An examination is made of the increasing educational demands of the modern workplace during a time when the makeup of an already shrinking workforce is becoming more composed of minorities, women, and immigrants. Articles in this newsletter issue discuss which jobs will grow and which will decline; the new educational demands and skills required of the new workforce; and the challenges, opportunities, and problems that will exist in the workplace over the next 11 years. A brief discussion of the labor shortage is presented from the aspect of the nation's birth rate and how that labor shortage will need to be replaced by minority and immigrant laborers. (GLR)
The Changing American Workplace

by Donald A. Ranard

Jobs are demanding more language, math, and technical skills at a time when minorities, women, and immigrants are making up a larger share of a shrinking work force . . .

New Jobs Demand New Skills

WHEN the auto plant was automated, the managers offered Ed a promotion to production foreman. “All you gotta do is learn how to use a computer,” his boss told him, handing him a computer users’ manual. But Ed, a high-school drop-out, had never learned to read well. Too proud to reveal his problem, Ed turned down the job offer. Two weeks later, he was laid off.

Until recently, it wasn’t necessary to read or write well or know much math to get a good job. Factories, steel mills, and coal mines offered good-paying jobs to millions of workers with little or no literacy skills.

But for those who can’t read and write, communicate clearly, or use mathematics, it is becoming more difficult to find a job that pays more than entry-level wages, labor specialists say.

One reason for this change is the widespread increase of service-sector jobs. People who hold service jobs—janitors, secretaries, computer technicians, doctors, businessmen—provide services rather than produce goods, and the numbers are growing at a time when American manufacturing jobs are declining, as companies substitute machinery for workers or go overseas, where labor costs

In This Issue

New Jobs Demand New Skills ........................................ 1
Lifelong Learning ...................................................... 2
Which Jobs Will Grow and Which Will Decline? .............. 3
Building a More Diverse Workforce ................................ 4
The Labor Shortage: From Baby Boom to Baby Bust .......... 5
Sources ......................................................................... 8
Lifelong Learning

In the new workplace, "learning will be a lifelong need," says Per Christiansen, current educational consultant at Polaroid Company, where new technology and a work team approach are demanding new skills from mostly foreign-born workers in the camera assembly section.

"In the traditional factory, production workers did the same thing day after day, year after year," says Christiansen, who served as the coordinator of Phatet Nikhom's pre-employment training program from 1982 to 1983. "There wasn't much need to learn anything new. But over the next 20 years, technological innovation will keep changing the work required in most jobs, and those who are able and willing to keep learning all their lives."

Currently Christiansen is helping to design a training program at Polaroid for 280 camera assemblers, many of whom are immigrants and refugees with little or no literacy skills in any language.

"We hope that after training, a significant percentage will be able to make the transition to working in work teams using automated machinery," says Christiansen. Training for the least skilled workers will be similar in content and methodology to the training in A/B-level Work Orientation, Christiansen noted.

are cheaper. While manufacturing provided good-paying jobs to low-skilled and even unskilled workers, good service jobs will require math, language, and reasoning skills.

In addition, technological change will upgrade the work required in jobs. In many companies, for example, industrial robots have eliminated the need for production workers, while creating a need for robot operators and repairers.1

The way that work will be organized in the future will also require new skills. More and more companies, for example, are shifting from the old model of assembly-line production and top down management to more egalitarian "work teams," a Japanese-style model of production that demands more communication and cooperation among workers. "The work team approach means that each worker must communicate with some precision with other members of the team," says Per Christiansen, an educational consultant at the Polaroid Company, which uses work teams in its camera assembly division. "They also need to work cooperatively rather than competitively."

The work team model can also demand more technical skills, as workers take on responsibilities that used to belong to supervisors and specialists. At Polaroid, work teams are doing more quality control, a task which requires some knowledge of math and which previously was handled by a separate department.

This isn't to say that all jobs in the future will demand high skills. In fact, there will be a greater need than ever for cashiers, sales clerks, busboys, waiters, cooks, janitors, fast food workers, and housekeepers—jobs that require low to modest skills.2 But these jobs tend to pay considerably less than low- to medium-skilled blue-collar jobs. And they offer less opportunity for upward mobility than other jobs.

1There are a few exceptions to this general trend. Some fast food chains, for example, have reduced the need for literacy by using pictures of food items on cash register keys.

2Even low-skill service jobs can require a basic ability to read and write, add and subtract, and communicate clearly. Sales clerks, for example, often have to write up orders, compute price lists, read merchandise catalogs, and respond to customers' requests.
Worker skills don’t match job skills

At a time when many jobs are demanding higher skills, studies show that large numbers of workers—20 million, by one estimate—have little more than basic reading, writing, and computational skills. A 1986 study of the literacy skills of 21- to 25-year-olds by the National Assessment of Educational Progress (NAEP) found that while most young adults could read, write, and compute at a basic level, large numbers were unable to perform tasks of moderate difficulty, and only a small percentage could handle complex tasks. For example, on the reading and writing portion of the test, about 95% of the subjects could fill out a job application form, but only about 57% could follow directions using a map, and less than 9% could use a bus schedule. In the math section, about 92% could add up numbers on a bank deposit slip, but under a third were able to understand a loan ad well enough to determine the amount of interest charged by the advertiser.3

Comparing job demands and worker skills, the Hudson Institute concludes that there is a looming mismatch between jobs and the ability of workers to do them. An estimated 75% of all workers joining the workforce over the next 11 years will have low to mid-level literacy skills, but only 40% of the new jobs will be at these levels. And only 5% of the new workers will have

3Clearly, the NAEP study raises concerns about the ability of young workers to handle the increasing demands of the workforce. But it also indicates that by the popular definition of “illiteracy”—i.e., the inability to read or write anything—and contrary to many media reports, illiteracy is not a major problem in America. Approximately 6% of the NAEP subjects had only a basic reading level (fourth grade or below), and even fewer (less than 2%) were unable to read or write anything. These figures have led researcher Larry Mikulecky, among others, to suggest that literacy programs shift at least some of their focus from “the minority of adults experiencing extreme literacy difficulties” to “the much larger percentage of adults reading above the fourth-grade level, but not well enough to easily function in society . . . [and who] need a different sort of teaching than the basic literacy . . . training being provided by most volunteer tutors.”

Which Jobs Will Grow & Which Will Decline?
(A selected list)

<table>
<thead>
<tr>
<th>OCCUPATION</th>
<th>OUTLOOK</th>
<th>REASON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooks</td>
<td>Moderate increase</td>
<td>Trend toward larger hotels, which are expected to provide more full-service dining.</td>
</tr>
<tr>
<td>Electronic repairers</td>
<td>Moderate increase</td>
<td>More electronic equipment in use by firms to automate offices and production processes.</td>
</tr>
<tr>
<td>Computer programmers</td>
<td>Big increase</td>
<td>More use of computers in almost all industries.</td>
</tr>
<tr>
<td>Electrical engineer</td>
<td>Big increase</td>
<td>More electronic devices.</td>
</tr>
<tr>
<td>Machinists</td>
<td>Small decrease</td>
<td>New manufacturing systems and equipment.</td>
</tr>
<tr>
<td>Sewing machine operators</td>
<td>Small decrease</td>
<td>More use of robots.</td>
</tr>
<tr>
<td>Auto body repair</td>
<td>Moderate decrease</td>
<td>More use of plastics in car bodies will mean fewer minor repairs.</td>
</tr>
<tr>
<td>File clerks</td>
<td>Moderate decrease</td>
<td>More use of electronic filing systems.</td>
</tr>
<tr>
<td>Secretaries</td>
<td>Moderate decrease</td>
<td>Offices will become more automated.</td>
</tr>
<tr>
<td>Welders</td>
<td>Moderate decrease</td>
<td>Automation.</td>
</tr>
<tr>
<td>Electronic assemblers</td>
<td>Big decrease</td>
<td>Automation.</td>
</tr>
<tr>
<td>Typists</td>
<td>Big decrease</td>
<td>Replaced by word processors.</td>
</tr>
</tbody>
</table>
the skills to qualify for some of the fastest-growing occupations, such as nursing and management.

"The skills gap poses a threat to American society that goes beyond simply the economy," a recent issue of *BusinessWeek* magazine warns. One possible scenario: If new workers don't improve their skills, a growing number of job seekers could end up competing for low-skilled jobs, while higher-skilled jobs go unfilled. This, in turn, could drive down wages for low-skilled workers, who can least afford it, and raise wages for the most skilled and educated. "If we don't boost the skills of the bottom ranks of the workforce, we'll have an even more divided society than we have now," says Irwin Kirsch, a researcher at Educational Testing Services in Princeton, N.J.

---

**Building a More Diverse Workforce**

IT is not only the nature of work that will change over the next 11 years. The make-up of the workforce will undergo dramatic change, as well, with fewer white males and more minorities, immigrants, and women entering the workforce. Over the next 11 years, only 15% of those entering the workforce will be white males, the Hudson Institute estimates. The rest will be minorities, women, and immigrants. "Building a new, more diverse work force and making it tick will be Corporate America's biggest challenges in the decade ahead," *BusinessWeek* observes.

**For minorities, problems and opportunities**

It is no small paradox that for disadvantaged minorities the next 10 to 20 years will pose extraordinary problems as well as unprecedented opportunity.

At a time when jobs are demanding higher skills, blacks and Hispanics lag far behind whites in reading, writing, and math, studies show. In addition to lacking the right skills, minorities are stuck in the wrong jobs, with too few in the fast-growing fields and too many in the slow-growing ones. One study found that blacks and Hispanics were 35% more likely than others to have jobs in occupations projected to lose the most employees between 1978 and 1990.

Despite these obstacles, minorities could find themselves in a better position in the job market over the next decade. The reason: At a time when the overall number of workers has dropped, causing a labor shortage, the number of black and Hispanic workers is increasing. With fewer workers to choose from, employers might provide the less advantaged with better job opportunities and more training. Economic necessity, it is hoped, may finally accomplish what years of social action have failed to produce. "For the first time in our history, the needs of the disadvantaged and the needs of employers may be merging," *BusinessWeek* observes hopefully.

But while an increasing number of companies are providing skills training to their less skilled workers, it is unlikely that business alone will solve the problems facing minorities. Although business spends $30 billion a year on corporate training, most of the money is spent on job-specific skills training rather than the more basic skills that the disadvantaged need—and without the basic skills they can't take advantage of job-specific skills training. A recent report, *Jump Start: The Federal Role in Adult Literacy*, notes that it makes less economic sense for business to invest in basic literacy skills because these skills are much more "portable" than job-specific skills—that is, they can be carried much more easily from one company to another. And because low-level employees—those most likely to need basic skills instruction—often have a high turnover rate, business is less willing to invest in them.

Moreover, most American workers are em-
The Labor Shortage: From Baby Boom to Baby Bust

In 1945, post-war America launched an era of unparalleled prosperity. Big was in fashion: big cars, big clothes, big bands—and big families. Eighteen years later, the "baby boomers" began entering the job market in unprecedented numbers, creating a labor surplus that allowed employers to choose from among the most highly qualified and that forced the "baby boomers" into keen competition for the best jobs. Many took jobs lower in pay and status than they had expected. At the same time, rising taxes and inflation eroded salary increases. Downward, rather than upward, mobility became the norm: The real after-tax income for families headed by a person aged 25 to 34 declined by 2.3 percent between 1961 and 1982. In an era of disappointed expectations, small became beautiful, and large families, a hardship.

Moreover, an increasing number of women chose to put off marriage and children in favor of college and a career. A rising divorce rate also slowed the growth of families. The combination of social change and unrealized financial expectations turned the "baby boom" into a "baby bust." U.S. fertility fell from a high of 3.77 children per woman in 1957 to 2.1 in 1972 to a current rate of about 1.8.

As a result of the baby bust, the number of 16- to 24-year-olds in the workforce has dropped from 22.4 million in 1979 to 20.2 million. Over the next 11 years, most of the growth will be among minorities and immigrants. By the year 2000, almost a third of all new entrants into the labor force will be minorities—twice their current share.
ployed by small firms, a trend that is expected to continue over the next decade. Many of these businesses simply can’t afford to mount training programs of any significance.

And, as the Hudson Institute points out, business has other options than training: It can raise wages to attract more qualified workers, it can try to substitute technology for labor, and it can move job sites to areas of the country or the world with a larger pool of workers.

“If the policies and employment patterns of the present continue, it is likely that the demographic opportunity of the 1990s will be missed, and by the year 2000 the problems of [minorities]... will be worse than they are today,” the Hudson institute warns. Investments in education and training, as well as other social assistance programs, are needed, the report concludes—“not only to insure that employers have a qualified workforce, but to finally deliver the equality of opportunity that has been America’s great unfulfilled promise.”

A better place for women

In only 20 years, feminism, financial need, and higher educational levels among women, have changed America from a society in which most women stayed home to one in which the majority work outside the home.

As more women joined the workforce, it was hoped that employers would take major steps to accommodate the special needs of women. So far that hasn’t happened. Only 5% of U.S. companies, for example, help their workers with childcare.

Until recently, employers didn’t have to pay much attention to the needs of women. Escalating living costs and a surplus of male workers meant that women and their families needed the money more than companies needed women. But as the labor pool shrinks, women will be in a better position to make demands, labor specialists predict.

The Hudson Institute predicts that in order to help women better balance the demands of work and home:

- Both government and industry will provide more child care, since there is ample evidence that women are more likely to enter and remain in the workforce if childcare is available. In addition, school systems may lower the age for starting school to five or even younger.
- Employers will offer more flexible schedules. More employees will work part-time and at home, and more will be allowed to choose their own hours at work. A more generous leave policy will permit workers to take months of unpaid leave to care for a sick, disabled, or newborn family member.

These and other changes will encourage more women to join the workforce over the next decade, companies hope. The U.S. Bureau for Labor Statistics predicts that in the year 2000, about 47% of the workforce will be women, and 61% of all women will be at work. And more women will be entering traditionally male occupations, such as law, engineering, and business management.
New challenges for new arrivals

In the past twenty years, more immigrants have come to the U.S. than at any time since the turn of the century. Between 1970 and 1980, the foreign-born population increased by 4.5 million. If these trends continue, immigration will add more than nine million people to the U.S. population and four million to the labor force by the year 2000.

Today's immigrants represent a diverse mix of social and educational backgrounds. The foreign-born who arrived in the 1970s are both better- and less-educated than the average American: 22% were college graduates, compared to 16% of native-born Americans, while 25% had less than 5 years of school, compared to 3% of natives.

For the well-educated immigrant or refugee, the economy may offer better opportunities than ever before. In the past, a surplus of native-born skilled workers meant that even highly educated foreign-born workers often had to start at the bottom. But as the labor pool shrinks, employers might be expected to overlook the language deficiencies of otherwise qualified workers.

For the less-educated and less-skilled immigrant or refugee, the new workplace will offer both opportunities and problems. On the one hand, a shortage of young workers is making it easier for the unskilled newcomer to find entry-level employment, particularly in service jobs traditionally filled by young workers. "If you can breathe and walk, you can get a job," says a job specialist in northern Virginia, where a low unemployment rate has caused a serious shortage of hotel, restaurant, and fast-food workers.

On the other hand, the immigrant or refugee lacking English or math skills may find it harder than ever to find anything but entry-level employment. And without these basic skills, it will be difficult to take advantage of the training programs that provide the job-specific skills needed to get a better job.

But what many immigrants and refugees lack in skills, they more than make up for in their drive to succeed. The owner of a janitorial service in Reston, Virginia, started hiring refugee and immigrants when she couldn't find teenagers to fill the jobs. "Before, people quit for the same reasons you or I would quit: The work is boring, demeaning, and all those things you don't want in a job," she told a reporter. "But most of these people are trying to improve themselves. I know many of them are thinking, 'I don't want to be a janitor for the rest of my life. But this is a start.'" And for many refugees, past hardship strengthens resolve. "No matter how hard it is," says a Cambodian refugee who works at two janitorial jobs, "it's not hard for me. [In Cambodia] I worked in... a labor camp from morning until it was so dark you couldn't see the ground any more."

Since English language skills will be more important than ever in the new workplace, the exceptional motivation of most immigrants and refugees to learn the language is a hopeful sign. Indeed, the demand for ESL in many parts of the country outpaces the supply. At a time when a high percentage of native-born Americans are dropping out of adult basic education programs, "the motivation of most ESL students is exceptionally high," Jump Start notes. "Programs in California, Texas, Illinois, and other states are swamped with applicants. Most ESL students are in the workforce, and many go to extraordinary lengths to seek help. On average, retention rates and learning gains are high."

The increasing sophistication of ESL programs is one reason for those gains. "The ESL field is far ahead of most of the rest of the adult education effort," Jump Start notes. "A high-quality teaching force has been developed, and instructional techniques, assessment tools, and delivery systems have been refined." Certainly, one cause for optimism is that more and more ESL programs in the U.S. are providing the kind of effective and innovative training which the overseas program offers and which has been shown to make a clear difference in the lives of refugees and immigrants.
Sources


In America

Perspectives on Refugee Resettlement

In America has been developed and printed under a cooperative agreement with the Bureau for Refugee Programs of the U.S. Department of State. The material appearing herein does not necessarily represent the policy of that agency nor the endorsement of the federal government...
END

U.S. Dept. of Education

Office of Education
Research and
Improvement (OERI)

ERIC

Date Filmed
March 21, 1991