work teams, requires that managers and workers alike need better analytical skills.

There are a number of obstacles to meeting these challenges. Business, industry, and multinational corporations often flee to foreign cities.
like Singapore, where wages are $20 per month. But corporate flight reduces access and stifles community growth, which may be even worse for business, in the long run, than having to pay higher wages. Access to literacy training, skills training, public and social services, and job placement is important for business and industry as well as for the unemployed. As the low-skilled, unemployed worker gains skills needed by industry, he or she can ultimately be more productive than the low-skilled, low-wage workers in foreign lands.

Community colleges and industry partnerships for the basic skills training in reading, math, and communication are most important because the job focus is no longer physically intensive, but mentally intensive. The lack of these basic skills means that neither the unemployed nor those in need of training can add a completely new set of skills to their portfolio when companies upgrade.

Diversity in the Workplace

The United States Department of Labor predicts that 85 percent of the new work force in the year 2000 will be women, minorities, and recent immigrants. As the number of White males and their influence diminishes in the corporate workplace, managers find it very necessary to orient all employees to cultural diversity in the changing corporate culture. This practice could, according to Gupta, prevent "unattended cultural melting pots from reaching a boiling point" (1990, p. D1).

In California, state legislation was formulated and passed to insure that higher education sought faculty and staff who reflect the mosaic of their respective communities. To insure that industry is in step with this emerging social structure, cultural diversity training and multicultural work teams are being utilized in the corporate workplace.

Some positive initiatives have come from the corporate group. For example, Boeing is requiring its 16,000 managers to attend a half-day diversity training workshop. Boeing also encourages workers of different cultural backgrounds to spend time together during breaks, lunches, and even outside of work (Gupta, 1990).

Another example is Security Pacific Bank. The bank's 2,300 salaried employees are required to attend an all-day seminar on diversity in the workplace. To many employees' surprise, a group that initially seemed homogeneous suddenly looked quite diversified. The workers described their cultural backgrounds as White, Black, Native American, Asian, Irish, Scottish, German, Jewish, female, Californian, Seattleite, and even Republican! Stan Savage, Security Pacific's president, said the seminar was a small part of the bank's effort to begin diversifying its work force. The bank has
committed $800,000 to the efforts this year and has hired a diversity manager, Ruby Okada. Okada, who reports directly to Savage, hopes to develop a mentor program that helps bring more women and minorities into management positions and into a core group program in which workers will meet to discuss diversity issues and a training session for nonsalaried employees. The bank has developed an accountability program in which managers are required to set goals in diversity understanding or hiring and promoting of women and minorities and submit regular progress reports (Gupta, 1990).

Companies like Boeing and Security Pacific are visionary. Without diversity, any organization reduces its maximum power. The demographic, ethnographic trends and forecasts do affect the social, political, and economic dynamics of American society and business. An illiterate workforce cannot produce a quality and easily marketed product. If a product is returned because of defective parts or safety violations, the company is faced with financial and legal risks. Developing a well-trained, literate workforce by capitalizing upon the strengths of our newly diverse population is clearly in our nation’s best interests.

Women in the Work Force

In recent years the most prevalent demographic trend has been the emergence of the female, single-parent head of household, who is often poor, illiterate, and innumerate. The number of female-headed households has increased by 250 percent since 1950. Further, these same families comprise 41 percent of all poverty-level families. The limited income of these families creates new demands and stresses on all public services, including schools (Coates, 1978).

With the increasing female head-of-household population, it becomes imperative that women return to school to close the gap between illiteracy and economic development; between personal, social, and financial enslavement and independence; and between acquiescence and an enriched quality of life.

The new freedom, as literacy has been referred to, is not without costs. A parent with children under five might choose to delay literacy enhancement, remediation training, college, and vocational studies until the children are in school, she can comfortably manage transportation to and from the school site, and she can access support services (financial and counseling, guidance, life management assistance, etc.). Society gives the welfare recipient even less incentive to obtain literacy and job training. For example, if welfare will provide her with $1,100 per month for herself and three children, a Section 8 Housing Voucher that pays all but $165 of her rent, a monthly food stamp allowance of approximately $200, free medical care
for her and her children, and a clothing allowance, she may ask, "Why should I leave my house to get training to acquire an entry-level job where my bring-home pay is $1,400 or less? I'll pay $600 for rent, $400 for food, $300 for an after-school sitter, and $100 for transportation to and from work, work clothing, and lunch at work."

There is no incentive to change. Business and industry must collaborate with government to help create a realistic incentive for welfare dependents to seek skills training and self-supporting employment. With the current flaws and contradictions inherent in our welfare system and the government policy which regulates it, the welfare recipient will likely stay home and do nothing to become less dependent. To this end, we should take a serious look at the benefits of "learnfare" and "workfare" programs.

In spite of the above scenario, women are returning to school at a higher rate than men (58 percent), trying to turn literacy into paychecks and gain a heightened economic prospect. If census data are correct and trends continue, the female population will soon outnumber, outlive, and hold more jobs than the American male. These figures indicate that women must be specifically factored into any victory over illiteracy and into the economic future of American businesses.

**African-Americans and Hispanics**

Besides literacy and workplace diversity for women, minorities share interesting population and education trends that make their struggle no less difficult.

Over the next 20 years, Hispanics and African-American college-age groups will increase significantly. The White college-age group will decrease, but Whites will graduate at a higher rate from high school. As Dale Parnell observes, "The data on minority enrollment are not as precise as needed, and the year-to-year changes can be dramatic; we can safely observe that urban colleges carry a heavy responsibility to actively recruit and educate larger numbers of ethnic minority students and to serve as a positive force for the social mobility of disadvantaged youth" (1990, p. 119).

The minority adult learner represents approximately 12 percent of the six million plus adult learner population. Our changing ethnic populations will bring more minorities into the work force. These new minorities cannot support themselves or the nation's economy without the literacy and numeracy skills needed to advance and maintain a positive economy for the United States. A failure to address the needs of our unskilled minorities will simply decrease our ability to compete on a global scale.

Minorities are lagging behind in reading and math skills. Should the present trend continue, we will be producing proportionally fewer minority
professionals in science and engineering, according to the National Science Foundation. The NSF suggests there could be a cumulative shortfall of science and engineering graduates through the year 2000. To create and maintain a competent work force, the seeds of interest in science, technology, and economic prosperity must be planted very early in the minds of youth (Bernstein, 1988). Further, if the pervasive underdevelopment of minority communities prevails, and if the demand on primary and secondary educators' time is to discipline rather than teach, the whole nation will suffer because of this undereducated population.

Hispanic population growth does not translate into Hispanic employment growth in business and industry. The lack of basic skills training and education is the major contributing factor to Hispanic unemployment. Fifty-two percent of Hispanic adults have not earned the high school diploma, and 37.7 percent only have an elementary education through the eighth year (Parnell, 1990). Several studies show a decline in Hispanic baccalaureate degrees between 1980 and 1985 but show a clear increase in Hispanic enrollment at community, technical, and junior colleges where Vocational English as a Second Language programs ease access. These statistics are a clear indication as to why population growth has not been translated into employment growth.

Hispanics and African-Americans are at risk of failing in schools unless schools and colleges focus considerable attention on developmental programs. Students are emerging from secondary schools underprepared or unprepared for college and the workplace. Parnell has suggested that some proactive federal measure on the order of an educational Marshall Plan might be feasible for addressing this urban problem (1990). Without literacy and basic skills training, we will see few Hispanics or Blacks in mid-level and upper-level industry positions and we will fail to utilize a sizeable portion of our human resource potential. The community college seems best prepared to meet this challenge. Forty-seven percent of the African-Americans who are in a college are in community colleges, and Hispanics are six times more likely to attend community colleges than four-year colleges (Estrada, 1988).

Asian Growth

During the 1970-80 decade, Asian growth was in excess of 140 percent (Estrada, 1988). The Vietnam War, Asian emigration, and the new Amerasians (children of American and Asian parents during the Vietnam War years) contributed to this growth. Further, Japanese economic development could no longer be contained on the island of Japan. The Refugee Act of 1980 brought an additional influx of Laotian, Cambodians, and...
Vietnamese into the United States. Many of these individuals came into the country with training and expertise in a broad range of vocations. Programs were set up at community colleges to do an experimental portfolio analysis, and doors have been opened for them through community college programs. The Asian influence on the global electronics market indicates that they can and have held their own in a sophisticated industry. The Asian culture emphasizes education. College enrollment for Asians is up. In fact, 26 percent of the 1987 freshman class at Berkeley was Asian (Parnell, 1990). Although our new Asians do not seem to be at serious risk, they too must be factored into our work force diversity and provided with liberal education and training opportunities.

The Urban Challenge

There is a correlation between illiteracy and low economic development in the United States and between low levels of educational training and high unemployment. The challenge is no longer about winning the economic war; it is really about just holding the line. Community colleges can help hold the line.

Literacy enhancement is the salvation for national economic development. The management of diverse human resources must be such that a company can manufacture a quality product at a high rate of productivity for a competitive market. The wealth is not just in oil, robotics, or agriculture—the wealth is within our human resources. Proactive measures on the part of educators and industrial leaders could convince national policy makers to appropriate financial resources into jobs, not jails, into education, not correctional administration. The criminal population in the United States is equal to our sixth largest city. If it costs the nation $24,000 a year to house a prisoner, we might be better off spending $15,000 per person to educate them. Community colleges have an opportunity to provide the impetus and leadership to the national literacy agenda. These literacy initiatives must be pervasive throughout urban America, where the highest illiteracy rates tend to appear.

A Role for Community Colleges

What do low levels of literacy and our sluggish economy mean for community colleges? They mean that community colleges must provide the community, including business and industry, with the leadership and coordination capabilities of the college; assist the community in long-range planning; participate in economic development; join with individuals and groups in attacking unsolved problems; provide for all age groups access
to educational services and vocational training designed to meet the needs of the community and the college district at large; become a center of community life, literacy, and training by encouraging the use of college facilities and services by community groups; embrace diversity; and promote the cultural, intellectual, and social life of the college community and the development of skills for the profitable use of leisure time and life-long learning (Harlacher, 1969). Finally, the community college must be the source of community invigoration and leadership development.

In this era of a service-based economy, community college leaders must encourage corporate industry to stay in the community and implement partnerships that serve all aspects of the community, develop long-range strategic plans with industry, and work collaboratively with junior high schools, high schools, and universities on life-long learning, articulation, and blended educational services to leverage the resources and expertise of each.

As it now stands, the current level of literacy and training preparedness impedes economic growth. It retards the development of diversity and it frustrates our global leadership abilities. And, it should be noted that illiteracy is a problem for Americans of all races and cultural backgrounds.

In communities where there is a high level of illiteracy and low economic development, high drop-out rates, high crime, high levels of drug abuse, inordinate numbers of single-parent families, low income status, high rates of child and spousal abuse, and many other appendages of social trauma, community colleges must lead. If the community college is to work toward reducing illiteracy and increasing the economic welfare of a community and its people, the college must remediate those entering its doors, raise students’ competency portfolio to college-level work, help students to get jobs, and be prepared to train workers for business and industry.

All higher education institutions have a mutual stake and responsibility in the preparation of a literate and competent work force. The responsibility and the accountability is not solely in the numbers graduated, but in the quality of their students’ education and training. College-level educators have long been critical of public education in primary and secondary schools, but some say higher education is in equally bad shape. Former UCLA Executive Vice Chancellor and English Chairman William Schaffer says college graduates are “semi-literate, largely unskilled, and ignorant of entire academic fields” (“UCLA Professor Claims Graduates Unskilled,” 1990). If this is the case, the problem of illiteracy is more deeply imbedded than any of us know. Therefore, pointing the finger to any one source does not solve the problem. The responsibility and accountability for education and training is to be borne by all shoulders involved.

The community college is unique, precisely because the scope of its mission is to serve all segments of a community for the total good of society.
Literacy training, basic and developmental skills programs, institutes, seminars, and conferences help to develop healthy communities. A cutting-edge curriculum along with support services and cultural, occupational, and professional programs is not yet fully provided by many colleges. To face the mandate of literacy training, community colleges must produce a cohesive interrelationship between the college and its community.

In the final analysis, community colleges appear to be both geographically and educationally positioned to lead the way toward correcting America's great literacy deficit.
The purpose of this monograph is to draw attention to the growing need for a more literate work force and to demonstrate some practical and efficient methods for meeting this need. To accomplish this purpose, selected examples of adult literacy training initiatives from COMBASE member colleges are presented. The featured initiatives present a brief but insightful representation of how community colleges across the nation are responding to this social challenge.

Not every model presented here is directly connected to business and industry. Each, however, is contributing to the development of our country's human resources on which business and industry depend for their work force.

Each of the featured authors will be pleased to describe his or her programs in greater detail if contacted.
Purpose:
The class offerings discussed in this chapter were designed to improve the reading and writing skill levels of community college students. Charles Stewart Mott students represent all levels of ability and have varied reasons for attending, including job training and retraining.

Unique Features:
Developmental classes are structured so students receive as much individual attention as possible. Computers play an important part in this individualization of instruction, both in the reading and developmental English courses. Students are pretested on entry into the class using Nelson Denny for reading and a writing sample for English. These results provide the basis for determining a plan of remediation, initiated by the instructor in conference with the student and implemented by the instructor with computer assistance as appropriate. Teachers in these classes have specialized training above that required for college teaching to meet the very specific needs of the target population. Teachers are required to have specialized training provided by Mott Community College instructors.

Funding Source(s):
The program depends on internal funding. No current grant funding is being used.

Initiative Description:
Mott Community College, an urban institution located in Flint, Michigan, has long recognized the need for specialized developmental courses in the basic literacy skills. The reading classes, developed in the 1960s, are structured so each student follows an individual program planned by
the instructor in conferences with the student. The computer component was added to the Reading Program in January of 1990.

The computers are combined with book-based work, Education Development Laboratory-controlled (EDL) reader work, and individual conferences with the instructor. Several instructors are employed in the Reading Program, but all must be trained by the coordinator of the Reading Program before being considered for hire. This is to ensure continuity from section to section. Students are tested using the standardized Nelson Denny Reading pre-, mid-, and post-tests so teacher evaluation of student performance does not impact the amount of observed reading progress.

Mott has offered remedial developmental English for many years under many course numbers. Currently, developmental English is a two-semester sequence. The first semester concentrates on the basic sentence skills, grammar, and syntax. The second semester gives more opportunity for students to practice writing skills they have learned. The two-semester sequence was instituted to alleviate both student and faculty concern that developmental students were not receiving sufficient time and practice to internalize the material in English courses. The two-semester sequence has remedied that situation somewhat. The two courses are taught using a modified workshop approach whereby students produce and edit their own material. A collaborative classroom has been developed which closely follows the precepts of adult learning theory. The most unique feature of the Developmental English Program is the amount of student-teacher interaction that is engendered using this approach. The program is labor-intensive, but the quality of the results shows that such an approach is worth the extra energy.

Many of the jobs that local people are training or retraining for require some ability to write cogent, concise prose. Developmental English, using conferences with each student, tailors writing skills to the individual once the basics of English prose writing have been mastered.

Because of a wide variance in the skill levels of the entering student population, many students need extra help in some aspects of English composition. To accommodate these skill variances, a computer-assisted laboratory facility is available for individual students or entire classes to come for extra tutorial-type help. The computer lab has received tremendous use in the semester it has been available.

Results:

The reading course, in existence since the 1960s, has produced an average of two years' growth in reading comprehension. The past semester, with the addition of computer-assisted instruction, that average has grown to 2.4 years.
Students who satisfactorily completed the reading course were twice as likely to complete their academic program as those who did not take or did not pass the reading course.

The Reading Center serves approximately 1,100 students per fiscal year (900 per academic year). The reading course is also available via a telecourse that serves approximately 100 students per fiscal year.

The majority of students have been recommended for the reading course based on placement test scores below 11th-grade level. Some students elect to take the course for personal gain. There is no mandatory placement for students, yet classes show 90 to 100 percent of maximum enrollment each semester.

The local hospital sends its nursing students to the Mott Reading Center if their reading scores are not up to college level. The improvement in reading level helps to ensure success in other aspects of the nursing curriculum.

The Developmental English Program is much newer than the Reading Program and is, therefore, somewhat smaller in number and narrower in scope. Developmental English serves approximately 900 students during the fiscal year. Students who take these courses are those who have placed low on the writing sample portion of the placement test, those who have tried the college-level composition course and met with difficulty, and those students who have been out of school for several years and feel the need for some “brush-up” before attempting college-level work. Like the reading course, enrollment is not mandatory.

Specific statistics are not currently available on success rates for developmental English students. However, student comments indicate a successful program. Students report that since completing the developmental English sequence, they have more confidence in writing and are more at ease when confronted with a writing task.

The college benefits from these programs by having students more capable to meet the academic demands placed upon them in other classes. This benefits the college by increasing its percentage of successful students. Such successful programs benefit the community and business by producing graduates who are literate and qualified for the jobs they seek. Businesses need not spend extra resources on developmental education to bring workers to an acceptable level of literacy to successfully perform the job for which they were hired.
TARGETED LEARNING CENTER

Dian Connett

College:
Clackamas Community College, Oregon City, Oregon

Purpose:
Rural Clackamas County, Oregon, has many unemployed, placed, and undereducated workers. The Targeted Learning Center was established by Clackamas Community College in 1986 to address the problems caused by an undereducated work force. Objectives of the program are to improve basic educational skills in the work force and to provide unemployed adults with skills necessary to obtain employment.

Unique Features:
Businesses and public agencies provide funds for students to attend the TLC. At the request of a business, workplace audits performed by TLC instructors identify needed job skills. Then, workers who need to improve skills refer themselves or are sent to the Targeted Learning Center by employers. Agencies buy "slots" to send students for instruction.

Informal and standardized test results are used to determine levels of placement and proficiency. After the initial testing is completed, instructors and students work together to set short- and long-term educational and job goals. Individuals may aim for a GED, a 45 wpm typing proficiency, an upgrade for writing skills, or improvement of college placement test scores. Students who are referred by agencies meet regularly with instructors and agency representatives to ensure that they are on track for employment or training. Employed students provide their employers with a copy of pass/no pass grades at the end of the term if the company needs proof of enrollment. The reports in no way reflect levels of skill functioning or areas of deficiency. Thus, the students' privacy is maintained.

The average reading level of the majority of entering students is seventh grade; math proficiency usually ends at multiplication of whole numbers; and sentence and paragraph writing skills need improvement for most. The individualized, open entry/open exit computer-assisted program uses flexible grouping in math, grammar, writing, reading, phonics, and spelling. Multi-sensory techniques are used to address learning style differences in almost
all lower-level classes. Instructors from the Office Administration and English departments teach transition typing and writing classes. Successful completion of these classes eases students onto campus and into other programs that prepare them for the workplace.

The center is tailored to the needs of high-risk learners and is open 52 hours per week during the fall, winter, and spring terms. It operates on a somewhat abbreviated schedule during the summer. The atmosphere is calm and relaxing. Students bring food when they wish; coffee is provided.

Funding Source(s):

TLC is administered by Clackamas Community College under the direction of the Department of Alternative Programs and Continuing Education. Students, agencies, and businesses pay tuition by purchasing blocks of instructional time. Payment procedures are geared to the accounting needs of the individual business or agency; most are billed by the college registrar's office.

Initiative Description:

Clackamas County has been hard hit by lay-offs due to cutbacks in the timber industry. High unemployment rates among those workers and a need for qualified workers by manufacturing interests in the county spurred the need for a job-oriented, nontraditional adult center that would upgrade skills in a minimum amount of time.

Public agencies need training for potential workers who are undereducated or who need retraining due to lay-offs or injuries. Businesses need qualified workers. Instructors at the TLC keep abreast of needs of various vocational training programs and gear basic skills instruction toward that training or toward whatever educational or job goal a student may have.

The TLC is often considered a stepping stone to employment, better job security, and more education. Students gain basic skills that ready them for vocational training or specific skills that are needed in a given workplace. For example, when a business requires workers to understand the variances allowed in manufacturing, workers may come to the center to learn more about decimals; when an agency that is responsible for retraining establishes an employment plan with a client and learns that typing is needed for a potential job, it may send individuals to enroll for individualized keyboarding on the computer or for a typing class; when individual students decide to tackle long-needed reading proficiencies, they pay their own tuition in order to learn specific needed skills in the individualized, relaxed atmosphere. During the learning process, students and instructors define and redefine goals to include skills assessment and real-life situations. Availability of funding sources and potential resources for training and employment
are investigated. Students who are working with agencies are able to meet with counselors and instructors so that all agree upon realistic educational goals.

Results:

The TLC has a student population of about 100 per term. About 60 percent of our students are recruited from medium-sized industries and 40 percent from public agencies. Student ages range from 18 to 68, with an average age of 30. The majority of day students are women and the majority of night students are men.

We measure our students' success by how close they come to achieving individual goals. Goals include skills improvement, GED completion, college placement, and better scores on employment tests.

Our program success is measured in several ways. The standardized testing that we do shows some tangible results, but anonymous student surveys yield about 98 percent positive comments. In addition, after six months of intense agency referrals, agency case managers relate that they are very pleased with our ability to sort through barriers to education and to maximize growth. We measure our success with business clients by individual student satisfaction, improved criterion-referenced or standardized test results, employer feedback, and increasing referrals. One of our larger business clients provides tuition to TLC as an employee benefit.

Recently, one of our job-seeking students, a 55-year-old, happily reported that job hunting was so much easier than it had ever been before, because "now I can read the ads. Before, I had to wait for my wife to get home so she could read the newspaper to me." That is the kind of success we consider very valuable. Interaction of our students with their community is an added bonus. Lesson content stresses not only job skills, but also current affairs, consumer awareness, and controversial subjects that spark critical thinking and verbal interaction.

TLC's purpose is to benefit the business community and the general business climate of the county by upgrading worker skills. Peripherally, as businesses increasingly use our service, the community college increases its full-time equivalency enrollment. This increases our credibility in the community, a connection that also helps the college pass its operating tax levies.
College:
College of DuPage, Glen Ellyn, Illinois

Purpose:
This college’s literacy effort is directed toward adults who read below the sixth-grade level unless employers require a higher skill level for the work site. Because they have failed to succeed in the formal education system, adult nonreaders and low-level readers are reluctant to return to a classroom setting to seek help and improve their skills. College of DuPage has discovered they succeed and flourish in small group or one-on-one teaching situations.

Unique Features:
DuPage established the People Educating People (PEP) program as a unique element to defray the cost of professional individualized tutoring. This program utilized approximately 200 volunteers in 1990 to provide services to over 3,000 students. Some of the roles volunteers play in the PEP program include:

Classroom aide. Under the direction of a classroom instructor, volunteers assist small groups of adult students or tutor individual students enrolled in a class. Classroom aides assist once a week for three hours or twice a week for two hours.

Individualized tutor. Volunteers assist adults formally enrolled in the ABE/L (Adult Basic Education/Literacy) and ESL (English as a Second Language) programs. Tutors meet one-on-one with an adult learner for a minimum of one hour per week. Tutors commit to at least two hours of service per week and can come from the plant or business site or the community. College staff members screen them for this position based on their communication ability, supportive personality, and confidentiality.

Independent Tutor. Volunteers assist adults not formally enrolled in an ABE/L or ESL program. Independent tutors work with an adult learner for at least one hour each week in an open lab concept. Here tutors commit
to at least two hours of service per week where adult learners seek assistance without a formalized program. This is especially helpful when enrolled in other college classes.

Volunteers also assist as clerical, administrative, or public relations aides with a varied time commitment.

Volunteers have access to teaching materials and are provided with tutoring and professional support at their designated sites. They are trained and managed by professionals and have become an integral and essential element of the literacy program delivery service.

In many businesses, employees feared losing their jobs if the company found out they could not read or do simple math functions. They were less inclined to allow a tutoring situation to occur, due to personal embarrassment or job competition. Management, labor, and supervisory frustrations occurred over the loss of human resource capital needed to regain the competitive edge in today's marketplace. Any company that attempted to implement statistical process control procedures discovered the need for literacy assessment of the workers. If a worker was unable to analyze or do the calculations required of basic math operations without a calculator in hand, the efficiency of an automated production line decreased and the whole purpose for implementing a new process was defeated. Often islands of automation were developed within a manufacturing plant without implementation across production lines due to the inadequacy of the workforce to handle the new technology. Low productivity, workplace accidents, absenteeism, poor product quality, and high personnel turnover were traced to functional illiteracy.

This frustration was not limited to manufacturers. The service industries of hospitality, health care, and retail also formed partnerships to combat illiteracy through tuition reimbursement benefits, consortium business contracts with the college, and released time for employees to attend college classes.

Promotional efforts to employees were another unique feature of the College of DuPage literacy enhancement effort through its business and professional institute, Basic Education Skills Training (BEST). A familiar program to most companies for its on-site training, staff members held 12-hour day open houses at the work site in order to accommodate shift changes. They would meet with employees in an open-door, relaxed yet confidential atmosphere. This allowed the staff the opportunity to alleviate fears of assessment and discuss the need for literacy enhancement for job security and the personal benefits of literacy education. These open houses were advertised internally by management and labor leaders, and employees were encouraged to visit voluntarily during shift changes, lunch, and break times.
Assessment was a critical factor in this process in order to target the skill training needed for an efficient learning curve. In a range from preliterate to college-level, math, reading, and language skills were evaluated and ranked alongside job audit requirements. College of DuPage staff members analyzed the job sheets, production line forms, technical manuals, personnel forms, and safety materials using the Fry Readability Index and an item analysis process. Companies often received composite scores of the assessment so that strategic training plans could be developed. No individual scores were given unless employees signed grade release forms.

College staff met with employees individually to counsel and interpret their scores. Often this would result in a referral to higher-level, job-specific technical training which could further their advancement if literacy was not a question. When literacy was an issue, this counseling session would discuss the interference in the workplace and the benefits of investing the time and effort into program participation.

Arrangements for providing instruction involved various delivery methods and time-sharing options. Some companies negotiated a sharing of work release time and personal time. If a class was scheduled for one and one-half hours, then 45 minutes was released company time and 45 minutes was personal time. Some companies arranged classes immediately prior to or after shift changes so that individuals could attend on their own time but conveniently at the worksite. Some companies would pay tuition, books, and supplies for individuals to independently study a skill-building program when they were unable to attend a class. An independent study instructor would monitor learning and report student progress to the college and company liaison.

Funding Source(s):
Funding was provided by the Illinois Library Literacy Program, the Illinois State Board of Education, and contracts with businesses.

Initiative Description:
College of DuPage has been involved in direct service delivery toward literacy enhancement for over 10 years. These services have expanded to meet the diverse and changing demographics of the district. College of DuPage Open Campus initiated a multifaceted approach to serving its constituents and businesses. Cooperative relationships developed utilizing multiple site locations and unique instructional delivery methods in order to offer individualized, small group tutorial, and classroom approaches to this need. By reaching out to social service agencies, religious associations, small businesses, service industries, and manufacturers, over 7,000 individuals received services last year.
Adult illiteracy has been recognized as a national issue with Census statistics noting one out of five adults or over 27 million are reading at or below the sixth-grade level. Functionally illiterate, they are unable to read utility bills, food or medicine labels, simple directions, newspapers, job forms, technical manuals, and production line instructions.

Illinois ranks 34th in state literacy, with two million adults functionally illiterate. According to a 1989 special project conducted by Southern Illinois University Edwardsville, as many as 147,000 adults within the College of DuPage district are estimated to be unable to be effective in everyday life because of illiteracy or low skills. Of the 828,668 adults who live within the college service area, 29,665 have less than a high school education and over 59,000 speak a first language which is not English. Employers complain about not being able to recruit workers who can handle simple basic math functions or read employment forms. Dislocated workers are having difficulties applying their previous work experience to the new emerging industries due to the increasing sophistication of the technical manuals. Product quality and productivity are the key ingredients to training programs throughout the district; however, all training is connected to the literacy capabilities of the work force.

Results:

The People Educating People program utilized approximately 200 volunteers and provided services to 3,760 adults in 1989 and 1990. A six-month to seven-year growth in skill ability was noted within one year of the People Educating People program and the Basic Education Skills Training program. Due to increased individual motivation and the achievement of skills needed, employees were encouraged by their successes and often requested other courses to be delivered at the work site. Training managers of some companies noted the promotion of some of the enrolled employees into supervisory positions.

Employees of participating business and industry programs and district residents who have taken the literacy enhancement classes have encouraged others to enroll. As one graduate of the Basic Education Skills Training program noted, "There is no better thing a company can give employees than the opportunity for an education." As companies are discovering, utilizing expenditures to enhance their human capital is more critical than capital equipment expenditures to regain the competitive edge.
PROJECT SPHERE AND PROJECT ABLE

Nancy V. Abdood

College:
Community College of Rhode Island (CCRI). Lincoln, Rhode Island

Purpose:
The three programs implemented by this college were designed to provide prevocational academic instruction, ESL instruction, high school equivalency preparation, and other basic skills to educationally and economically disadvantaged Rhode Island residents.

Unique Features:
CCRI has made a conscious effort to incorporate literacy components into several programs designed to provide job training and support services for the educationally and economically disadvantaged, single parents and displaced homemakers, and populations with limited English proficiency. Unlike many community colleges, CCRI receives no Carl D. Perkins Vocational-Technical Education Act funding for literacy programs; in Rhode Island, the funding traditionally goes to Adult Education Centers operated by the secondary schools.

Funding Source(s):
The programs use Rhode Island Department of Adult Vocational Education and Rhode Island Job Training Partnership Act (JTPA) funds.

Initiative Description:
The Community College of Rhode Island, as a comprehensive community college, has a responsibility to provide state residents with access to higher education. This means offering the college-level courses students need to successfully transfer to a four-year college or to attain the skills required for a satisfying career in a technical field. However, in some cases it also means providing residents with basic skills required to function in the workplace. Several grant programs offered through CCRI provide basic literacy and job-readiness training.
The Job Training Partnership Act has awarded CCRI a total of over $180,000 to offer academic testing and assessment of disadvantaged adult
populations in most state communities. Testing is performed at the Department of Employment Security Intake Centers. After assessment, residents may enroll in GED preparation, basic ESL, or basic education.

A special program, Project SPHERE, offers literacy training to single parents and displaced homemakers. Services available through this program include educational and vocational counseling, career and vocational exploration, interest and aptitude assessment, vocational-technical training information, postsecondary educational information, high school equivalency preparation, child care, skills assessment, prevocational academics, and access and referral to supporting agencies. Project ABLE provides adult bilingual educational services, counseling, vocational information, citizenship training, and GED preparation to immigrants and refugees. In the upcoming year, ABLE services will be expanded to focus on “pre-beginner” English classes for the general population as well as for populations with limited English proficiency.

In the past decade, Rhode Island has seen an influx of Hispanic and Southeast Asian refugees. The demand for ESL at the noncredit, precollege level has increased and can certainly be considered literacy training because it is providing residents with the basic communication skills required for entry into the work force.

Results:

The JTPA funds received for prevocational academics and related instruction serve about 500 people a year.

Project SPHERE served over 1,800 people during the 1989 fiscal year with a separate grant totalling $158,000. Individual counseling is provided to inform clients of available services and to advise participants regarding training and educational options. Students were referred to ESL, high school equivalency classes, and vocational training. A total of 270 students were served through Project ABLE. Of these, 13 enrolled in nursing assistant training, 49 enrolled in GED classes, 95 enrolled in ESL, and 27 enrolled in citizenship classes.

Of the 1,844 individuals who received a GED in Rhode Island in 1990, 635 individuals went through CCRI to attain the certificate.
FOCUS
Susan Rapp

College:
Delaware County Community College, Media, Pennsylvania

Purpose:
The goal of this project is to break a pattern of illiteracy and marginal literacy, as a means to connect residents of Chester City, Pennsylvania, to opportunities for employment, job skills training, further education, and an enhanced quality of life.

Unique Features:
The FOCUS program has been designed to provide flexible services and scheduling to fit the needs of each adult learner. A learning environment has been created where mastery of specifically designed competencies has allowed program participants to progress at their own pace through an open-entry, open-exit curriculum from zero through 12th grades. An important aspect of the project has been the merging of all educational activities with life skills development. Services of the FOCUS program are open to anyone 17 years of age and older.

Funding Source(s):
The FOCUS program was originally funded by a grant from the Pew Charitable Trusts. Created in 1987, grant funding by Pew expired in December 1990. Continuation of the FOCUS program will be contingent on obtaining funding from another private funding source.

Initiative Description:
Delaware County, while having a high overall rate of employment and abundant job opportunities, continues to have a significant number of residents without adequate job skills and sufficient basic literacy skills to obtain and sustain employment. Many of these individuals are currently receiving public assistance in one form or another. The greatest concentration of poverty and unemployment exists in Chester City, an island of deprivation within a region where, overall, significant economic development has replaced the stagnation caused by the shift from a manufacturing to a high technology and service economy. Unemployment and illiteracy are disproportionately high in Chester City, where 43.7 percent of the adult population
have less than a high school diploma. 29 percent are functionally illiterate, and the unemployment rate stands at 12.2 percent, compared with 3.0 percent county-wide.

Based on the overwhelming need to provide Chester residents with the tools to overcome problems wrought by unemployment and illiteracy, the Pew Charitable Trusts commissioned a task force to recommend programs to address these needs. The concept for FOCUS was developed in a collaborative effort by Delaware County Community College and the Delaware County Literacy Council. The result has been to create a unique and highly responsive approach to adult education encompassing a broad spectrum of services. Aimed at adults who are 17 or older, with no limitation on skill level or financial means, FOCUS has directly served over 400 clients and provided referrals and information to many others.

FOCUS provides instruction in reading, writing, and mathematics from zero- through 12th-grade levels. After an individual intake interview with each potential participant, appropriate literacy measurements are used to determine the participant's skill levels. Project staff create an educational plan of activities to fit the needs of the participant by working with the participant's intake interviews and assessed skill levels. Progress notes for each client are recorded by each instructor after every class or tutoring session. Small group sessions or one-on-one tutoring is offered. Groups are divided into basic literacy, pre-GED, GED, and review refresher classes. Students reading below a fifth-grade level are placed with a literacy coordinator; volunteer tutors are recruited to work with these clients one-on-one.

In addition to direct literacy services, FOCUS also offers opportunities for clients to improve life skills and to learn to manage the practical aspects of life with more ease. Workshops are offered on subjects like selecting nutritious food, opening a bank account, registering to vote, and parenting. Guest speakers are brought in and field trips are arranged. Appropriate reading materials and exercises link these workshops to basic skills development.

Instruction is also provided to clients who wish to enter or retain a particular job. Refresher instruction has been offered in the past for clients in paralegal, nursing, cosmetology, and apprenticeship trades. Instruction has also assisted individuals preparing for military entrance exams. In some instances area employers have referred employees to FOCUS so that by improving their literacy skills they can become eligible for job promotions and increased responsibilities.

A recent sampling of current students enrolled in the FOCUS evening program reveals that they are employed in the following areas: pipefitter, dishwasher, janitor, nursing assistant, cook, building maintenance worker, factory worker, security guard, housekeeper, and nurse's aide. Their reasons
for enrolling at FOCUS are generally to obtain a better job by increasing their marketability with improved literacy skills.

For clients who are ready to enter the job market, a series of job success workshops is offered. Topics in this series include how to fill out an application form, how to write a resume, how to participate in an interview, appropriate dress and demeanor, and how to act on the job.

Results:

Since its inception, FOCUS has directly served over 400 individuals. Many others have received assistance in the form of referrals to other agencies more appropriate to their needs. The program serves a wide range of individuals. Ages have ranged from 17-year-old high school drop-outs to elderly grandmothers to adults in their middle years who wish to find better jobs. Since the program provides baby-sitting services, there are many single mothers enrolled in the program. Because the program is open-entry, open-exit, FOCUS clients generally remain with the program until their individual goals are met. This may include obtaining their GED, preparing for an entrance exam for the military, or simply improving their literacy level. Therefore, success is measured in terms of whether or not a client has met individual goals.

It is difficult to maintain accurate statistics on job placements since FOCUS does not provide direct job placement assistance. However, many FOCUS clients who are interested in obtaining a job remain with the FOCUS program until they have been hired. Some continue with their programs at FOCUS even after they have obtained a job.

FOCUS offers several direct benefits to the community. It offers an opportunity for residents to break the pattern of illiteracy which has prevented Chester City residents from obtaining meaningful employment. The program is also a resource for area employers who want to help employees develop better literacy and communication skills. Finally, the program meets the college’s own mission of providing service to all members of the community.
Center for Basic and Pre-Technical Education

Margaret M. Skold

College:
Hawkeye Institute of Technology, Waterloo, Iowa

Purpose:
The purpose of this program is to serve the basic and pretechnical education needs of adults in Hawkeye Institute of Technology's district. Five main objectives directly address the mission:

- Improving the employability and promotability of adult learners in the workplace
- Removing the barriers to participation for adults in need of basic education
- Providing individual academic assessment, counseling, goal setting, and class referral to adults
- Improving the quality of life for adults through basic education
- Responding to the basic education needs of all parts of the adult community, whether in the workplace, the sheltered workshop, urban learning center, church, library, or other community institution

Unique Features:
Features that distinguish the initiative include on-site learning centers and skills enhancement classes in the workplace, a learning continuum for class placement and individualization of the learning activities with accompanying curriculum, the use of "master teachers" as mentors and trainers in team teaching settings so that multiple learning styles are addressed, and a volunteer force of trained tutors to work with nonreaders.

Funding Source(s):
The Center for Basic and Pre-Technical Education is funded by employing companies and unions, the Job Training Partnership Act (JTPA), state general aid to community colleges, economic development training contracts, federal Adult Basic Education dollars, and local gifts and grants.
Initiative Description:

Recent lay-offs among major industrial employers in the area brought the problem of low literacy to the attention of the continuing education division of the community college and to the employers in the area. People who had gotten jobs in the past simply by showing up for work when the call went out suddenly found themselves ill-equipped to find new employment. Many had long since forgotten how to read and write well enough to complete a job application. The available jobs required higher academic skills than were ever needed before. Across the district the adult basic education program was asked to respond to the need to upgrade the skills of laid-off workers. The Center for Basic and Pre-Technical Training, housed in the urban center of the community college, has expanded its services to work with the individuals, the employers, and the other continuing education and retraining units of the college.

The Success Center, located on the edge of downtown Waterloo, Iowa, is home to the adult literacy and basic education programs which serve all or parts of 10 counties in northeast Iowa. The Center for Basic and Pre-Technical Training, sponsored through Hawkeye Institute of Technology, one of Iowa's 15 area community colleges, serves as a model for other state programs. Outstanding features include computers in each classroom, a learning continuum placement system, extensive cooperation and coordination with area service agencies, partnerships with community-based organizations (CBOs), coordinated workplace literacy programming with area industries, and master teachers to train and teach with new instructors. The program is accessible, responsive, service-oriented, student-centered, and successful.

The One-on-One Volunteer program trains volunteer tutors and partners them with adult nonreaders. The Iowa Library system showcased the program in 1986 in a video titled "Libraries Literacy, and Learners." Distributed nationally, the tape demonstrates how libraries and literacy programs can work together to promote adult literacy. In addition, Barbara Bush spent a Saturday in 1988 at the center interviewing several tutors and their students.

The center programs remove barriers to participation through a student-centered delivery system. Adult students access learning opportunities and classes on an open-entry, open-exit basis. Additionally, classes are offered at convenient times and locations in nonthreatening environments. No student lives more than 15 miles from a class site. Classes are offered "on demand" because teachers travel to any site where a group of students will agree to meet regularly. Students may begin study at any time, and classes are offered mornings, afternoons, and evenings in seminar settings. Learning opportunities housed in industries use the same open-entry, open-exit format with the unique characteristic of meeting between shifts so that students can attend either immediately before reporting to work or
immediately after a shift. In one foundry, classes start both at 5 a.m. and at 3 p.m. Other sites available include libraries, neighborhood schools, churches, CBOs, care facilities, and urban education centers. Some sites allow children to accompany their parents to school.

Students who need prerequisite skills prior to advanced training may enroll in teacher-guided individualized independent classes. These classes are also offered by correspondence and are available to adult and alternative high school students. All learning experiences address the needs of the students through individualized instruction in classes with an average student/teacher ratio of 8 to 1. No student is ever made to feel that the teacher does not have time for him or her. In fact, when a student misses more than two or three sessions, the teacher personally telephones or sends an "I've missed you" card. The program's success in removing barriers to attendance, and its positive success-oriented environment can be measured by an average enrollment increase of 10 percent per year and an average attendance (contact hour) increase of 20 percent per year over the past four years.

Coordination and cooperation with area agencies further assists in achieving the program objectives of student recruitment, success, and accessibility to classes. Linkages with service agencies assist students with transportation and child care. Many grants for services are jointly delivered through the Job Training Partnership Act (JTPA); Private Industry Council (PIC); Operation Threshold, a service provided for low-income people; Community Action Program (CAP); Correctional Services; Job Service; and the Department of Human Services (DHS).

The program also sponsors a VISTA project with three volunteers who develop public relations materials, make personal home visits to potential students, help students find needed services within the community, and

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<td>Precurricular brush-up</td>
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<td>Werk ethics and employability skills training</td>
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Note: Levels refer to U.S. Department of Education reporting levels for Adult Basic Education. All students are grouped in classes by ability except for nonreaders, who are paired with tutors.
give talks to interested community groups about adult literacy and adult learning opportunities. A successful program recruited truckers for basic skills and advanced training in preparation for the new Commercial Driver's License requirements.

Individual assessment, counseling, referral, and student goal setting are part of the learning continuum system employed in the program.

When students first indicate an interest in the program, they are assessed using an instrument normed on adults. Based on the results, they are counseled and advised about which learning opportunity might best help them to achieve their personal educational and employment goals. Students are guided toward success rather than being given the opportunity to fail. This program believes in building upon successes, not failures.

At sites where multiple classes are offered, students are grouped into Level I, II, and III classes (See Learning Continuum). Nonreaders are partnered with individual tutors for one-on-one instruction.

The quality of students' lives is improved because the program offers instruction which integrates academic, employment, and living skills. The core of the instruction is the three "Rs," but other skills are incorporated so that the learning is relevant to the daily lives of students. Reading activities may include practice in reading directions, maps, and signs. Writing instruction includes job applications, resumes, memos, and letters. Math instruction may focus on balancing a checkbook, making a budget, calibrations, decimals for statistical processes, and other job-related problem-solving situations. Classes include lessons on work ethics and being good employees.

The Center for Basic and Pre-Technical Training has solved the environmental problems of access, recruitment, retention, and success by implementing the objectives just described. An outstanding feature of the program is its accessible, positive, adult-centered, success-oriented environment. Not only is the environment appropriate to meeting the students' needs, but also employers report that graduates possess appropriate skills. A key to the success of this program is its responsiveness to the needs of the community it serves. The environment is the total program. It is the geographic area served, the classrooms, the teachers and tutors, the positive accessible instruction, the cooperation with the agencies in the area, and the learning opportunities in the workplace.

The program responds to community needs in a variety of ways. In addition to cooperative activities previously mentioned, classes are offered at community-based centers. Area seminars on literacy in the workplace are sponsored by the Cedar Valley Labor/Management Council (CVLMC). Ongoing programming with the CVLMC has resulted in on-site basic skills classes being co-sponsored by two unions and four industries.
Self-assessment instruments in math and reading have been developed for use by workers and are distributed in cooperation with the CVLMC. The adult students can complete the assessment instruments in the privacy of their own homes. Information about working with their unions, their employers, or the center makes self-referral easy and nonthreatening. Programs include communication at work, math in manufacturing, and basic skills for truck drivers who need to pass the licensure requirements. Individual GED testing is offered 13 hours per day at the Success Center and by group appointment at three sites in the district.

Results:

Our master teachers regularly survey the students about how they are meeting their individual goals. Student feedback received in the FY 1990 annual report revealed that the program successfully assists students in reaching their goals. Of the 2,959 adults enrolled, 2,180 reported personal satisfaction with basic skills improvement. Of the 430 students starting the GED program, 234 completed it. Students learned functional English as a Second Language and studied to receive U.S. citizenship. Additionally, 412 individuals pursued postsecondary prevocational study, 93 registered and voted for the first time, 267 obtained a new or better job, and 29 went off welfare.

Over 300 volunteers have been trained as reading tutors in the past five years, and over 100 are currently active. Surveys of former nonreaders show that 23 percent reached their goals, 17 percent dropped out of the program, 9 percent moved, and 51 percent are still in the program.

The Center for Basic and Pre-Technical Training is a replicable model featuring significant student learning outcomes. It was the first in the state to implement a Principles of Adult Literacy System (PALS). The computer-assisted system augments instruction of Level 1 of the continuum. From the Laubach materials for nonreaders through published materials for all stages of the learning continuum, teachers share with each other how best to use the materials. When ready-made material is not available, teachers and tutors have written their own. Two books of stories, one by students and one by a tutor, have been published. A competency-based math curriculum has been developed for industrial workplace basics classes. Customized reading curricula for specific occupations are currently in development.

The impact of this model program is simply summarized in the following student comment: "The teachers at the Success Center hold you up. They help you feel better about yourself. They show you that the best investment you can make is in yourself."
**CENTER FOR ADULT BASIC EDUCATION AND LITERACY**

*Terry Irby*

**College:**
Joliet Junior College (JJC), Joliet, Illinois

**Purpose:**
Joliet Junior College’s Center for Adult Basic Education and Literacy (CABEL) is one of only two Illinois State Board of Education-approved adult basic education programs operating in the Joliet Junior College district. The center was established in the early '70s for the purpose of meeting the adult basic educational and literacy needs for undereducated and uneducated adults who reside in parts of the seven counties of Will, Grundy, Kendall, Livingston, Cook, Kankakee, and LaSalle in the Joliet Junior College district.

**Unique Features:**
The unique features of the programs offered through CABEL include the following:
- Instruction is individualized to meet the specific learning needs of the learner
- Classroom, tutorials, and small group instruction are planned and scheduled to allow the student to be involved in the classroom setting and to receive the individualized tutorial assistance that is needed
- Classes and tutorials are offered in a variety of sites throughout parts of seven counties in the Joliet Junior College district, including 525 grade schools, secondary schools, colleges, churches, community centers, libraries, sheltered workshops, and business sites
- Classes and special programs for parents and children are designed to break the intergenerational cycle of illiteracy
- Classes and tutorials for limited-English-speaking adults are designed to help these adults improve their oral and written communication skills
- Computer-assisted instruction reinforces and supplements classroom and individualized instruction
- Vocational and job skills orientation of all classes and tutorials is available; preparation for employment is a major goal of all CABEL classes
Funding Source(s):

Funding for the center is provided by three major sources: the Illinois State Board of Education, the Illinois Community College Disadvantaged Student Grant Program, and the Illinois Secretary of State's Office.

Initiative Description:

They come to churches, community centers, schools, and business sites. They come before, during, and after work. They are young, old, and in-between.

"They" are the 5,000 students helped in 1989 through CABEL.

The students are drawn to the program from throughout the seven-county college district. They need help learning to read and write. Sometimes they need help learning to speak English. Some need a basic skills review. Others need their GED or help with job search and job retention skills.

Adult Basic Education (ABE) classes help adults to develop skills in reading, grammar, and mathematics to the eighth-grade level. Classes allow each student to work at his or her own pace. Classes also provide information and discussion on getting and keeping a job, consumer buying, family living, and citizenship. This program is a step toward a high school equivalency certificate. ABE enrollment has increased 36 percent in five years.

GED preparation classes help students to develop skills in the following areas: reading, grammar, social studies, science, mathematics, writing skills, and the Constitution. Classes are small to allow for the greatest amount of teacher assistance. JJC scholarships are available to students scoring over 300 points on the GED exam. GED enrollments have increased 174 percent since 1985.

ESL classes are designed to help non-English-speaking people learn correct forms of written and spoken English. Emphasis is placed on listening, speaking, reading, and writing to help the student develop well-rounded English usage skills. The ESL classes are also Immigration Naturalization Service-certified to include instruction in the Constitution and civics for nonresidents to assist them in obtaining permanent U.S. residency and citizenship. Increasingly, these classes are requested by businesses. CABEL is involved in tailoring curriculum to provide language-specific instruction to help adults with a limited English proficiency improve their oral and written communication skills to the level that they can function productively and effectively on the job. Enrollments in ESL programs skyrocketed from 148 in 1985 to 1,253 in 1989, a 746 percent increase.

Job Skills Training classes instruct unemployed or underemployed students in learning and practicing employment strategies. This involves enhancing self-image and attitude as well as learning how to best handle a job interview. Individuals are helped to make the most of the skills they
have and to point these out positively to a prospective employer. Information is also provided on maintaining a good on-the-job attitude to enhance job retention.

The Public Assistance Special Project provides special counseling, job skills, classes, job search assistance, and support referral services free of charge for students who are public aid recipients. Students who are receiving public aid are offered an opportunity to learn how to acquire the necessary basic education, job skills, and training to become self-supporting. CABEL offers one of the largest job skills programs in Illinois.

The Literacy/Volunteerism Project is the volunteer tutorial component of CABEL.

This project operates cooperatively with area schools, libraries, and service agencies and provides one-on-one instruction for adults who need help learning to read or improve their reading skills. Absolute anonymity is provided for adults requesting private tutors. All student information is confidential. Adults may opt to work one-on-one with a private volunteer tutor in a mutually agreed-upon location or in a small group setting in the ABE classes. Through the project, volunteer literacy tutors are provided comprehensive training and instruction in the most effective reading methodologies currently utilized in teaching adults to read. The program has grown from 74 volunteers in 1986 to more than 380 volunteers in 1989. The program is unique in that training is provided by highly trained and educated trainers through cooperation with the Will County Reading Association.

The family literacy component is designed to empower parents with the skills needed to assist their children in school and to ensure that their children will continue to be involved in education. Parents and children work and learn together using the most effective methods utilized in teaching reading. This program is unique in that five different approaches to the intergenerational literacy problem are taken.

CABEL is committed to breaking the intergenerational chain of illiteracy by addressing the problem through teaching parents and children to read together and share the reading experience; self-concept, self-esteem-building workshops for mothers alone; basic skill classes for parents; ESL classes for parents; after-school programming for cultural and learning experiences for parents and children; and read-a-long books on tapes for use by nonreading parents.

Family and intergenerational programming appears to be the most viable solution for demonstrating to parents and children together the importance of literacy in our society today. CABEL uses five approaches for solving the problem -- the Parents About Literacy Project, Wonder Woman, the Learning and Enrichment Project (LEP), Project Read-A-Long, and Kaleidoscope.
The Parents About Literacy Project is an intergenerational literacy project sponsored by CABEL and operated in cooperation with the Will County Headstart Program, Child Care Development, Inc. The program, in its second year of operation, is designed to improve the reading and parenting skills of Headstart families. The connection between children’s reading, language, and writing development and the literacy skills of parents is clearly documented in the research, which is why the project stresses the development and enhancement of literacy and basic skills for both parents and children.

Wonder Woman is a self-esteem and self-concept program that is designed to empower mothers to be positive and directive forces in the lives of their children. This project is based on the concept that before parents can effect positive changes in the lives of their children, they must first feel good about themselves and who they are. In the words of Priscilla Stepney, a participant in the Wonder Woman project, “I have been helped through this project to realize who I am and my potential to become the best that I can be. This project is fantastic and should be continued so that other women can be assisted to feel better about themselves.”

LEP is a family involvement, community-based program designed to provide a network of resources and services to families throughout the JJC district. Programming includes educational support, cultural events, positive self-concept enhancement, job seeking, and family management. The project is designed to aid both children and adults and is operated for eight weeks at two churches. CABEL provides academic and reading tutorials for adults as well as children grades one through 12, three nights a week for two hours. Trained tutors conduct assessments of students and provide tutorials. Scheduled workshops include job skills, family management for adult and teen parents, job skills training, study skills, and positive self-concept sessions. The study skills and self-concept sessions were presented by consultants from Central Illinois Adult Education Service Center of Springfield, Illinois. Field trips have included trips to museums, libraries, a cultural event, and a tour of area colleges. Through LEP, families are given the opportunity to become involved in a structured program that promotes positive self-concepts, self-awareness, skills development, and a better relationship between parents and children.

Project Read-A-Long is a combined effort of CABEL and the Altrusa Club of Joliet. This project is designed to halt intergenerational transmission of illiteracy. Altrusa members were provided books for children ages one through four, which were read and transcribed onto cassette tapes. CABEL donated books and tapes to the project and has also appealed through the media for other donations. Both books and tapes will be presented to families, early childhood centers, hospitals, or to sites throughout the Joliet
Junior College district. This program can be beneficial by providing an opportunity for nonreading parents to become involved in reading to their children and also participate in a worthwhile learning activity.

Kaleidoscope is a family literacy project that took place in the spring of 1990. The project provided extensive sensory experiences to high-risk children to prepare them for success in reading. Through the use of visual and auditory sequencing and discrimination, children learned the connection between sounds, language, writing, and reading. In addition, interactive reading activities took place between parent and child, and field trips were offered to expand the knowledge and experience of the participants. Staff included elementary education teachers, early childhood educators, a speech/language pathologist, a social worker, and a Hispanic interpreter. This project provided an opportunity for eligible children and their parents to expand their language experiences.

The Workplace Literacy component of CABEL is designed to provide on-site basic skills education to employees. Basic skills upgrades and brush-ups as well as specially designed curricula are utilized to ensure the workers' ability to perform necessary job tasks. Skills needed are defined by the employer, and CABEL designs the curriculum that will best meet the defined needs. The program is unique in that a major emphasis is on building communication and language skills of limited-English-proficiency students.

Individualized education allows adults to progress at their own pace. Instructors, tutors, volunteers, and staff work closely in providing an accurate assessment of students' needs, goals, and educational levels. Individualized plans are prepared for students to help guide instructors and tutors in providing appropriate instruction. Computerized assessment and instruction is also available through CABEL. Computer software for all subjects and levels is utilized for practice, drill, and reinforcement of classroom activities. A Learning Resource Lab has been developed for students which includes tutorial assistance, books, and materials used to aid students in developing and reinforcing skills learned in the classroom.

Basic skills brush-up courses are offered to adults who have received their high school diploma but need further assistance in reading, math, language, or other skills to prepare them for further education, training, employment, or job advancement. Basic skills brush-ups are individualized to meet the needs of the student and are offered at CABEL class sites and on site at area businesses.

Results:
CABEL's success is measured in both numbers and individually, as lives are improved through learning. Of 1,424 ABE students, 447 advanced
to the pre-GED or GED levels. Of 1,018 GED students, 350 succeeded in passing the GED exam. Seventy-five students were assisted in obtaining employment. Nearly 800 students in the literacy tutorials improved their reading by an average of 1.2 levels after an average of 72 hours of instruction, and over 1,000 parents and children have been assisted via the intergenerational literacy program.
FILENE'S WORKPLACE EDUCATION PROJECT

George Luoto

College:
Massachusetts Bay Community College, Wellesley, Massachusetts

Purpose:
Filene's Workplace Education Project sought to provide ESL instruction to employees at the Filene's Natick Distribution Center.

Unique Features:
The Filene's program was a collaboration between the Filene's company, its Natick Distribution Center, the United Food and Commercial Workers International Union Local 1445, and Massachusetts Bay Community College.

The curriculum, which was developed by the program staff, was competency-based. Input from Filene's management, union personnel, and the students themselves was used to develop a set of communication tasks the participants were to learn. The tasks were job-related for the most part, but communication skills used outside the workplace were addressed as needed. Subject areas covered in the course included the following: naming work-related tools, materials, and equipment; describing work-related processes; locational directions at work; safety language; worker rights and responsibilities; unions; grievance procedures; cultural awareness issues; and communication in the community.

The project also included the active involvement of floor supervisors as language coaches.

Funding Source(s):
An assistance grant was funded by the Executive Department of Economic Affairs, the Executive Office of Labor, and the Department of Education through the Metro-South/West Service Delivery Area. Filene's and the union provided in-kind matching funds.

Initiative Description:
The number of non-English-speaking workers at the Filene's Natick Distribution Center had been increasing steadily, and most of the floor
workers had a first language other than English. Since most supervisors were English-speaking, communication had become extremely difficult and had deteriorated to a point where sign language was the common practice. Compounding this was the fact that the employees represented three distinct language and cultural groups: Hispanic, Asian, and Native American.

The goal of this project was to provide ESL instruction to 40 students at Filene's Natick Distribution Center over a 40-week period (five eight-week sessions). The curriculum focused on reading, writing, and speaking skills related to work and the life skills needed by the target audience. In line with the company's goals, this project tried to improve the language skills of Filene's associates to increase their effectiveness in the workplace and in the community, encourage intercultural awareness on the part of management and associates, and increase associates' understanding of the company and the resources and strategies they can use to solve problems.

During the first two weeks of student contact, instructional staff met individually with students to determine their abilities in speaking, listening, reading, and writing in English. Assessment tools included proven standardized tests, such as the Structured Test of English Language (STEL) and the Cambridge Community Learning Center assessment test, in conjunction with locally developed testing materials. As part of the overall instructional model, the assessment utilized situations with the appropriate vocabulary and language structures (via photographs and readings) to directly link the students' incoming skills to language competencies in the curriculum. Based on the results, students were placed into small groups according to similar abilities.

Eligibility was determined by Filene's. Orientation included informal discussion with individuals in small groups about expectations and some informal goal setting to alleviate anxiety and provide realistic goals.

Each class met at the work site twice a week for two hours per session for a period of 40 weeks. The average student-teacher ratio was 10 to 1. Instructional staff wrote a functional curriculum and associated materials that developed specific language competencies needed for the workplace and for general living in the community. Workplace competencies focused on job functions and the language needed to perform them, daily uses of language to foster better interpersonal communication with peers and management, and union procedures and the language necessary for involvement. The instructional staff worked with Filene's personnel to determine these competencies and to establish a resource file of job-site documents, manuals, and photographs. In addition, existing ESL networks were tapped for life skill competencies.
Five floor supervisors received training and functioned as language coaches for the students. This proved to be an excellent way for instruction to be reinforced on the work floor.

Support services were provided in different ways. Instructors were responsible for following up on students outside of the classroom and providing support for problems that affect attendance, such as child care. In addition, a series of workshops was provided to give information and to address issues on topics of importance to the students. Topics included an overview of Filene’s operations, the union’s structure, procedures for bidding and applying for promotion, conflict resolution, time management, child care, and reducing family stress.

Results:

A total of 53 people were enrolled in the Workplace Education Project during the first 18 months of the project. The student population was composed of Hispanics (55 percent), Vietnamese (25 percent), and Native Americans (20 percent), with 50 percent men and 50 percent women. The average years of prior formal schooling was eight. The average age was 26.5, with a range from 18 to 43. Job titles included checker, utility (general duties), material handler, and marker. Although rates of achievement differed among individuals, all demonstrated progress, and more than 56 percent of the participants reached the level of competence expected for the amount of instruction provided.

General reports from supervisors related incidents in which associates demonstrated newly acquired language skills. Some examples include a better ability to respond to general conversational cues in English, an increase in cross-cultural communication among non-native-English-speaking associates, and the development of skills leading to greater independence in communicating at work and in the community.

It is not possible to document career growth among all of the participants who were enrolled in the program since we do not have the means to conduct a follow-up with the 11 associates who have left employment at Filene’s. Those people comprise 20 percent of all who enrolled in the program. Local 1445 is attempting to track the progress of these individuals. Nevertheless, among those who took part in the Workplace Education Project until the end of the program year, it is possible to identify the following achievements among individual participants.

One participant was promoted from performing general duties in the center to a clerical position requiring 35 wpm typing in English. Although this person had received clerical training in her native country, her English assessment upon enrolling in the program indicated that she was at the intermediate beginner level and not likely to be successful working in a
clerical position requiring English. She has been able to handle the demands of the new position and receives good reports from her supervisor.

Two participants were recognized as "Outstanding Employees." This is an award given only once a year to a limited number of associates. Both participants who received this award were also recognized for perfect attendance in the English classes, and they have demonstrated a marked improvement in communication skills during the time they have been in training.

A participant was featured in a newspaper article which noted his accomplishments as a businessperson and contributor to the community as well as to his own family's well-being.

Five participants took steps to enroll in educational programs outside of the Workplace Education Project for additional English, basic skills, or career training.
REGINA WORKPLACE LITERACY PROGRAM

Barry L. Mellinger, Anna Faye Kelley, and Helen Dees

College:
Mississippi Gulf Coast Community College (MGCCC), Perkinston, Mississippi

Purpose:
The purpose of workplace literacy initiatives at MGCCC is to provide basic skills enhancement training tailored for specific job functions, which will lead to increased company productivity and quality.

Unique Features:
Job functions were identified and targeted by a coordinator who interviewed supervisors and employees, observed employees working, and looked at samples of written materials used on the job. Ancillary services such as individual assessment, counseling, and GED-program referral were available.

Funding Source(s):
Federal, state, and local governments provided money for the Regina Workplace Literacy Program.

Initiative Description:
The Mississippi Legislature passed the Mississippi Economic Development Act of 1989, Senate Bill 2925, Section 15, providing for a 25 percent state income tax credit for employers who provide a qualified basic skills training program for their employees. The State Department of Vocational, Technical, and Adult Education, Industrial Services Division, was charged with the responsibility of monitoring eligible programs.

Because MGCCC is committed to industrial training, as well as to the concept of workplace literacy through on-site training, the college became the provider of the pilot program to determine the procedures required for the implementation of an eligible workplace literacy program.

After the college was chosen to be a provider of the State Tax Credit Workplace Literacy Program on the Mississippi Gulf Coast, the college's industrial training coordinator and the workplace literacy coordinator prepared a marketing plan which was presented and accepted by the first company approached, the Regina Company, a division of Electrolux.
Through the use of a basic skills training program, the reading, writing, mathematics, and interpersonal communication skills of Regina participants would be enhanced, therefore contributing to increased company productivity and quality.

A study committee identified job categories by functions and made suggestions regarding the current and potential special needs of employees. The college then conducted a needs assessment by interviewing employees and supervisors in each job function, observing employees on the job, collecting samples of all written materials used at work, and determining job-specific basic skill requirements and employees' ability to meet those requirements.

Students were recruited via departmental meetings, a company newsletter, paycheck inserts, posters, and individual counseling. Classes were held on site in the company training room for a fixed term of three hours per week for four weeks. The classes were coordinated to overlap the end of the first shift and the beginning of the second shift, providing for a combination of company release time and employee time.

Instructional methods included small group and individualized instruction. The ancillary services utilized included individual educational assessment, counseling, and referral to GED, vocational, and academic programs where appropriate.

Results:

An evaluation report was prepared with information drawn from pre- and post-testing, student attitudinal surveys, interviews with management, and statistical reports. Statistical data derived from the evaluation show that the educational background of the participants was as follows: 1-3 years of college, 19 percent; high school diploma, 38 percent; GED, 10 percent; neither a high school diploma nor a GED, 33 percent. The participant profile indicated 21 employees enrolled, with one withdrawal. The 20 successful completers achieved competencies in technical vocabulary and information, math prescriptions, and intercommunication skills based upon a pre- and post-test of the skills identified by the task analysis.

Participants who did not possess a high school diploma or GED, or who were in need of additional basic skills instruction, were referred to a regular college counselor for continuing education. Interviews with management indicated their interest with other on-site training programs.

Student attitudinal data indicated that 94 percent of the participants responded that they would attend other classes on company time, while 89 percent indicated they would attend other classes on their own time. Twenty-one percent of the respondents indicated that the length of each class was too short, with 43 percent responding that the length of the total
program was too short. Of significant value were the participants' suggestions of the need for smaller classes and instruction for employees in all job functions.

In conclusion, short-term or immediate benefits were realized through employees' ability to satisfy current skills and knowledge requirements, thus reducing management and direct supervision time. Expected long-term effects are increased productivity, product quality, improved morale, enhanced self-motivation and self-concept, increased involvement in training and educational programs, upward mobility of workers, reduced absenteeism, improved safety through reduction of accidents, and reduced job turnover.
WORKPLACE LITERACY SKILL BUILDERS PROGRAM

Paul E. Kreider

College:
Mt. Hood Community College, Gresham, Oregon

Purpose:
The purpose of the Mt. Hood Community College Workplace Literacy Skill Builders Program is to train workers with inadequate basic skills who are currently unable to perform their jobs effectively or are ineligible for career advancement. Any training relates to the literacy requirements of actual jobs. The philosophy of Skill Builders is to provide workplace literacy training that respects the dignity of the worker, protects the worker’s rights while ensuring the practical value and utility of all instruction, and thereby increases the overall literacy level of the workforce.

Unique Features:
The Workplace Literacy Skill Builders Program is built upon workplace literacy partnerships among business, educators, labor, government, and community groups. The initiative creates training that links basic skills instruction directly to the literacy requirements of actual jobs targeted for specialized Adult Basic Education (ABE) training programs, thereby addressing the increasing basic skill requirements of the changing workplace. It targets workers with inadequate skills for continued employment, increased productivity, or career advancements, and reduces barriers to participation in literacy training by offering support services appropriate to the needs of learners. In particular, it establishes individualized, personally meaningful education plans for participating learners whenever appropriate to encourage their continued learning. Finally, the program provides rigorous learner assessment and careful evaluation of the service delivery.

Funding Source(s):
The Workplace Literacy Skill Builders Program is funded by the Workplace Literacy Partnerships Grant Program of the U.S. Department of Education.
CREATING A LITERATE SOCIETY

Initiative Description:

Mt. Hood Community College provides instructional programs designed to address the immediate needs of three types of workers: carpentry/general construction workers, truck drivers, and warehouse workers. Very specific skills have been targeted by both employers and workers for training for each of these business/labor partnerships. Participants can take classes held at the apprentice training site, union halls, or the college campus.

The program for carpenters and construction workers includes a weekly, four-hour class titled "Calculation in Construction," for apprentices, at the Oregon-Washington Carpenters-Employer Apprenticeship and Training Trust, and an ongoing weekly evening program of three-hour modules in blueprint reading, calculator use, understanding contract documents and specifications, algebra and rulers, and safety. A partnership has been forged between the Carpenters District Council of Oregon and Associated General Contractors to ensure instructional value, recruitment, and participation in any training.

Truck drivers preparing for the mandatory test of Federal Motor Safety Carrier Regulations can take an ongoing weekend or evening program of three-hour modules in map reading, daily log management, weights and measurements, understanding shipping documents, and safety information and hazardous materials identification. The program also provides warehouse workers with basic instruction in computer literacy and "Just-in-Time Inventory Control." A partnership has been forged between the Teamsters, Oregon Trucking Association, and Fred Meyer, Inc. to ensure instructional value, recruitment, and participation in any training.

Mt. Hood Community College Skill Builders will operate for 18 months. There is a staff of three part-time field instructors (12 hours per week) and a part-time coordinator responsible for operations, partner coordination, assessment, and curriculum development.

At the heart of this proposal are 10 workplace literacy training delivery partnerships formed by different business, education, and labor groups in Oregon. The partners include the Associated General Contractors of America, Inc., Oregon-Columbia Chapter; Fred Meyer, Inc.; The International Brotherhood of Teamsters, Chauffeurs, Warehousemen & Helpers of America, Union Local 156 and Union Local 206; Mt. Hood Community College; Northwest Oregon Labor Council; AFL-CIO; the Oregon Trucking Associations, Inc.; and the United Brotherhood of Carpenters & Joiners of America, Local Union 247. These partnerships represent four industries: carpentry/construction, food products, trucking, and warehousing.

One of the key assumptions shared by the representatives of government, education, and industry who have participated in the development of the workplace literacy program is that improved productivity is a necessary
outcome of workplace literacy training, particularly if private sector cooperation, leadership, and funding are to be secured for the long term. Consequently, the project has been designed with increased productivity in mind.

Demonstrable increases in worker productivity are anticipated as learners improve skills that have been identified as critical to successful task completion. For example, the ability to use manuals to prevent and to correct errors should increase. Where workers are required to pass stringent licensing examinations and training has been designed to enhance the literacy skills necessary for passing such exams, there should be an increase in the proportion of workers passing these exams. If workers are required to operate a newly introduced high technology process and they lack the basic literacy skills to assume this task, the training provided through this project should allow workers to assimilate the new requirements of the technology at a faster rate. Overall, reliance on literacy should increase, as should ability to judge when documents should be used, with resultant improved effectiveness and efficiency.

Over 125 learners will receive up to 15 months of basic skills training designed to the specifics of the literacy functions and skill-level demands of the jobs they hope to retain or advance to. The content of these courses will be based on needs articulated by employers and employees (e.g. specific tools to use and tests to pass) and observations of the functions of literacy on the job, which will be carried out by Mt. Hood Community College and the project's technical assistance staff. The learners will receive the benefit of assessment of their pre- and post-training reading and math abilities and job literacy effectiveness, which will assist them in their plans for further training and career goals. It is also expected that higher rates of credentialing exam success will be achieved as the result of participation in training. Goals for such outcomes will be set for each learner group.

Partner industries will benefit directly. Through the project, specifically tailored curricula and instruction will be developed that can continue to be used cost-effectively for future employees. They will have more skilled employees to retain and promote. The partner businesses and labor organizations will also have strong ongoing relations built with Mt. Hood Community College, upon which further cooperation can be based.

The Advisory Council will constitute a forum for all interested parties - business, labor, education, government, and community agencies who are involved in economic development and adult basic education. Out of the project, and especially out of its Advisory Council, a plan for the development of a regionwide, multi-industry Workplace Literacy Campaign will emerge. Based on the experience of the project activities and motivated by the demonstration of positive learner and industry outcomes that the project evaluation will provide, a cost-effective campaign can be
developed that relies on local resources, is tailored to the needs of the area's industry, and is aligned with the cities' and state's economic development plans.

Finally, on the national level, the project will serve as a demonstration of workplace literacy training delivery and training evaluation. Its reports will be complete and detailed, providing a suitable structure for long-term planning of and dissemination to similar multi-industry workplace literacy efforts elsewhere. The industries in this initial set of partnerships have been selected to represent the Columbia-Willamette economy but also with the mission of national demonstration in mind. The choices of the construction, trucking, and warehousing industries capture occupations that are common to every metropolitan area in the country.

Results:

Mt. Hood Community College received funding for this project in June 1990. The grant calls for a three-month development phase with instruction that began in September 1990. The results of this project were not yet available when this book went to press.
College:
Piedmont Technical College, Greenwood, South Carolina

Purpose:
Piedmont's initiative strives to assess the educational needs of area workers and to coordinate the delivery of instructional services to meet those needs.

Unique Features:
The Initiative for Work Force Excellence addresses the educational needs of the current work force, involves the cooperation of a variety of community educational/literacy agencies, makes business a partner in upgrading its workers, is marked by flexibility in programming and staff, and provides free training to all participants.

Funding Sources:
This program is funded by the Office of the Governor of South Carolina, the State Board for Technical and Comprehensive Education, the Office of Adult Education of the State Department of Education, and literacy councils in Piedmont Technical College's service area that are in turn funded by varied sources, public and private.

Initiative Description:
In nearly every sector of the work force in South Carolina, as with the nation as a whole, people are increasingly being expected to perform more complex, mentally demanding tasks. Yet, while the needs of the workplace have changed decisively, most workers have not acquired the higher-level skills needed to perform in this new environment. Every employer survey conducted by Piedmont Technical College in its ongoing effort to identify training requirements has confirmed this central fact: business and industry are demanding a much brighter worker, one with better math skills, better communication skills, better reasoning and critical thinking skills, and better reference skills.

While all of this has obvious implications for the training of future workers, particularly in view of anticipated shortages of skilled workers in
many fields, it also has immediate relevance to the current work force. No amount of reform in the public schools and colleges of South Carolina, or any other effort to turn out better-educated graduates in the years ahead, would touch the entire group of 300,000 adults already working who have not completed the ninth grade, plus the countless others who live on the economic margin because they lack one or more basic skills necessary for successful functioning in the contemporary workplace.

The academic shortfall characterizing the American worker is well-documented in some estimates suggesting that up to 30 percent of those now working cannot read at the eighth-grade level. Testing of workers in Piedmont Technical College's seven-county service district produced results consistent with that figure. Of 2,000 persons tested, 25 percent read at the fifth-grade level or lower; 50 percent read at a level between the fifth and ninth grades; and only 25 percent indicated an ability to read above the ninth-grade level. These findings are supported by 1980 U.S. Census Bureau data showing that 32.3 percent of service area adults 25 years of age and older are functionally illiterate. Similarly, 53.4 percent of the adult population has not completed high school.

The work force initiative at Piedmont Technical College was organized to address these problems and thereby strengthen the current work force in the area. Under the direction of a work force specialist assisted by a project secretary and a number of part-time instructional personnel, the program is almost entirely external to the college campus. The work force specialist begins the process by meeting with top management officials in industry to win their commitment. This has not been a difficult task indeed, management recognizes their work force problems and enthusiastically embraces the effort at remediation.

A second level of contact with industry, and one found to be vital to the program's success, is a briefing for first-line supervisors. Their understanding and support is crucial. This session is followed by an orientation for workers. An important issue here is dealing with worker fears about testing. Assurances regarding confidentiality of outcomes are usually effective in allaying such concerns. Results are, in fact, provided to management only in aggregate form. A testing schedule is then established. Company policies vary with respect to which workers are tested, some making it mandatory for all workers and others leaving it on a voluntary basis. The primary instrument used in assessment is the Test of Adult Basic Education (TABE) Locator. This instrument reports grade-level performance in reading, English, and mathematics. For workers whose lack of reading ability prohibits administration of the TABE Locator, the Slosson Oral Reading Test is used.

When assessment results have been compiled, the work force specialist presents them to management along with a proposal for training. Participants
in the delivery of instruction, known as skills enhancement training, may include a community literacy program, an adult education program, or the college's developmental studies division. The extent of involvement by any or all of the training agencies is dictated by the scope of student needs. An "educational brokerage" role is assumed by the work force specialist in relating the needs of a given group of workers to the agency or agencies best able to meet those needs. The cooperation and mutual support among the training providers is one of the unique features of the program.

Another is the program's flexibility. All of the original briefings and orientations are done on company time during the varied shift schedules under which the industries operate. Classes for training, on the other hand, are typically taught after hours at the industrial site. Training schedules, thus, are highly variable and require substantial flexibility on the part of delivery agency personnel.

The entire program, from assessment to training, is provided at no charge to students. All costs are absorbed by the training providers and, in some cases, by the companies involved. Many of the firms have also developed creative strategies for motivating and rewarding their employees. One, for example, matches voluntary study hours with paid hours. In other words, if a worker voluntarily enrolls for five weekly hours of training, the company will compensate him or her at the regular pay rate for five additional class hours. Another firm rewards its workers' accomplishments by giving them savings bonds, with the principal amount keyed to grade-level increases.

Results:

During the 1989-90 academic year, the first year of its operation, the Initiative for Work Force Excellence assessed the skills of 2,000 workers. All were employed by businesses and industries in the seven-county area served by Piedmont Technical College in Greenwood, South Carolina. Ninety percent of these were hourly-wage employees in manufacturing/production environments. Of the 2,000 assessed, some 960 entered training in either reading, English, or mathematics. In Greenwood County, where the program is based, 266 workers enrolled in classes. Of these, 181 workers, or 68 percent of the total, remained in training to the point of having completed a predetermined objective. In the case of Greenwood County, the workers scored an average increase of 1.5 to 2.0 grade-level advances in their areas of study.

Educational attainment objectives are generally linked to individual student goals. If a worker desires to advance his or her reading level by two grade levels, and succeeds in doing so, that worker has completed the training. The same is true of those who simply wish to improve their skills in mathematical operations involving fractions or any other skill area. When a personal goal has been achieved, the student exits.
During its first year of operation, the Initiative for Work Force Excellence has focused almost entirely on basic reading and mathematics. It is anticipated, however, that more job-specific training will be offered in the future. Plans are underway to develop and provide courses in communication, problem solving, creative thinking, teamwork, and self-esteem.

The initiative has successfully coordinated the resources of several community-based programs, bringing their strengths to bear on the educational weaknesses of the existing work force. One result has been unprecedented cooperation among the agencies. Another has been the heavy involvement of employers in improving the basic skills of their employees. It is projected that these outcomes will enable business to remain competitive, thereby contributing to an improved standard of living among the people of the area and the state.
COLUMBIA-WILLAMETTE
WORKPLACE LITERACY
CONSORTIUM

Pamela Transue

College:
Portland Community College, Portland, Oregon

Purpose:
The Columbia-Willamette Workplace Literacy Consortium was developed to help workers succeed and advance in their careers and to help employers compete and profit in the marketplace.

Unique Features:
The program links 18 Oregon community colleges, businesses, and labor unions with the Northwest Regional Educational Laboratory to form the Columbia-Willamette Workplace Literacy Consortium, the "Skill Builders."

Funding Source(s):
The consortium is supported by a $399,000 U.S. Department of Education grant matched by $227,000 in in-kind contributions from the consortium partners.

Initiative Description:
In Oregon, as elsewhere in America, advanced technology and tough licensing laws are radically altering even the most rudimentary kinds of work. On the assembly line, in the warehouse, and at the construction site, the worker who can't read, write, and calculate well, who can't learn and grow, who can't keep up with the accelerating pace of change in the workplace, faces stagnation, or worse, unemployment. The consortium members have forged partnerships to train 300 workers in job-specific basic skills in northwest Oregon, including the Portland metropolitan area. The laboratory will provide overall project design, coordination, and technical assistance. Three community colleges—Portland, Mt. Hood, and Clackamas—will work with eight business and industry associations and six labor organizations to address the workplace literacy needs in the fields of carpentry and...
construction, food products, heavy manufacturing, small business, light manufacturing, trucking, and warehousing. The purpose of the consortium is to develop training that is appropriate to these industries, all of which are key to northwest Oregon's economy. The training will be a mixture of job skills and basic skills. The need for skill building is acute. The consortium's business partners have identified specific areas of their industries where rising literacy requirements are jeopardizing the job security of current and future workers as well as the long-term and short-term ability of the industries to remain competitive. The labor partners have identified testing and certification requirements that their members must be trained to meet. Some examples of problems workers and businesses face are:

- Production operators at Oregon Cutting Systems are now required to complete statistical process control charts. Some workers do not have the algebra background to understand and use the methods.
- Increased requirements in the new federal licensing standards for the trucking industry may keep as many as 30 percent of truck drivers off the road if they do not find ways to improve their basic skills and pass the certification exam.
- Warehouse workers at the Fred Meyer Distribution Center need basic math principles to prepare for the transition to automated inventory control processing.
- Introduction of new production technology at Nabisco, Inc., requires line employees to become computer literate. Employees will also need to improve their problem-solving skills.

Clackamas Community College will work with two major manufacturing firms Oregon Cutting Systems and Precision Castparts Corp. to design customized curricula for each company. Training will be offered through classes and through individual, self-paced study at home, at the work site, and at the college's Targeted Learning Center.

Mt. Hood Community College will offer classes both on campus and at union halls to carpenters and general construction workers, truck drivers, and warehouse workers. Carpenters and construction workers will be able to take classes on subjects including reading blueprints, using calculators, working with construction measurements, and understanding documents and specifications. Courses for truck drivers may include training for a number of mandatory exams in such topics as air brakes and hazardous materials identification. Warehouse workers may be offered instruction in math essentials in preparation for future automation.

Portland Community College will design curricula for teaching job-related basic skills to workers at Nabisco, LWO Corporation, and Leupold & Stevens, Inc., the college's small business manufacturing, and food
products partners. Training will address such issues as team building, job advancement, and changing technologies.

Results:
The project began October 1, 1990. Results will be available at a later date.
VISION 2000 LEARNING CENTERS

Vera Estrada and Tony Zeiss

College:
Pueblo Community College (PCC). Pueblo, Colorado

Purpose:
The major focus of Pueblo Community College's community-based Learning Centers Project is to establish the capacity for providing adult/family literacy services leading to increased access to employment and higher education for adults. This project is designed to eradicate adult illiteracy in targeted neighborhoods by the year 2000.

Unique Features:
The college has elected to provide educational services throughout Pueblo County at strategic locations that enable the undereducated and underemployed to take advantage of basic skills training in a nonthreatening environment. Classes are free.

Four literacy centers were developed as cooperative ventures with School Districts 60 and 70, the Pueblo County Job Training Administration, and the community college.

Funding Sources:
US West Corporation, the Governor's Job Training Office, and the Colorado Community College and Occupational Education System provide funds for the project.

Initiative Description:
The purpose of the Bradford Cooperative Learning Center (BCLC) is to serve unemployed adults who cannot qualify for industry training programs. Remedial reading, language, and mathematics classes are provided for those individuals with basic skills deficiencies. The BCLC is housed at Bradford Elementary School in the heart of a high-need Pueblo Hispanic community.

The primary purpose of the Corwin Family Literacy Center (CFLC) is to provide basic skills for adults and at-risk youth with low reading, language, and math abilities who have been typically unemployed or lack the
ability to take advantage of postsecondary education due to inadequate basic skills. Basic reading, language, and mathematics classes are offered. CFLC is located near low-income housing developments and is housed at Corwin Middle School.

The emphasis of the County High Learning Center (CHLC) is to increase the basic skills of JTPA-eligible clients to the 10th-grade level in reading, mathematics, and language arts. Entry-level office occupations and computer literacy skills training are also provided. CHLC is located in the rural area of Pueblo County housed at Pueblo County High School.

The primary purpose of the Pueblo Community College Learning Center is to provide remediation and tutorial assistance for PCC students, including college credit students and special students participating in the GED, ABE, or Amnesty program, or other programs directed toward specific populations.

Student orientation, registration, and testing are conducted every Monday and Tuesday evening. Entry into each adult education program requires an assessment of academic competencies, and pretesting is used to distinguish mastery from nonmastery.

All students enrolled in the literacy classes are given the Test of Adult Basic Education (TABE) as a preassessment instrument to place them in the correct program at their appropriate general level of functioning. Students are given an exit test to determine improvement. Satisfactory completion of the program is achieved when each at-risk student acquires a minimum learning gain of one grade level. Students enrolled in the basic skills program attend five hours weekly during evenings.

Classes are structured so that students work at their own pace on a well-defined set of skills and knowledge until mastery of the subject materials is achieved.

Computers are an integral facet of the instructional activities at all centers. Computer-assisted instruction is offered for students who wish additional opportunities to enhance the basic skills. All projects use IBM/Apple Skills Bank software supplemented by individual instruction, one-on-one tutoring, and small group instruction to provide effective basic literacy. The programs blend scheduled content classes with open lab approaches, creating a flexible and user-friendly delivery system. The computer lab, its equipment, and maintenance are provided by local schools. The campus-based center uses the Unisys ICON system.

Results:

The college has increased access to higher education opportunities and other training programs for hard-to-serve students by its presence in the local community and through cooperative ventures with local schools using
existing resources of PCC, Pueblo School District 60, and Pueblo School District 70.

The Corwin Family Literacy Center, from its inception in April 1989, in less than six months or 18 weeks of study, served 93 students. The CFLC has become an established and viable program within the Pueblo community. Adult students have been successful in raising their grade levels significantly in reading, language, and mathematics.

Of the individuals in this high-risk group that persisted, success was evident. Nine have become employed, three have enrolled in college, and 48 have gained an average of a 1.0 to 2.5 grade-level increase in basic skills education.

As a family education center, a summer remediation program for at-risk sixth- through eighth-grade youths attending Corwin Middle School was established. Forty-one students enrolled in evening basic skills classes. These students had failed two or more classes during their academic years. Thirty-eight youths successfully completed the program and received recommendations to progress to their next grade level in a regular academic program.

The Bradford Cooperative Learning Center, established in May 1988, served 467 at-risk adults in less than two years. Students enrolled in the basic skills classes take the courses primarily for personal improvement. Some students elect to take courses for "brush-up" before attempting to enroll in college courses on campus. Twelve percent enrolled in the basic skill courses have entered higher education.

Every effort is made to track students once they have completed their personal goals. Specific statistics on success rates of adults have reflected a student learning gain of 1.0 to 4.0 grade levels in their area of study. Six percent of the students attending BCLC classes have been employed.

The primary focus at the County High Learning Center is reading, language, math, and computer applications. During its first six months of operation... 37 students enrolled in basic skills courses. Success rates for CHLC students have reflected an average learning gain of 1.5 grade levels in 40 hours of instruction. The 1990 summer session alone involved seven students who advanced to a 10th-grade level in reading, an eighth-grade level in math, and an eighth-grade level in language. Students enrolled in the computer literacy class are introduced to WordPerfect, DOS, Lotus, and DBase.

PCC, in collaboration with local schools, community-based organizations, and the local Job Training Administration, has successfully provided educational opportunities for the high-need residents who lack the basic academic skills necessary to succeed in the job market.
In 1989-90, 120 students were placed in computer-assisted instruction utilizing the ICON auto skills learning system, MECC, and SKILLS BANK I at the Pueblo Community College Learning Center. Ninety-eight students increased a minimum of one grade level in reading, English, and math using the alternate delivery system. An additional 2,285 students were served by the learning center in a traditional tutorial process.
**ACADEMIC ASSISTANCE PROGRAM**

Karen Dixon and Clayton Johnson

College:
Quincy Junior College (QJC), Quincy, Massachusetts

Purpose:
Quincy Junior College has an open-admissions policy. The Academic Assistance Program's primary objective is to increase the rate of retention of underprepared college students through content-based reading, writing, and math skills instruction.

Unique Features:
While many community colleges have courses in reading or writing skills, frequently little connection is made between skills work and college courses. Quincy Junior College, on the other hand, is committed to integrating developmental education and skills into the curriculum. As a result, the Academic Assistance Program focuses its efforts on improving students' basic reading, writing, and math skills for the courses in which the students are enrolled. A strong vocational/career guidance component enables students to connect skills work to job search and placement activities.

Funding Source(s):
The Academic Assistance Program is funded in part by Public Law 98-524, the Carl D. Perkins Vocational-Technical Education Act. Quincy Junior College provides a matching effort in its Developmental Education Center and Career Counseling/Placement Office.

Initiative Description:
The Academic Assistance Program began as a supplement to the Developmental Education Center services and course offerings at QJC. Recognizing that many students needed intensive work in language and computation skills, the college instituted its Developmental Education Center in the 1970s. However, for some students, transfer of skills to content courses remained a problem. Without a source of funding for tutorial service, the college sought a way to maximize the results of its
developmental education efforts. The answer seems to be with the Academic Assistance Program.

The Academic Assistance Program is targeted at economically or educationally disadvantaged students as defined in the Perkins Act. Students are aggressively recruited in developmental education classes, freshman composition, and freshman mathematics by the Academic Assistance staff. In addition, all faculty are encouraged to refer students who demonstrate poor writing ability, who do poorly on a test or quiz, or who otherwise seem to be having academic difficulty. Finally, students may drop in to the Developmental Education Center, where the program is based, for occasional help or to set up regular sessions.

What makes the Academic Assistance Program unique is that once a skill area is identified for a student, instruction in that skill is based on the student's current textbooks and coursework. Thus, the student having difficulty in reading his or her psychology text isn't given a reading workbook to practice comprehension skills. Instead, the reading instructor uses the psychology text to teach skills such as finding main ideas, recognizing organizational patterns such as cause and effect, and marking the text in studying for exams. The math teacher, likewise, uses the students' algebra, business math, or pharmacological math text to teach math and sometimes uses a chemistry text in order to relate math to balancing chemical equations. Writing instruction focuses on the assignments a student needs to complete in order to achieve a good grade in his or her current courses. Instruction is provided in small groups or on an individualized basis, depending on the needs of the students, the availability of the instructor, and the demands of the subject matter. Students and instructors work in the Developmental Education Center or nearby classrooms.

A second unique feature of the Academic Assistance Program is the team of instructors. The team isn't unusual so much in its individual members as it is in their combined talents and deployment. Among the two reading, three math, one English, and one ESL teacher, there are both subject specialists and educational specialists. One is a former elementary teacher, one holds a certificate of advanced graduate study, and yet another is an ordained minister. They range in age from under 30 to nearly 60. In short, they are very diverse, and students can choose among them to find the teaching-learning match most conducive to their learning style. One of these teachers is almost always available.

Finally, the counseling team also brought unique talents to the program. The two grant-supported vocational counselors and the college-supported placement counselor included a former dean of student services, a master's degree intern, and an adjunct instructor of psychology. Again,
the three counselors' schedules provided the flexibility of hours and personalities to accommodate a wide variety of students.

Results:
The program's success, measured in number of students served, was remarkable. The Academic Assistance portion served 101 students; its target was 50. The ESL component met its goal of 30 students, and the guidance project served 81 students, surpassing its target of 50.

The students served were very diverse but were representative of the college's student body. Approximately 75 percent of the students were female. Some demonstrated a need for skills support or financial support, and many were in career transitions. While statistical data are unavailable, anecdotal records indicate that most students made substantial progress. Many have inquired about the fall program already.

Plans are underway to track the success of the students as they continue their studies or seek employment. In the meantime, the program is being expanded in the 1990-91 academic year to include the evening division students and to provide instruction in computer science and natural science. If this year's response is an accurate predictor, next year's program will reach even more at-risk students and perhaps reduce that risk.
Learning Development Center/Stein Initiative

Dorothy Horrell, Sarah Dey, and Sheilli Bischoff

College:
Red Rocks Community College, Lakewood, Colorado

Purpose:
The Learning Development Center’s Stein Initiative was designed to offer literacy training to parents of students at Stein Elementary School.

Unique Features:
Red Rocks Community College and Jefferson County Public Schools staff cooperated in planning and implementation of the program, which provides instruction on two evenings per week. ESL and GED preparation programs were offered to parents. Child care was available, and information about the program was presented to all families via newsletter.

Funding Source(s):
The program was paid for through Red Rocks Community College scholarships and the Learning Development Center budget.

Initiative Description:
The Learning Development Center director at Red Rocks Community College was approached by two administrators from Stein Elementary School in Lakewood. These educators had identified a need of the parents of Stein students. These parents, many of whom were welfare recipients, were undereducated and anxious about their parenting skills. While many instructional activities had been suggested, offering GED and ESL programs seemed a logical starting point.

Representatives from the Learning Development Center and Stein met several times to develop the program. The necessary approvals were received from top administrators of both institutions. Fliers were developed and mailed to all Stein parents. and an open house at the school was well-attended by interested prospective students.

In addition to the instruction, other needs were met. Child care by a licensed care giver was arranged, and the college provided a number of scholarships to assist the students. The instruction was presented twice a
week on an open-entry, self-paced basis. Both teachers were experienced in this type of teaching and in meeting the needs of the targeted population. The requirement for instructor awareness became evident when a student seeking a GED prep. was discovered to be deficient in basic reading skills. The student was then referred to a literacy program.

Sixteen students accomplished significant achievements and were honored at a recognition ceremony at the end of the school year. Families attended to hear congratulatory speeches and to applaud student progress. Lives have been touched and changed by this grassroots program.

Plans have been made for expanded offerings at Stein. Classes in parenting and career exploration will become part of the 1990-91 curriculum, and a second-grade school site has been proposed by school officials. This program is in consonance with national trends. Family literacy is a vital component of the literacy movement, and Red Rocks Community College is proud to be a trendsetter.

**Results:**

Stein Elementary serves a neighborhood characterized by high mobility. Many parents of Stein students have not had opportunities for educational experiences. According to Stein officials, the Red Rocks program has awakened participants to possibilities never before considered.

Of the 16 registered students served, 10 were GED students, and six were ESL students. By the end of 1990, four of the GED candidates had received the GED certificate. One student was prepared to complete four of the five subtests. Another had completed two subtests. Both of those students planned to continue.

One of the students was diagnosed as a nonreader. This individual was referred to the Literacy Action program, a volunteer tutoring program housed in the Learning Development Center.

The six ESL students indicated an intention to return in the fall. Several are working on citizenship requirements as well as English language improvement. It is anticipated that a fall program will not only be offered at Stein, but also at another grade school per request from the school system.

The college has benefited by participating in a collaborative venture with the school system and being identified as a community contributor. The community has benefited as citizens perceive themselves as self-confident individuals who can achieve goals leading to a nonwelfare status. Children see their parents as role models for learning. Eventually, business and industry will receive these individuals as trained workers.
PERDUE SELF DEVELOPMENT PROJECT

Bryan Gregory

College:
Vincennes University, Vincennes, Indiana

Purpose:
The Perdue Self Development Project attempts to provide employees of Perdue Foods' Washington, Indiana, turkey processing plant with on-site basic skills instruction.

Unique Features:
Perdue Foods, Inc., contracts with the Vincennes University Adult Basic Education (VU-ABE) program to provide two classes per week. Perdue Foods pays one teacher's salary and fringe benefits and provides testing and instructional materials for the class. Perdue also provides classroom space and instructional equipment in its on-site training facility, Quality House.

Funding Source(s):
This project is funded exclusively by Perdue Foods, Inc., for the benefit of its employees and uses "peer worker tutors" as an integral part of its program.

Initiative Description:
In September 1989, Perdue Foods contacted VU-ABE with a request that the program provide services to undereducated employees at the plant. When one worker was promoted into a product handling position and his functional illiteracy resulted in inventory and shipping mistakes, Perdue saw a need to upgrade the basic skills of production workers to ensure that the work force could be retained, that employees could benefit from other training, and that individuals could be promoted into jobs demanding higher skills. Perdue felt many other valued employees might be lacking in skills needed for promotion, retention, and retraining.

The Perdue Human Resources Department originally estimated that 50 to 150 workers needed basic skills upgrading with five to 10 starting immediately. Twelve employees initially committed to attend the self-development classes. As of August 1990, 15 employees had attended classes.
Instruction is provided by an experienced teacher from the regular ABE program. Perdue has provided several volunteer “peer tutors” from within the work force. This serves several purposes. First, peer tutors can help make sure instruction is relevant to the work environment. Second, the tutors can help reduce staff costs by working as aides in the classes. Third, the peer tutors can help promote participation from their co-workers.

Classes have been going on since the end of October 1989. At times, participation has been disappointing despite several attempts to promote the class within the plan and schedule changes to try to make class sessions more accessible to workers. Workers are expected to attend class after or before their shifts. They do not attend during regularly scheduled work hours. Worker teams are now preparing to reschedule classes to ensure greater attendance.

Results:
Fifteen employees have started in the classes. Three students entered class as nonreaders (K level skills). Four more tested below high school level (6.9 8.5), and the remaining eight tested at high school level reading ability (9.1 11.2). We feel it is premature to assess results. No students have yet been post-tested. An indirect benefit to Vincennes University has been the opportunity to learn about producing on-site workplace literacy instructional programs.
III.
A NATIONAL CHALLENGE
Tony Zeiss

At the 1989 American Association of Community and Junior Colleges Convention, President George Bush stated that:

We share the conviction that there is no such thing as an expendable student. We will never accept the notion that vast numbers of illiterate and undereducated Americans can be offset by a well-educated elite.

The at-risk population referred to by our President is not only at risk personally, but it also creates a risk for our society. We are indeed facing some remarkable challenges in this country. We are facing a serious shortage of skilled workers and appear to be developing a permanent underclass of people (Parnell, 1990).

Historical evidence is convincing that people yearn to be free, to participate in society, and to pursue liberty and happiness. People wish to be engaged in the events that directly affect them. To do so, they must possess a knowledge base and the basic skills that allow them to make informed choices. An illiterate society with a permanent underclass denies this essential freedom for which our country stands. Further, an illiterate population impedes our country’s great potential to set new standards of living and to achieve greater heights for a more sophisticated, more compassionate society.

Our nation’s power and wealth are not driven by its corporations and its government. Our power and wealth are and always will be driven by our people. Our ability to empower people, all people, with knowledge is what we must be about. As we enter the last decade of the 20th century, human development will rise to the top of our national agenda. In a very real sense, this is the greatest challenge for educators. We must be on cue, and we must be effective in this newest age, the age for human development.

The mandate for action is clear. We must acknowledge the immediate problem of adult illiteracy, embrace it as a national challenge, and set in motion the strategies and educational services to solve this problem. Illiteracy is a silent but effective enemy to our country and attacks the essence of our most important resource...our people. As this monograph has demonstrated, America’s community-based two-year colleges are in a unique position to accept this most serious challenge of the 1990s. More
importantly, they have already begun to lead the way in solving this human tragedy.

The Challenge

Community, technical, and junior colleges are in the fundamental business of human development. For decades we have been providing outstanding leadership in this essential arena. Indeed, the American community college movement has caught the attention of many nations and has permeated virtually every major community in this country. The leadership provided by the faculty and staff of our 1,250 community-based colleges has been unprecedented and exemplary. However, as this monograph has outlined, there is yet another sector of our population that desperately needs our help. Leadership in the area of adult literacy education is our newest demand and our most imminent challenge.

Our republic was established on the principle that all citizens should have access to a public education. We have been successful to this end. The needs of the 20th century, however, demand that access alone is not enough. Today's citizens must possess good literacy and occupational skills to be able to support their families and to contribute to their society. To this end, business leaders are calling for a shared vision with educators. Educators, they suggest, must view business, government, and the communities as customers just as they view students as customers (Primozic, 1991). Education must not exist in a vacuum. It has a compelling obligation to serve society in a holistic manner.

Concerns about education in the United States are not new. In fact, our forefathers were interested in education and saw it as an essential element of a free society. Our modern-day leaders recognize that "the continued welfare of the United States is tied inextricably to its higher education institutions" (National Commission on Higher Education Issues, 1982, p. 11). In fact, a knowledge-based society is viewed as essential for a prospering society. More recent national commission reports about our growing illiteracy problem have alarmed the business community, as well as those of us who are in education. For instance, there appears to be a direct correlation between low basic skills and poverty, crime, teenage pregnancy, welfare dependency, the high school drop-out rate, and unemployment (Carnevale, Gainer, and Meltzer, 1988).

Most of these reports have been quick to fault public education and to propose a solution by demanding higher quality education and imposing higher standards for college entry. There is a fundamental problem with this popular trend. Higher standards generally create the opposite result of what was intended. Teachers and administrators become inundated with
new regulations and bureaucracy, thereby removing them further from the essential teaching-learning process. More importantly, the emphasis in education at all levels gravitates quickly to the brightest students. The unfortunate result is that the marginal student, the underemployed adult, and the average achiever are penalized. The gap between the faster and slower learners becomes wider, and the majority of our students are effectively forgotten. The interest in quality and high standards must always be considered, and we must guard against diluting the curriculum at the expense of our brightest students. However, we must have an equal interest in educational access and accountability to those most in need of education. A proper balance in educational services for all people is desperately needed.

Recent work force trends indicate that literacy in the basic skills of reading, mathematics, communication, computers, and critical thinking has become essential for nearly all job categories. American employers are pleading for educators to get back to the basics and to produce graduates who can effectively read, write, and calculate. Further, there is an increased frustration on the part of business and industrial managers that workers do not have the proper math and verbal skills required for learning technical skills needed on the job (Nuventures Consultants, 1990). Employers throughout this country clearly recognize that an educated work force is the most important element for bottom-line productivity. These industrialists also recognize that America is running out of qualified people. Our work force is aging rapidly and will soon be decreasing in size. The competition for literate employees by business, the military, and the government will be fierce. In the meantime, Third World countries will be using their abundant work forces and lower-cost labor to push this country into greater economic decline.

The Opportunity

I believe there is a “win-win” opportunity here. By emphasizing the importance of basic skills mastery of all students, regardless of age, gender, ethnicity, or condition, with the same vigor that we have emphasized quality and high standards, we can insure that America’s work force is second to none. This more literate work force will then be better able to use the advanced technologies we have developed. In short, our smaller, more mature and more diversified work force will be better prepared to become more productive. Meaningful partnerships between business and education will become the norm rather than the exception. In consequence, our ability to compete on a global scale will increase dramatically. More importantly, that “forgotten majority” of underachievers will be equipped
to lead productive and quality lives. Social dependency should diminish, and the continuing socioeconomic disparities among minorities, the elderly, and the handicapped should decrease.

A Shift in Resources

A community's, state's, or nation's economic standard of living is determined by its ability to educate its citizens and to empower them with the knowledge and skills to be productive. With an ever-shrinking work force and an increasingly competitive global market, our country must embrace the challenge to educate the masses, not just a selected percentage, beyond high school. During the '60s and '70s, we were lulled into believing that our higher educational system was among the best in the world. This belief allowed and encouraged a greater emphasis and increased financial support for research. Slowly but decisively, we shifted from a higher educational system which focused primarily on teaching and learning to an educational system which began to focus more on university-level research. Our financial support appears to have continued to increase at the upper levels of research-focused activities and has remained stagnant or diminished for teaching-learning activities. This imbalance in funding for higher education is self-perpetuating, and the gap between research and teaching is growing wider. We must support the basic teaching process with greater enthusiasm and sufficient dollars to do the job correctly.

Today, we are faced with America's greatest educational and economic challenges. We are the world's largest debtor nation, businesses and financial institutions are failing by the hundreds, the number of homeless and disadvantaged citizens is increasing dramatically, and our adult illiteracy rate is at 13 percent and rising. It is clear that our educational system at all levels has not met the challenges of this decade and our emphasis on research versus teaching is out of balance.

If we hope to restore the economic health of our nation, states, and communities, we must effect an immediate shift in higher education philosophy by restoring a more practical balance in financial support between teaching institutions and research institutions. Both our businesses and our impoverished citizens will be better assisted by a well-supported educational system which focuses on teaching and learning. Through knowledge, people and businesses will be empowered to compete and thereby establish a more comfortable economic standard. Nearly every state in the union is engaging in a debate about funding for higher education. Essentially, tax revenues do not appear to be keeping up with the demand for increasing educational services. As community colleges continue to serve additional students, the pool of dollars for higher education is being stretched.
to the limit. Much posturing has occurred as a result of this situation. The state universities and four-year colleges are naturally reluctant to give up dollars to support student growth at community colleges. The likelihood of additional state revenues is slim. And yet, the community colleges need more dollars to accommodate their additional students.

Clearly, the time has come to fund higher education in a more equitable and efficient manner. To ask the state legislatures and taxpayers for dollars they do not have seems to be unrealistic and unproductive. The funding disparities, where they occur between community colleges and universities, must be scrutinized and justified. Community colleges in Colorado, for instance, receive less than half of the state support per student the universities receive. And community colleges are serving the underprivileged, the economically disadvantaged, and the less-prepared students!

Certainly, both the teaching mission and the research mission have merit, but we need a better balance—a balance that is more in line with today's mandate for a better-educated and -trained population.

The debate for the distribution of limited resources will, no doubt, continue for years. However, it is time to re-examine all funding for higher education. We will find that many colleges and universities have been caught in an elitist time warp of educational practices. Clearly, we must move from the research-focused "technological age" to the "age of human development.”

Advice to Practitioners

America's greatness always has and always will lie with its people and its ability to face adversity with optimism. I am very optimistic that we can reduce the current outrageous adult illiteracy rate and that we can train our citizenry to be the best work force in history. I am optimistic because of the wonderful success of community literacy initiatives such as those outlined in this monograph and because of similar initiatives that are springing up across the nation. The outstanding results of these selected literacy initiatives have convinced me that community colleges are in the best position to eradicate adult illiteracy, and effective programs can be established based upon some proven techniques. To become a leader in community literacy education, it is not at all essential that an existing program must be replicated. In fact, the most successful programs have been individualistic and designed around the unique circumstances of the respective communities. There are, however, some commonalities among these exemplary programs. First, the college governing board, president, and key administrative staff must be committed to supporting the initiative. Secondly, the program must bring together a variety of human development agencies so that they can combine their expertise and financial leverage.
Thirdly, the community, including the local businesses and the press, must be supportive of the literacy activities provided by the college and its associates.

The two most difficult obstacles to establishing a literacy outreach program are financing and interagency cooperation. Programs vary widely, but most are supported by a combination of public and private dollars. Many private and corporate foundations are very supportive of literacy education. Establishing interagency cooperation to provide a united focus on a community's illiteracy problem seems to be the greater challenge. This is where leadership from the college president is required. From personal experience, I can attest that the most astute political and social skills will be required to eliminate long-standing turf wars and to achieve the spirit of cooperation necessary for a successful community-wide program. The following simple formula has worked for us, where virtually every human development agency and educational entity is cooperating with a single resolve to eradicate adult illiteracy in Pueblo, Colorado:

- Create enthusiasm for the project
- See that everyone has a share in the ownership of the project
- Create a climate that rewards innovation and risk taking
- Constantly nurture and keep the players focused
- Develop a strategic plan which is socially and politically astute
- Work the plan
- Praise, praise, praise

Providing community-based adult literacy programs is not easy, is not financially profitable, and is not glamorous. However, it is desperately needed, and it is an area that community college leaders must embrace. Yet another leadership challenge is before us. With commitment and our existing skills for educational leadership, I am convinced that America's community, junior, and technical colleges will be up to the task.
IV.

EPILOGUE

Robert M. Ady
President of PHH Fantus, Chicago, Illinois

There is little doubt that throughout the 1990s, America will be in hand-to-hand combat with nations around the world for new investments, jobs, and economic development. And as surely as transportation systems were of the utmost importance to the creation of economic wealth in the beginning of this century, a literate, trainable work force will be the linchpin for success during the last decade of the century. It is amazing how obvious this fact is to us practitioners of site selection who scour the globe looking for suitable locations for the manufacturing and office facilities of tomorrow, yet how oblivious governments, people, and yes, even educators are to this fact!

There is absolutely no question in my mind, based on the requirements of hundreds of major corporations worldwide who use PHH Fantus site selection services, that a literate, trainable work force is now, and will be throughout the 1990s, the single most important criteria for the placement of new facilities both worldwide and within the United States. Those states that can produce such a work force will be the economic development winners of this decade regardless of whether they are located in the northern, southern, eastern, or western part of this vast nation.

It is interesting to note that American industry has spent the past 20 years working on product improvement and quality management, yet little attention has been directed toward the work force until recently. The technical and managerial successes of the '70s and '80s can only produce economic rewards if the work force is capable of fulfilling the expectations generated by the previous two decades.

The world of site selection and ancillary job creation and economic development deals with pragmatic nuts and bolts issues. Is country A or B better? Is community A or B better? To my knowledge, this is the first definitive book that offers pragmatic, realistic solutions to the growing adult illiteracy problem, as opposed to simply restating the problem. The focus of the book is on 16 model adult literacy training programs that are being operated today—right now—by community, junior, and technical colleges throughout the nation.
For far too long and far too often our nation's community, junior, and technical colleges have been viewed as repositories for those who are incapable of attending our four-year colleges and universities or are unwilling to enter the work force. In truth, it is these institutions that give America its competitive advantage worldwide. In no other country is there an educational system so geared to matching industry needs with work force training. Our nation's community, junior, and technical colleges are a tremendous resource for business and industry and must be among the relevant institutions for delivering the quality work force that will allow us to maintain our economic pre-eminence during the 1990s and simultaneously hold out the hand of hope to all who aspire to better themselves and this great nation!
V. REFERENCES


Tony Zeiss is president of Pueblo Community College, which has a main campus in Pueblo, Colorado, and extension campuses in Canon City, Cortez, and Durango, Colorado. Zeiss received his doctorate in education from NOVA University in 1979. He has become a leading educational figure in economic development and a strong advocate for eradicating illiteracy as a basic activity for improving America's economy. Zeiss serves as chairman of the Governor's Job Training Coordinating Council for Colorado and is an active economic development consultant for community colleges.