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Industrial Education Magazine [Presidential By-Line] 2/15/90 [OA 6894]

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Lange/Cawley  
February 12, 1990  
[VOCED.DOC]

PRESIDENTIAL BY-LINE: INDUSTRIAL EDUCATION MAGAZINE

AS?  
If you're a reader of this magazine, you're already standing on the front line of America's fight for a competitive future. You provide the skills that make America strong.

More than ever before, all of our industries -- whatever their combination of goods and services -- will rely on a skilled workforce to get the job done. And the people these businesses will need to keep America strong in the future, are relying on you for skills today.

The long-awaited "Baby-bust" is already being felt in a number of key industries. In some regions, managers are already scrambling to keep enough talent on the line, behind the counter, and in the field.

As we approach the new century, there is a serious possibility that the number of jobs created will outstrip the number of qualified people available to fill them.

~~More than half of these new jobs will require a year or more of study beyond high school. Our working men and women will need~~

Elizabeth  
Khachigian  
Dept. of Labor  
523-6851

Workforce 2000 Booklet

stronger job skills; stronger basic skills in reading, writing, and computing; and above all, the adaptability to be trained and retrained as technology advances and jobs change.

21 new  
workers 30 current

Some estimate that more than 50 million people will need some kind of vocational training between now and the end of the century. That challenge -- America's competitive challenge -- rests squarely on the shoulders of those committed to excellence in vocational and technical education. Your work is building a better America.

"Human Capital" Article -  
9/19/88 Business Week  
p.104

Because of this administrations's conviction that education is so crucial, we've placed special emphasis on reform for the nation's schools. We are raising our standards -- and our expectations. Encouraging choice. Promoting flexibility. And improving the accountability of teachers for what they teach, students for what they learn, and institutions of all kinds, for the results they attain.

Although the federal financial role in vocational education is relatively small, we think federal leadership can help point the way toward more effective programs. That's why we sent the Vocational Education Excellence Act of 1989 to the leaders in Congress: to improve the Perkins Act, which sets the tone for basic vocational education assistance to the states.

Tom Johns  
Dept of Ed.  
Vocational Education  
OPC.  
132-2237

→ Vocational Ed. Excellence Act of 1989  
Section-by-Section Analysis  
(Dept of Ed. fax)

The bill we offered would improve the Perkins Act in several areas:

To encourage accountability, we're encouraging states to set specific goals for students, in areas like basic skills and job-market success -- and we're calling for states to use those goals to determine which programs are measuring up.

To allow for more flexibility, and to streamline and simplify wherever possible, we're emphasizing greater state and local control over how federal funds are spent.

To ensure program improvement, beyond just maintaining ongoing programs, we're calling for action in three areas: curriculum development; acquisition of instructional equipment; and the professional development of teachers, counselors, and administrators.

And finally, our bill includes new provisions to ensure that Perkins Act funds are closely tied to state and local economic development. We believe vocational training funds should only train students for jobs where openings are projected -- and that vocational education programs should be coordinated with each state's overall economic and job training strategy.

But as much as we work to improve vocational education from the federal level, the real work will be done by educators like

yourselves: the administrators and teachers of this nation's crucial technical and vocational programs.

So I'd like to encourage you to think about ways to integrate vocational education with your school's traditional curriculum -- and seek out new partnerships with the private sector. Business leaders can keep you in touch with the needs of the marketplace, help you set goals, and provide expertise and role models for the students you teach. By working with the business community, you can ensure that your programs are producing the kinds of graduates America needs to succeed.

The work you do has profound consequences for our economic future. But along with our productivity, competitiveness, and the rising standards of living Americans depend on and deserve, there is another reason to make sure our vocational and technical education is second to none.

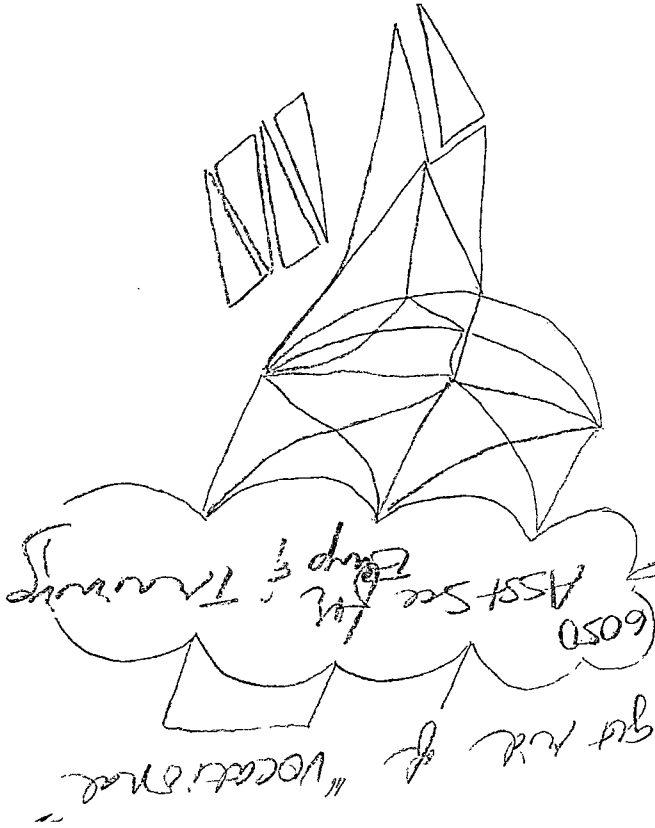
As labor markets get tighter -- and businesses turn to sources of talent once left untapped -- vocational education can bring a vast array of individuals into the mainstream of the American dream.

That means new success stories for dropouts, who see no opportunities. For youth at risk, who don't see the connection between school and work. For the underskilled, who need training. For older and more experienced workers, who need new

skills. For the disabled, who only need a chance to prove their abilities. For dual-career families, who need flexibility. And for dislocated workers, who need to be retrained as jobs change.

It is crucial that vocational education enlist and develop the unlimited potential of these individuals. Their advancement gives us a two-fold advantage: in our competitive position in the marketplace -- and in our belief that a free society is based on opportunity.

Every day, your work is providing opportunity for millions. In the coming years, it will be even more crucial for millions more. Working together, we can ensure that the skills you provide America's working men and women are nothing less than world class.



Elizabeth Khochigian  
523-6851

**VOCATIONAL EDUCATION EXCELLENCE ACT OF 1989****Section-by-Section Analysis**

**Section 2.** Section 2 of the bill would amend in its entirety the Carl D. Perkins Vocational Education Act (20 U.S.C. 2301 et seq.). The purpose of these amendments is to improve the operation of vocational education programs under current law by promoting accountability, increasing flexibility in the administration of these programs, reducing administrative burdens, fostering economic development, and improving vocational education personnel.

Proposed amendments to the Perkins Act will be referred to in this document as "the proposed Act". These proposed amendments are as follows:

Section 1 of the proposed Act would include the short title of the proposed Act and the table of contents.

Section 2 of the proposed Act identifies the major purposes of the proposed Act. These purposes include assisting States to improve vocational education programs, with particular emphasis on serving special populations (described in section 201(b) of the proposed Act); strengthening the accountability of vocational education programs; improving the academic foundation of vocational education; and authorizing national programs to support research, demonstrations, information dissemination, and bilingual vocational training.

Section 3 of the proposed Act would authorize appropriations through fiscal year 1994. This section would authorize specific amounts for fiscal year 1990 and such sums as may be necessary for fiscal years 1991 through 1994. Specific authorizations for fiscal year 1990 are: \$48,000,000 for State administration of vocational education programs (as authorized in section 102(a) of the proposed Act); \$8,000,000 for State councils (as authorized in section 112 of the proposed Act); \$858,387,000 for basic State grant programs under title II of the proposed Act; and \$35,000,000 for national programs under title III of the proposed Act.

Section 4 of the proposed Act defines terms used in the proposed Act. These definitions are very similar to those used in current law; however, for clarification, the term "disadvantaged individuals" would no longer include individuals with limited English proficiency, since these individuals comprise a special population for purposes of title II of the proposed Act. The section would also delete, as no longer necessary, definitions for "area vocational education school," "career guidance and counseling," "construction," "Council," "economically disadvantaged family or individual," "private vocational training institution," "school facilities," "State educational agency," and "vocational student organizations."

## TITLE I--VOCATIONAL EDUCATION ASSISTANCE TO THE STATES

### PART A--ALLOTMENT AND ALLOCATION

Section 101 of the proposed Act would allot to various program authorities the sums appropriated under section 3 of the proposed Act. Section 101(a)(1) of the proposed Act would reserve for the Indian vocational education program (under section 103 of the proposed Act) 1.25 percent of the sums appropriated for the basic State grant program. This is the same percentage as Indian programs receive under current law. Funds would no longer be set aside for special programs for Hawaiian Natives. Services for Hawaiian Natives could be provided with funding from the basic State grant to Hawaii.

Section 101(a)(2) of the proposed Act would allot to each State for each fiscal year the remainder of the sums appropriated for basic State grant programs. Fifty-seven percent of these sums would be allotted to each State based on the ratio that the number of persons aged 15 to 55 in poverty in the State bears to the total number of such individuals for all the States. The remaining 43 percent of the sums for the basic State grant program would be allotted to each State based on the ratio that the product of its population aged 15 to 55 and the State allotment ratio bears to the total of such product for all the States. This allotment formula would direct Federal funds to States in a manner that more accurately reflects the purposes for which the States will use these Federal funds. The age cohort proposed to be applied more accurately reflects the vocational education population that will receive services than do the cohorts and weights in current law.

Section 101(a)(3) of the proposed Act would provide that for each fiscal year each State would receive at least 95 percent of the amount it received for the basic State grant program for the preceding fiscal year; if appropriations are insufficient to provide for this "hold harmless" provision, funding for each State would be ratably reduced.

Section 101(b) of the proposed Act would authorize the Secretary to reallocate funds not required by a State.

Section 101(c) of the proposed Act would adjust the allotment ratio for each State on the basis of that State's per capita income. Funding would be allotted in inverse proportion to income, so that the poorer States would receive a greater proportion of funds. This section would remove the moderating constraints on the allotment ratio formula in current law, so that, under the proposed Act, relatively more funds would be allotted to poorer States.

Section 102(a) of the proposed Act would authorize the Secretary to make awards to each State for State administration in direct proportion to that State's allocation under the basic State grant. This is a departure from current law, which permits States to reserve up to seven percent of the basic State grant allocations for State administration. This change is proposed in order to sever the direct relationship between the appropriation for basic State grants and the amount available for a State's administrative activities. As in Chapter 1 of the Elementary and Secondary Education Act, funding for State administration would be determined annually through the appropriations process. There is no evidence that the cost of administrative activities varies directly with the amount of funds available to support programs and services. Funding for State administration would include the cost of carrying out activities of the "sex equity coordinator" established in current law. In a change from current law, funds provided under the proposed Act for State administration would not need to be matched.

Section 102(b) of the proposed Act would require States, as under current law, to reserve 57 percent of their basic State grants to provide vocational education programs designed to meet the needs of a variety of special populations and 43 percent to improve or expand vocational education programs.

Section 103 of the proposed Act would authorize the Secretary to make awards to eligible tribal organizations of Indian tribes to conduct vocational education programs. Activities authorized by this section would be conducted in accordance with the Indian Self-Determination Act and the Johnson-O'Malley Act. Section 103 of the proposed Act would also provide that Indian vocational education programs under this section would be in addition to such other programs as are made available to eligible Indians under other provisions of the proposed Act. Provisions of current law requiring the Bureau of Indian Affairs to maintain expenditures for vocational education, to match the appropriation for the Perkins Act Indian program, and to develop a joint plan with the Department of Education would not be reauthorized. The proposed Act would also not

reauthorize the requirement that the Department of Education transfer funds to the Bureau of Indian Affairs. These provisions are either unnecessary or an unwise restriction of administrative flexibility. In addition, the match requirement has been overridden annually by appropriations language.

#### PART B--STATE ORGANIZATIONAL AND PLANNING RESPONSIBILITIES

Section 111 of the proposed Act would set forth requirements of State administration under the proposed Act. Section 111(a) of the proposed Act would require, as in current law, that any State desiring to participate in vocational education programs under the proposed Act would be required, as in current law, to establish or designate a State board. The State board's responsibilities would include, for example, coordinating the development and implementation of the State plan, consulting with the State council for vocational education, and adopting procedures for coordination with the State job training coordinating council. These responsibilities could be delegated to other State agencies.

Section 111(b) of the proposed Act would require that each participating State assign a person to work full-time to assist the State board in eliminating sex-role stereotyping from vocational education programs under the proposed Act. The responsibilities of this individual, essentially unchanged from current law, would include administering the vocational education programs for single parents, homemakers, and single pregnant women, as well as programs designed to eliminate sex bias; gathering, analyzing, and disseminating relevant data; reviewing programs for sex stereotyping or bias; providing technical assistance; and developing recommendations to the State board. Each State would be required, as in current law, to spend at least \$50,000 annually to carry out the provisions of this proposed section.

Section 111(c) of the proposed Act would require, as under current law, that the State board make available to private industry councils a list of all the programs assisted under the proposed Act.

Section 111(d) of the proposed Act would authorize (rather than mandate, as in current law) the establishment of one or more technical committees to advise the State council and the State board on the development of model curricula to address the State's labor market needs.

Section 111(e) of the proposed Act defines a State-imposed requirement under the proposed Act. No change has been made from current law.

Section 112 of the proposed Act provides for the establishment of a State council to advise the State board and the Governor on the development and implementation of the State plan. Under provisions more flexible and less prescriptive than those in current law, membership on the council would be required to be broadly representative of those interested in vocational education (including representatives of educational institutions and the private sector). Due consideration would continue to be given to appointing individuals serving on a private industry council. The proposed Act would add, to the already wide range of responsibilities the State councils may exercise under current law, the provision that the council may advise the State board on the performance standards it proposes to employ. Unlike current law, however, the Governor would be authorized to assign the functions and responsibilities of the State council to the State job training coordinating council, provided that the latter council has an adequate number of members knowledgeable about vocational education and that assistance available under the proposed Act is available to the State job training coordinating council only to carry out the functions authorized by the proposed Act. These changes are designed to promote the necessary close coordination between programs under the Job Training Partnership Act and vocational education programs.

Section 113 of the proposed Act would set forth State plan requirements for any State desiring to participate in the vocational education programs under the proposed Act. Under section 113(a) of the proposed Act, State plans, which would span a two-year period, would have to be developed with the input of the State council and the public, although formal public hearings would no longer be required. In developing the State plan, the State would be required, for example, to assess current and projected needs for occupational skills within the State, the vocational education needs of the special populations described in section 201(b) of the proposed Act, the quality of vocational education, and the capacity of educational institutions to deliver needed vocational education services. In a change from current law, the State would be required to include a summary of the findings of these assessments in its plan.

Section 113(b) of the proposed Act would describe the required contents of the State plan, emphasizing those provisions most needed to assess performance and provide accountability at the State and local levels. For example, the State plan would have to describe how the planned uses of funds would address the

needs assessed for improved vocational education (as identified under section 113(a) of the proposed Act). The plan would also have to describe the performance standards the State will use for determining the achievement of basic academic skills, occupational competency, and success in the labor market, as well as the State's procedures for applying those performance standards, and, in subsequent plans, the State's success in implementing and applying these standards.

Section 113(b) of the proposed Act would also require States to set forth their criteria for approving applications and allocating Perkins Act funds. These criteria would ensure that individuals most in need are served. This provision would replace a requirement in section 113(b)(7) of the current Act that pertains only to programs for single parents, homemakers, and single pregnant women. The State would also be required to describe how the funds available under the proposed Act would be used to serve economically depressed areas; this would amend current law, which requires that the States allocate the majority of their funds to economically depressed areas. Section 113(b) of the proposed Act would require States to describe how their performance standards under the proposed Act are compatible with standards in effect under the Job Training Partnership Act. Finally, section 113(b) of the proposed Act would add a new requirement that States describe their procedures for ensuring that funds expended for occupationally specific training would only be used to train students for occupations in which jobs are projected and are not likely to be filled without the establishment or continuation of public vocational education programs.

Section 113(c) of the proposed Act would require the State plan to contain several assurances regarding such areas as equitable participation of students enrolled in private schools (a provision broadened from current law), distribution of funds, evaluation, and proper fiscal and administrative procedures. Each plan would also include a new assurance that projects and services in the basic State grant program are of sufficient size, scope, and quality to give reasonable assurance of meeting the objectives of the proposed Act, as well as the current "supplement, not supplant" assurance.

Section 113(d) of the proposed Act would set forth requirements for amending the State plan. Section 113(e) of the proposed Act authorizes the Secretary to establish, through regulations, minimum requirements for performance standards.

Section 114 of the proposed Act would set forth provisions for Secretarial approval of the State plan and amendments to the State plan. This section would require submission of the State plan to the Governor (rather than the State legislature, as provided in current law) as well as the State council and

the State job training coordinating council. This would direct review of the State plan to the official responsible for coordination of all economic development efforts within the State. In another departure from current law, the Secretary would not approve a State plan meeting the requirements of section 113 of the proposed Act unless that plan gave reasonable assurance of meeting the objectives of the proposed Act, including the objective of developing and applying program performance standards.

Section 115 of the proposed Act would require that eligible recipients submit to the State board an application describing the vocational education programs to be funded, the specific performance results to be achieved, and coordination efforts, as well as any other information required by the State board that is needed for the board to carry out its functions under the proposed Act.

#### PART C--FEDERAL ADMINISTRATIVE PROVISIONS

Section 121 of the proposed Act would direct the Secretary, as in section 501 of current law, to pay the Federal share of the costs of carrying out the State plan as well as the costs of the State council.

Section 122 of the proposed Act would provide that the Federal share of the costs of State administration and of the State councils in each fiscal year would be 100 percent. For each fiscal year, the Federal share would not exceed 50 percent for the costs vocational education programs under title II. This section would also standardize the Federal share that could be used to pay for the costs of the vocational education programs for the special populations described in section 201(b) of the proposed Act (rather than the varied Federal share in section 502 of current law).

Section 123 of the proposed Act would provide for full payments to a State if the State maintained 90 percent of its fiscal effort in providing vocational education as compared with the prior year's expenditures. The Secretary would be directed to decrease payments to a State not meeting the "maintenance of effort" standard only in direct proportion to the State's failure to maintain its 90-percent level. These provisions would replace language in current law prohibiting the Secretary from making payments to a State unless that State's expenditures had been maintained at the 100 percent level. This section would also provide for a one-year Secretarial waiver if granting that waiver would be equitable.

**TITLE II--BASIC STATE GRANTS FOR VOCATIONAL EDUCATION****PART A--VOCATIONAL EDUCATION OPPORTUNITIES**

Sections 201(a) and (b) of the proposed Act would authorize States to use 57 percent of their allotments reserved for part A of title II of the proposed Act. These funds could be used to provide vocational education programs designed to meet the special needs (as identified in the State's plan), and to enhance the participation of, the following "special populations": handicapped individuals; disadvantaged individuals; individuals of limited English proficiency; individuals who are single parents, homemakers, or single pregnant women; individuals who participate in programs designed to eliminate sex bias and stereotyping in vocational education; and criminal offenders who are in correctional institutions.

Section 201(b) of the proposed Act would add individuals of limited English proficiency to the group of special populations served under the current Perkins Act, and would remove the current law's set-aside for any adults who are in need of training and retraining, in order to target vocational education opportunity funds more specifically on individuals who are at risk of educational failure or who have not, in the past, been served equitably by vocational education programs.

In a significant departure from the current Perkins Act, States would not be constrained to make available to each special population a fixed percentage of funds available to the States under this proposed part. The proposed Act would remove the allocation requirements in sections 202 and 203 of current law. Instead, the State, in its plan, would have to identify the uses of funds under part A, the goals the State seeks to attain for part A populations, and how the uses of funds will address the needs identified. This approach will increase flexibility to the States, while continuing to ensure that funds for special populations are used for the benefit of those populations.

Section 201(c) of the proposed Act would authorize States to use funds designated for handicapped individuals for:

- (1) supplemental staff, equipment, materials, and services needed to enable handicapped individuals to participate in vocational education programs;
- (2) activities that supplement services provided under the individualized education programs of handicapped students enrolled in secondary schools; and
- (3) other activities that would improve vocational education opportunities for individuals with handicaps.

Section 201(d) of the proposed Act would authorize States to use funds designated for disadvantaged individuals for:

- (1) supplemental staff, equipment, materials, and services needed to enable disadvantaged individuals to participate in vocational education programs;
- (2) transportation, child care, and other ancillary services for economically disadvantaged individuals;

(3) supplementary basic skills instruction for educationally disadvantaged individuals; and (4) other activities that will improve vocational education opportunities for disadvantaged individuals.

Section 201(e) of the proposed Act would authorize States to use funds designated for individuals of limited English proficiency for: (1) supplementary English instruction to enable secondary and postsecondary students of limited English proficiency to participate in regular vocational education programs; (2) bilingual vocational education for individuals who are out of school and have entered, or are preparing to enter, the labor market and who need additional training; and (3) other activities designed to expand vocational education opportunities for youth and adults of limited English proficiency. Section 201(e) of the proposed Act would require that all of these programs be designed to enable individuals of limited English proficiency to progress effectively through regular, English-speaking, vocational education programs or, if instruction is provided in a separate setting, to enter regular programs as quickly as possible. Instruction could be provided entirely in English or, to the extent necessary, in the appropriate native language.

Section 201(f) of the proposed Act would authorize States to use funds designated for single parents, homemakers, or single pregnant women for: (1) vocational education and training activities that will furnish eligible participants with marketable skills; (2) assistance to eligible recipients to expand vocational education services when this expansion directly increases the eligible recipients' capacity for providing marketable skills; (3) assistance with child care, transportation services, or organizing and scheduling programs so that such programs are more accessible; (4) informing single parents, homemakers, or single pregnant women of vocational education programs and related support services; and (5) other activities to improve vocational education opportunities.

Section 201(g) of the proposed Act would authorize States to use funds designated for individuals who participate in programs designed to eliminate sex bias and stereotyping in vocational education for: (1) programs, services, and activities to eliminate sex bias and stereotyping in secondary and postsecondary vocational education; (2) vocational education programs, services, and activities for girls and women, aged 14 through 25 (unless the age limitation is waived) designed to enable the participants to support themselves and their families; (3) support services, including dependent-care services and transportation; and (4) other activities designed to eliminate sex bias and stereotyping from vocational education or to enable women and men to move into occupations that are nontraditional for their gender.



UNITED STATES DEPARTMENT OF EDUCATION

OFFICE OF THE ASSISTANT SECRETARY  
FOR VOCATIONAL AND ADULT EDUCATION

FAX COVER SHEET

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White House - Speech Writing

FROM: Tom Johns  
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# BusinessWeek

SEPTEMBER 19, 1988 A MCGRAW-HILL PUBLICATION

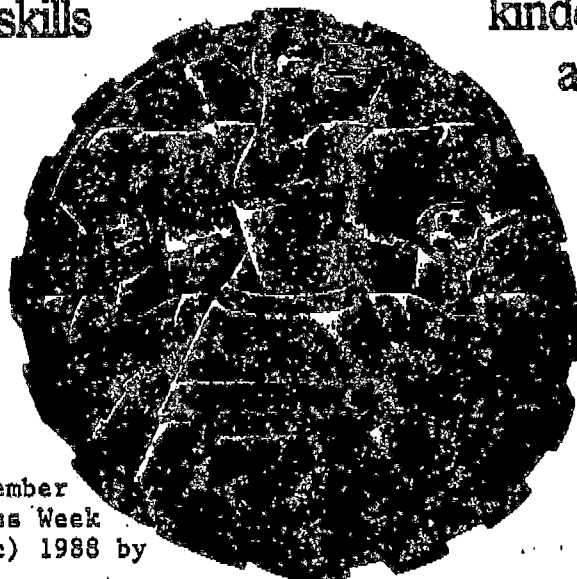
# HUMAN CAPITAL

## The Decline of America's Work Force

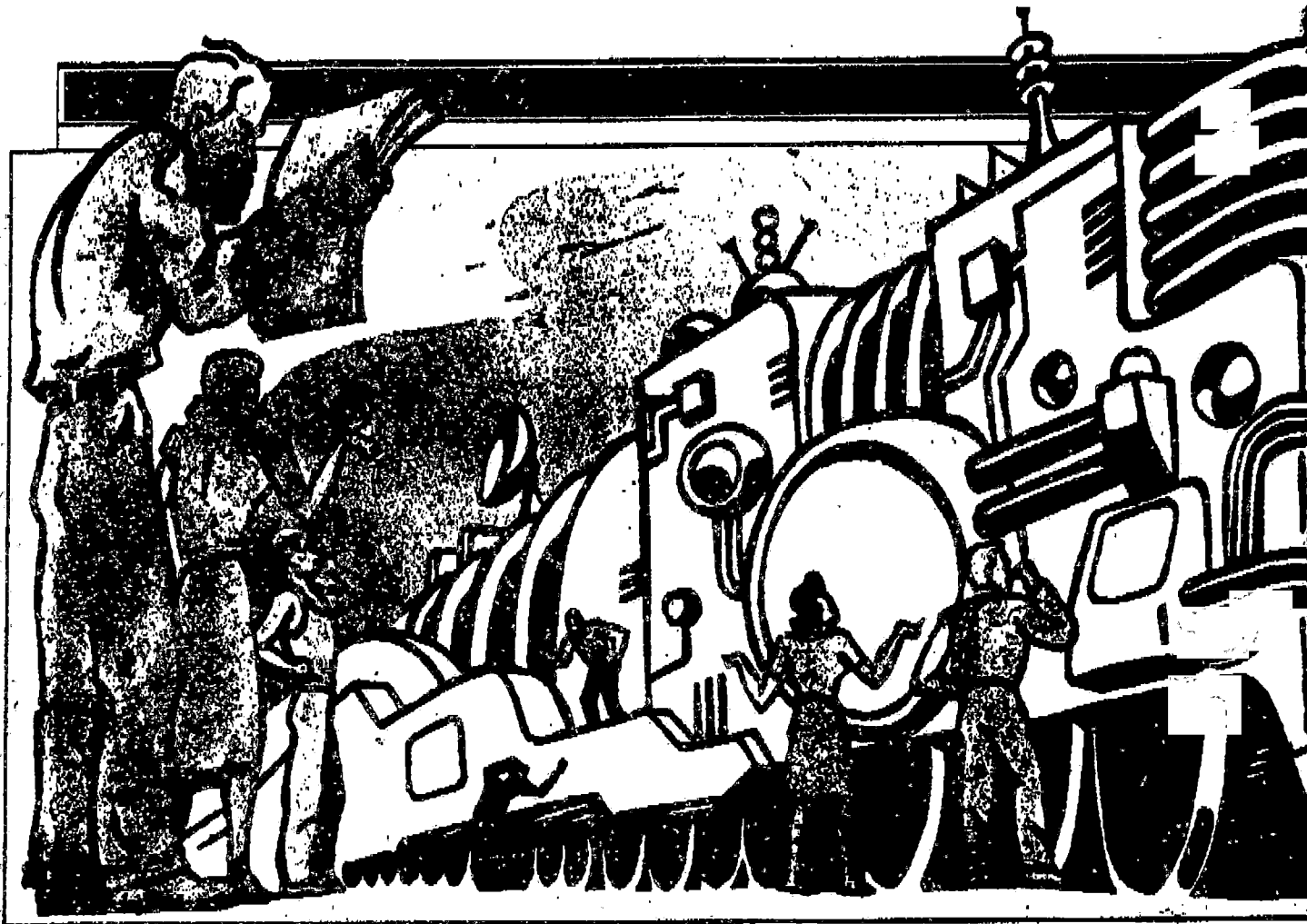
SPECIAL REPORT

**T**he nation's ability to compete is threatened by inadequate investment in our most important resource: people. Put simply, too many workers lack the skills to perform more demanding jobs.

And as the economy comes to depend more and more on women and minorities, we face a massive job of education and training—starting before kindergarten. Can we afford it? We have no choice. PAGE 100

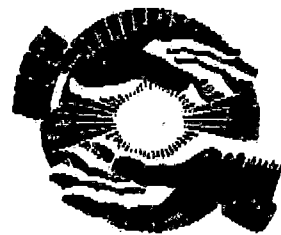


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# NEEDED: HUMAN

Who will do America's work as the demand for skilled labor outstrips a dwindling supply? The U.S. has lost much ground to competitors, and investing in people looks like the way to retake it. After years of neglect, the problem of human capital has become a crisis

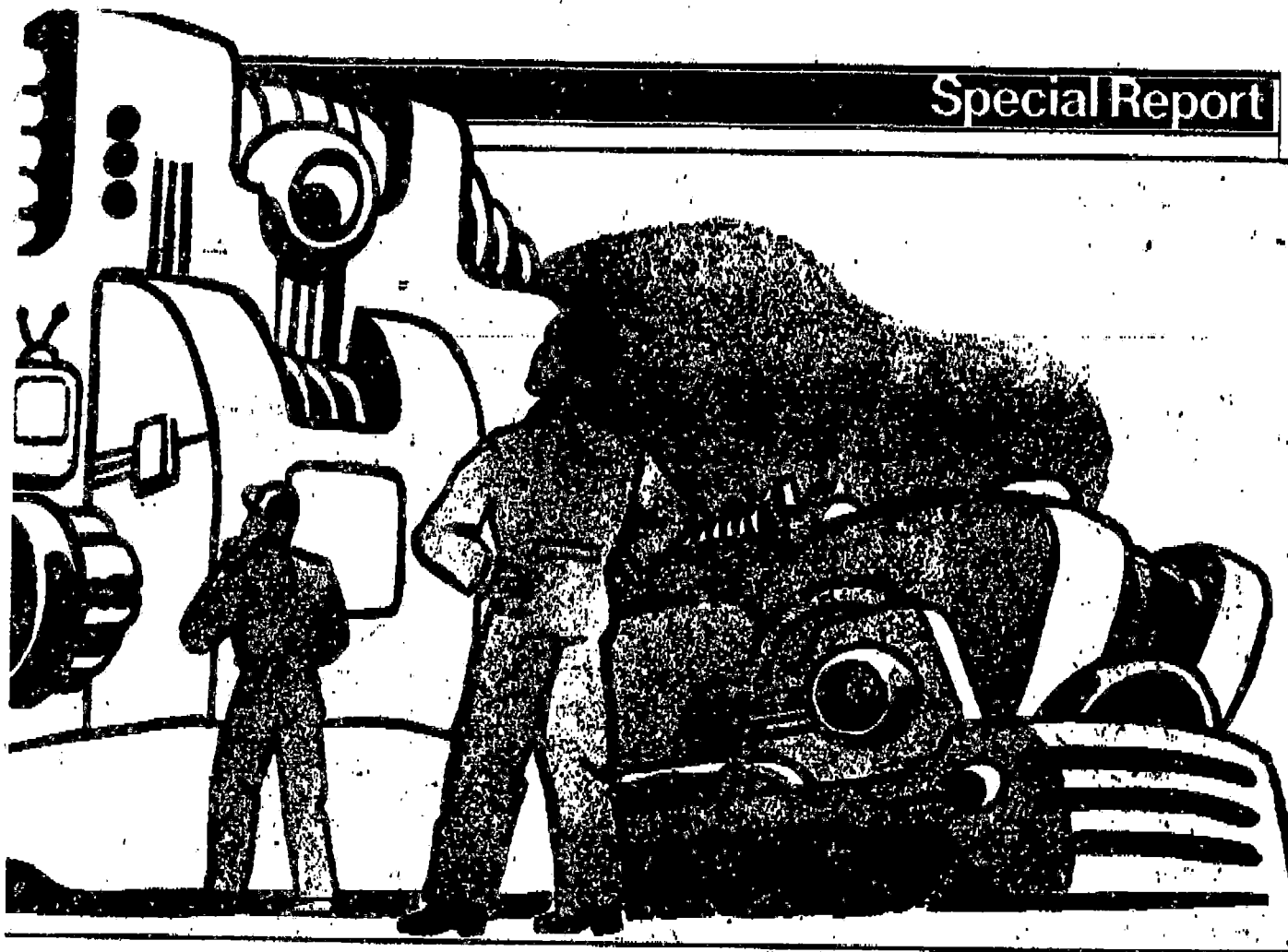


Take a trip back to what may be our future. It is the 1851 industrial exhibition at the Crystal Palace in London. Britain is the dominant world power. The U.S. is No. 2 in industry and catching up fast.

Made-in-America reapers, muskets, and tools are the marvels of the show. British businessmen are amazed at what they see. Products are assembled from completely interchangeable parts. Here is true mass production for the first time. So impressed are they that they name it "the American system of manufacture."

Worried delegations of British industrialists set sail to investigate. Their findings? American manu-

## Special Report



# CAPITAL

facturing prowess is in large part due to a highly educated work force. The Yankees have an astonishingly high literacy rate of 90% among the free population. In the industrial heartland of New England, 95% of adults read and write. In contrast, just two-thirds of the people in Britain are literate. **BLINDSIDED.** Now zip ahead a century or so to the 1980s. The U. S. is the dominant world power, and it is Japan that is No. 2 and closing fast. American CEOs marvel at the quality of Japanese products flooding their markets. They make pilgrimages to Tokyo. Their findings? Manufacturing superiority is being forfeited to the Japanese. And yes, once again, behind the success in manufacturing prowess lies a better-educated work force. In 1988, Japan's functional literacy rate is better than 95%. In America it's down to about 80%.

Illiteracy is but a symptom of the larger problem

afflicting the U. S. economy. The \$150 billion yearly trade deficit and a foreign debt of half a trillion dollars reflect the inability of a large percentage of the American work force to compete effectively in an integrated world economy. "Much of the success of Japan stems from the fact that its blue-collar workers can interpret advanced mathematics, read complex engineering blueprints, and perform sophisticated tasks on the factory floor far better than blue collars in the U. S.," says Merry I. White, professor of comparative sociology at Boston University and author of *The Japanese Educational Challenge*.

America, in short, has been scrimping on human capital. After trying to solve its serious competitiveness problems by pouring hundreds of billions of dollars into capital equipment, the country is discovering that it has been blindsided when it

# Special Report

comes to workers. Corporate restructuring and a sharply cheapened dollar may have arrested the economic decline, but investing in people is turning out to be the only way to reverse it.

Society's failure to invest is already haunting the business community. Chemical Bank in New York must interview 40 applicants to find one who can be successfully trained as a teller. And IBM Corp. discovered after installing millions of dollars worth of fancy computers in its Burlington (Vt.) factories that it had to teach high-school algebra to thousands of workers before they could run them.

Building up human capital is becoming a national priority. After years of neglect, it has finally entered the political arena, at least on the rhetorical level. Just listen to the messages being broadcast by both Presidential candidates. Who will be the "Education President?" Who will do the most to train workers or provide child care to working mothers?

Those messages are long overdue. More than two centuries ago, Adam Smith pointed to the improvement in the skills of workers as a critical source of economic progress and a means of raising living standards. Wrote Smith in *The Wealth of Nations*: "A man educated at the expense of much labor and time to any one of those employments which require extraordinary dexterity and skill may be compared to one of those expensive machines."

**'ABSOLUTELY CRUCIAL'** The evidence is overwhelming that people, not machines, are the driving force behind economic growth. In the period from 1948 to 1982, the nation's gross national product increased at an annual rate of 3.2%. Edward Dennison, an expert in growth economics, finds that one-third of that gain was caused by the increase in the education level of the U.S. work force and about half the growth was the result of technological innovation and increased know-how, which also depend on education. But just 15% of the total increase was the result of more capital equipment.

While Washington has been hell-bent on throwing incentives at business to increase spending on plant and equipment, outlays for human capital in the past 15 years have lagged behind. In the period from 1959 to 1971, total spending per student in public and private elementary and high schools grew at a brisk 4.7% a year, after adjusting for inflation. That was more than a full percentage point above the robust 3.6% rate of increase in the GNP and

even a smidgen higher than what business spent on plant and equipment. But from 1971 to 1985 things changed drastically. Dollars for education increased at a rate of just 2.7% in real terms, the same rate as GNP growth but 1.5 percentage points below the spending rate for capital investment.

And a good part of the money spent on education has not gone to those who teach the nation's young. Excluding administrative and capital cost from school budgets, from 1959 to 1971 teachers' salaries after inflation increased at a 2.8% annual rate. But then, even as international competition started to heat up, teachers' salaries nose-dived, falling by 1.25% a year until 1985. They've bounced back a bit since, but in real terms, salaries are barely above their 1971 level. Small wonder that top-notch college graduates are not attracted to teaching.

True, the U.S. spends plenty on education: \$185 billion a year on primary and secondary schools alone. When colleges and universities are added in, the figure soars to \$310 billion—more than is spent on defense. American universities are the best in the

world, but elementary and high schools are another story. The U.S. gets a lot less for its education buck than do Japan and Europe. U.S. students attend class 180 days a year. French and German kids go 220 days, and Japanese children spend 240 days in school a year. American high school students score below both their foreign counterparts in international math and science tests. They test two to three years behind the Japanese, neatly matching the difference in time spent in school from kindergarten through high school. Worse, half of the kids in inner-city public high schools drop out. "The issue is not money, it's competent use of money," says Pat Choate, director of TRW Inc.'s Office of Policy Analysis. "Janitors in New York City schools make more than teachers. Education systems are patronage systems: Community boards give out jobs."

**SECOND PRIORITY.** Educating America's future work force reaches beyond the classroom. A fourth of all children born in the U.S. will be on welfare sometime in their lives. A quarter of all American



## WHITE MALES NOW DOMINATE THE JOB MARKET

COMPOSITION OF THE LABOR FORCE, 1985



children are born out of wedlock, and 42% of them will live in a single-parent family before they reach their eighteenth birthdays. As a result, education often plays second fiddle to the more pressing needs of survival.

The once-pervasive family role in education appears to be seriously eroding. With both parents in most families now working, the question of who's reading to the three-year-old and checking up on Junior's geometry homework is becoming a national concern. In Japan the mother plays such a strong role in teaching her children that she is known as "education mama." Here, the "education mama" is vanishing—and "education papas" aren't taking up the slack.

One big exception is in the Asian-American community. "This year, 22% of MIT's freshman class is Asian-American," says Lester C. Thurow, dean of the Sloan School of Management at Massachusetts Institute of Technology. "The big reason for Asian-American success in public schools is family; family means some parent telling you that education is important."

At a time when jobs require higher levels of math, science, and literacy than

**SPECIAL REPORT**

Society's failure to invest in the work force already haunts business *Page 100*

**LABOR**

The gap between jobs and the skills of applicants is alarmingly wide *Page 104*

**DEMOGRAPHICS**

Employers must look to women, minorities, and the elderly *Page 107*

**UNDERCLASS**

In the face of prosperity, a growing underclass of the unemployed *Page 112*

**EDUCATION**

Everyone agrees that the system needs fixing. The question is how *Page 115*

**BUSINESS AND THE SCHOOLS**

Companies are taking a more active role in educational reform *Page 117*

**CONCLUSION**

What we must do to upgrade our No. 1 asset—the American worker *Page 120*

ever before, the economy is becoming increasingly dependent on the groups that often receive the poorest education. Between now and the year 2000, more than half of all new workers hired will be minorities, nearly three times the current figure. Blacks and Hispanics have the highest school drop-out rates in the coun-

try and lag significantly behind the national average on test scores.

But there is hope. The needs of the American workplace and the needs of the disadvantaged may be merging for the first time in recent history. The drive to raise productivity and increase international competitiveness is transforming the debate over social equity into a discussion about economic growth.

**BENIGN NEGLECT.** The Reagan years were an understandable reaction to the free-flowing social spending that earmarked the 1960s and 1970s. The national focus shifted to restructuring industry, deregulating the economy, and personal advancement. In the 1980s, programs for the bottom half of society got the deepest cuts. It wasn't all "welfare," either. The Labor Dept.'s manpower training programs were hit hard as well.

Those cuts in training could not have been timed worse. "The split between the top half and bottom half in society has been widening for the past decade, no matter how you cut the data," says Harvard University's Richard B. Freeman. "The educated, the skilled, and people in certain industries and jobs have done well. The rest have not." This inequality can only worsen if the human-

capital deficit is not solved. The internationalization of the economy in

the 1980s pitted the U.S. labor force against workers around the world. The results? "Trade has killed the earnings prospects for less educated people," says Freeman. "They must compete with lower-wage people overseas. As long as we trade with Korea, the less educated will have a problem."

That competition has proved devastating. From 1959 to 1986, earnings for young men who quit high school fell by 26%, adjusted for inflation. Even high-school grads saw their earnings drop by 9%, while those of college graduates rose by 6%.

In the final analysis, wage gains and losses mirror what is happening to worker productivity. The huge decline in the wages of America's unskilled labor force shows that it is no longer competitive in the international economy. The productivity of the unskilled is plummeting, while worker productivity abroad is soaring. This could signal major losses in the battle for world markets. The U.S. may now be entering an era when neglect of the bottom half of society begins to threaten the welfare of the entire nation.

In the following articles the editors of BUSINESS WEEK lay out the dimensions of the human-capital crisis—and what the country must do about it.

*By Bruce Nussbaum in New York*

**...BUT THEY WILL PLAY A SMALLER ROLE IN THE FUTURE**

**NEW ENTRANTS TO THE LABOR FORCE, 1985-2000**



15%	42%	7%	13%	13%	10%
U.S.-BORN WHITE MALES	U.S.-BORN WHITE FEMALES	U.S.-BORN BLACK MALES	U.S.-BORN BLACK FEMALES	IMMIGRANT MALES	IMMIGRANT FEMALES

**Special Report**

# WHERE THE JOBS ARE IS WHERE THE SKILLS AREN'T

As work becomes more knowledge-intensive, employers are fishing in a shrinking labor pool



U.S. has managed to keep that gap small. But not anymore. The nation is facing a monumental mismatch between jobs and the ability of Americans to do them.

Unless the U.S. invests more to close this human capital deficit, the economy will be shunted onto a lower growth track. The drive to improve technology and productivity could founder on a shortage of competent workers. There will be a social price, too: Lower-skilled minorities will find it harder than ever to land good jobs. The earnings differential that already is growing between the top and bottom halves of the work force could get even larger. The nation could become further polarized between skilled and unskilled workers.

**NEW VARDITION.** Three forces are combining to produce the leap in the skills the economy will require. First, technology is upgrading the work required in most jobs. The modern workplace needs people with high reading and math capabilities, so millions of jobs go unfilled while the army of the unskilled remains unemployed.

Second, job growth will be fast mainly in high-skill occupations. Most of these jobs will be in the service sector. This kind of work now requires knowledge that wasn't necessary 20 years ago.

Finally, the way in which work now is being organized requires a completely new set of skills. As companies shift from the old models of assembly-line production to Japanese-style work teams, employees will have to sharpen their abilities to communicate.

A detailed look at how new workers will match up against new jobs between now and the year 2000 tells the story (chart). The Labor Dept. has devised a method for measuring, on a scale of one to six, the levels of reading, writ-

ing, and vocabulary needed to perform a wide range of jobs. The Hudson Institute, an economic think tank, has matched the new jobs that the economy will create against these scales. Here is what they found:

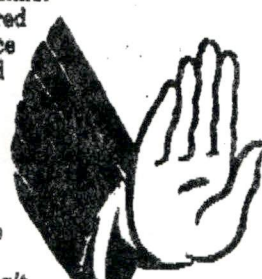
More than three-quarters of the nation's new workers will have limited verbal and writing skills (Levels 1 and 2). But they will be competing for only 40% of the new jobs. Most new jobs will require workers who have solid reading and writing skills, but fewer than one in four new employees will be able to function at the needed levels. Retail sales, for example, will be among the occupations providing the most new jobs. To fill those jobs, most retail employees will have to function at Level Three. They will have to write up orders, compute price lists, and read merchandise catalogs. Sound simple? Nevertheless, Hudson estimates that just 22% of the new employees will be

able to function at Level Three or better. For jobs in nursing or management, the educational ante is higher. Most of these jobs, which often require more than a high-school education, need skills at Level Four or above: an ability to read journals and manuals, write reports, and understand complex terminology. Just 5% of the new employees will be able to do that.

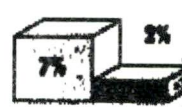
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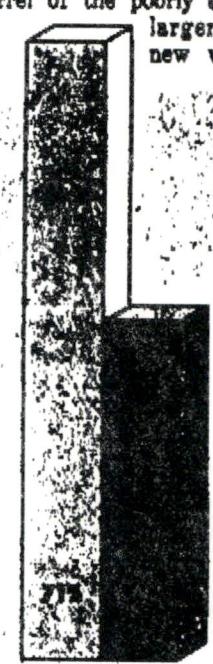
**DAUNTING TASK.** As many as 50 million workers may have to be trained or retrained in the next 12 years—21 million new entrants and 30 million current workers. The most daunting task ahead is to educate and train the young work force entrants. The decline in the number of 21- to 25-year-olds means that employers now must dig deeper into the barrel of the poorly educated. And a larger proportion of new workers will be



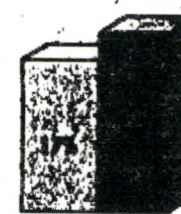
## THE LOOMING MISMATCH BETWEEN WORKERS AND JOBS



**LEVEL 1**  
Has limited reading vocabulary of 2,500 words. Reading rate of 95 to 125 words per minute. Ability to write simple sentences



**LEVEL 2**  
Has reading vocabulary of 5,000 to 6,000 words. Reading rate of 190 to 215 words per minute. Ability to write compound sentences



**LEVEL 3**  
Can read safety rules and equipment instructions, and write simple reports

CHARTS BY PAV VELLA/OW

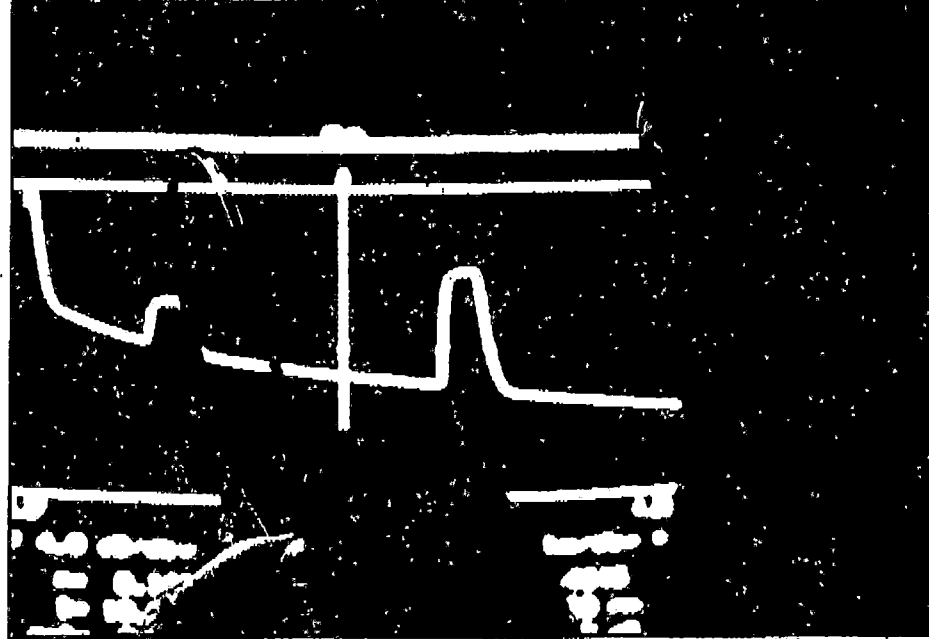
minorities and immigrants, who tend to have less education and fewer skills than other employees.

Minorities are the neediest of these new workers. But as employers become increasingly dependent on them, minorities are lagging behind in reading and writing skills. And those already working tend to be stuck in occupations that are disappearing, while few have jobs in growing industries (table, page 106).

As the economy continues to expand, big companies are looking harder for new workers. But many minorities with low skills still aren't being hired. Last year, Nynex Corp.'s New York Telephone Co. had to test some 60,000 applicants—many of whom were minorities—to hire 8,000 people. "There are lots of people who still want jobs, but they're dropouts who aren't qualified," says Howard Harman, New York Telephone's director of employment.

People who already are working will need massive retraining to keep pace with changing job requirements. They are the 30 million who will need more math and science to operate computers and robots on the assembly lines or better reading and writing skills to keep up in the office.

True, many companies are using technology to replace workers—but those employees who stay on the job generally must improve their skills. For instance, New York Telephone has used new technology to help shrink its work force,



which now numbers about 50,000, compared with 106,000 in the early 1970s. Nonetheless, the company has been forced to increase its in-house training rapidly to upgrade the skills of its remaining workers. NYT has four technology-learning centers where employees are taught to operate the handheld computers that telephone repairers use to keep track of orders. One five-day course retrains skilled splicing technicians who install overhead telephone cable. "Before, they handled 100-pound wire that was 6 inches in diameter," says Ray Bucaria, New York Telephone's director of train-

ing. "Now they must learn to use fiber optics, which means splicing very delicate fibers—like a brain surgeon, almost."

A growing number of companies go so far as to train the employees of their suppliers. In the early 1980s,

Xerox Corp. found that its product quality was much poorer than that of its rivals. Management decided suppliers were a big part of the problem. Xerox reduced its 8,000-odd suppliers to about 350 and raised tolerance standards for parts it buys from them.

Xerox then began a program to train its suppliers in Japanese-style quality control. Typically, a company employee trains the supplier's management, and the supplier then trains its own work force in the new methods. Xerox initially will train about 100 of its 350 suppliers, at an estimated cost of \$1.5 million. "Training suppliers has become a permanent part of the way we do business," declares Robert Fletcher, who manages material quality assurance at Xerox. Motorola Inc. goes further: It even trains its suppliers' suppliers' work forces.

General Motors Corp. had to retrain workers when it opened a new truck plant a year and a half ago in Fort Wayne, Ind. The plant does have some spiffy new technology. But more important, it has a new team-production

**TIME TO REWIRE**

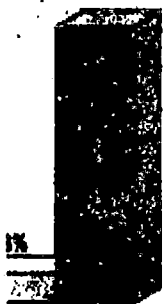
*As New York Telephone switches to fiber optics, it's rushing to retrain workers—proof that the skills gap affects longtime employees as well as recruits*

**ACTUAL SKILL LEVELS OF NEW WORKERS**

Percent of 21- to 25-year-olds entering the labor market from 1985 to 2000

**SKILL LEVELS NEEDED FOR NEW JOBS**

Percent of new jobs created from 1985 to 2000



**LEVEL 4**  
read journals, manuals, and business letters and reports



**LEVEL 5**  
Can read scientific/technical journals and financial reports, and write journal articles and speeches



**LEVEL 6**  
Has some skills as Level 5, but more advanced



DATA: HUDSON INSTITUTE, LABOR DEPT.

# Special Report

system. Both workers and management had to go through intensive training in group dynamics and problem-solving to increase manufacturing productivity.

"Our people never heard of this until a few years ago," says Don Davis, the union head of a GM/UAW joint training program in Detroit. In all, Fort Wayne's 3,000 employees took 1.9 million hours of training, including time to learn the new technology. That's more than 633 hours per worker.

Companies are now spending some \$30 billion a year on worker training. A lot of that money is going to upgrade the skills of office workers. Take Mary Ann Moscillo. After her father died, she dropped out of school at 16 to work as a clerk in the mail room at Blue Cross/Blue Shield of Massachusetts. She wasn't able to advance on the job for almost a decade. Then she enrolled in a remedial education program run and paid for by Blue Cross, and she learned reading, math, and history. Armed with a new high school diploma, Moscillo has had three promotions. Now, she compares claims made by hospitals with payments Blue Cross makes to them, finding and explaining variances between the two.

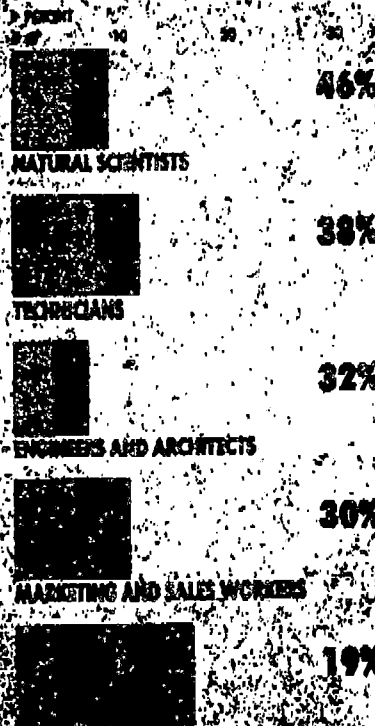
**BABY BUST.** The churning economy is generating millions of displaced workers. They account for more than one-half of the people already at work who will need retraining by 2000. Throughout the 1980s, some 2.8 million workers have been displaced each year, according to the bureau of Labor Statistics. Roughly 1 million long-term workers—those on the job three years or more—have been displaced annually. Approximately 80% of these lack basic skills—reading, writing, and arithmetic. Consequently, a third never found new jobs at all. Others found work but at substantially lower pay.

Elite workers, as well, could be in short supply. Because of demographic trends, the U.S. is facing a long-term shortage of scientists and engineers. The number of both has climbed steadily in the past two decades, but only because the baby boom brought many young people into the labor force. The percentage of students who choose these fields has actually remained constant: In the past 30 years, the

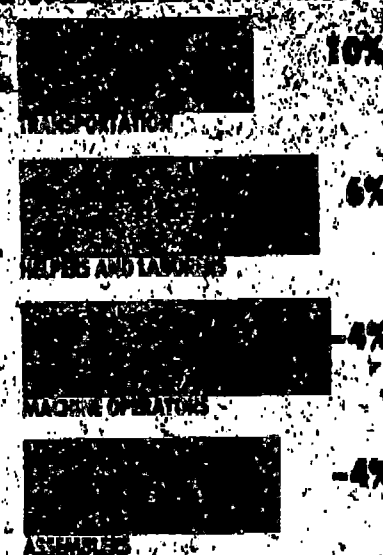
## MINORITIES ARE STUCK IN THE WRONG JOBS

Percent of jobs held in 1986 by:  Blacks  Hispanics  
Percent change in demand for jobs 1986 to 2000

### 100 PER IN FAST-GROWING JOBS...



### 100 PER IN SLOW-GROWING JOBS



DATA: BUREAU OF LABOR STATISTICS

proportion of 22-year-olds acquiring bachelors' degrees in science and engineering has remained within a narrow band of 3.7% to 4.8%, according to the National Science Foundation (NSF).

If this trend continues, the baby bust could cause growing shortages. If just 4% of students continue to choose science or engineering, the NSF warns, there could be a cumulative shortfall of more than 400,000 science and engineering BAs through the year 2000. Half of all engineering students at the graduate and post-graduate levels already are foreigners. And this country is facing a shortage of 27,000 PhDs by the end of the century.

Economists are quick to point out that in these relatively high-paying fields, shortages are likely to push up salaries and attract more people. But there's little evidence that previous shortages enticed more students to scientific fields.

**GROWING GAP.** In addition, market mechanisms may not work quickly enough to remedy shortfalls of PhDs, who require an additional six to eight years of schooling. "Usually the decision to enter science is made in high school," says John H. Moore, deputy director of the NSF. "We need to do something today to get teens thinking seriously about careers in these fields—or we'll be in trouble."

The skills gap poses a threat to American society that goes beyond simply the economy. Currently, labor shortages in New England and elsewhere are driving up wages for jobs in fast-food eateries. If new workers don't become better qualified, this situation may change drastically as shortages move up the skills ladder. Many new job-seekers could wind up competing for a dwindling number of low-skilled jobs, while higher-skilled jobs go begging for want of qualified workers.

That would drive down wages for low-skilled workers, who can least afford it, and raise wages for skilled employees, who are already better paid. The social consequences of this are clear. Warns Irwin S. Kirsh, a researcher at Educational Testing Service in Princeton, N.J.: "If we don't boost the skills of the bottom ranks of the work force, we'll have an even more divided society than we do now."

By Aaron Bernstein in New York and bureau reports

CHARTS BY GUY VELLA/PH

# Special Report



**MODERN FAMILY**  
 Karen and Melvin Peterson, who both work the swing shift at Echo Bay Mines Ltd.'s operation in Round Mountain, Nev., drop off toddlers Laura and Lori at the 24-hour, company-run day care center before going to work. If Karen stayed home, "we'd struggle along from paycheck to paycheck. It would be rough," she says. Two incomes let them save money for the girls' education

## FOR AMERICAN BUSINESS, A NEW WORLD OF WORKERS

Employers must look to the nonmale, nonwhite, and nonyoung—and competition will be vicious



Once upon a simpler time not so long ago, "work force" meant white men in ties or blue collars. The image was never quite exact. One generation back, as the nation settled into postwar prosperity, 30% of all women worked outside the home—even if *Leave It to Beaver* reflected the cultural ideal of family life. "Negro,"

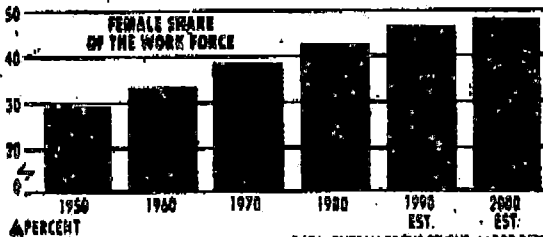
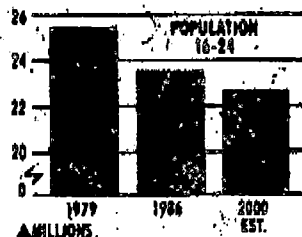
"Oriental," and "Spanish-American" workers always have helped to do America's work. But with a plentiful labor supply, few employers had to reach beyond the male Caucasian in his prime except for the least-wanted jobs. Indeed, by the late 1960s, as employers awarded self-winding watches to 65-year-olds, the first fresh-faced baby boomers were on their way to Personnel.

The last of that numerous cohort is now straggling into the world of pay-

checks and withholding taxes. The boss is losing that confident glow. The decline in birth rates after 1960 has slashed the numbers of young people available to fill jobs right up to the year 2010 and maybe beyond.

The years of picky hiring are over. Vicious competition for all sorts of workers—entry-level, skilled, seasoned—has begun. Employers must look to the nonmale, the nonwhite, the nonyoung. There may be a push for non-citizens as well:

### AS THE POOL OF YOUNG WORKERS SHRINKS, WOMEN WILL FILL THE GAP, AND MORE WORKING



- ▶ 73% of all working women are of childbearing age
- ▶ 60% of all school-age kids have mothers in the work force, up from 39% in 1970
- ▶ Women with children under 6 are the fastest growing segment of the work force

DATA: BUREAU OF THE CENSUS, LABOR DEPT.

PHOTOGRAPH BY JAMIE TRUANA; CHARTS BY IAN JEPMA

Over the next 10 years, predicts the Hudson Institute, an economic think tank, only 15% of work force entrants will be native-born white males.

Building a new, more diverse work force and making it tick will be one of Corporate America's biggest challenges in the decade ahead.

### MOTHER, DAUGHTER, WORKER, WIFE

In the past 15 years, as women ventured into the workplace in growing numbers, it has been widely expected that employers would take major steps to accommodate their special needs. So far, though, employers have been able to hire 52% of all women without doing much very differently. That's partly because in a world of stagnant real earnings, women and their families have needed the money more than companies needed the women. Feminism, higher education levels, and rising expectations pushed women into the work force, too.

But as employers fish in a shrinking pool for new workers and try to retain experienced ones, women will be in a position to make demands. Companies will be forced to make it easier for workers to balance work and family.

Three-quarters of working women are in their childbearing years; more than half of all mothers work. Those with children younger than 6 make up the fastest-growing segment of the work force. For many such women, as well as for their spouses, balancing work life with parenting at a distance presents logistical challenges worthy of an air traffic controller.

It isn't only children. As the U.S. population becomes older—and by 2000, 51% will be between 35 and 54—more people must take responsibility for their parents. Americans are living longer, thanks to better nutrition and medical breakthroughs, but those beyond the age of 75 are often ill or infirm. Services are expensive, so care usually falls to family members—many of whom work.

About 40% of workers over age 40 already provide care to parents, according to Anthony Gajda of Mercer-Meidinger-Hansen, an employee-benefits firm. About 12% of women who care for aging parents must quit their jobs to do so.

A growing body of research links employees' concerns for the care of children or elderly relatives with productivity losses from increased absences, tardiness, and stress on the job—and such time-wasters as excessive use of the phone. This holds for men in dual-career marriages as well as for single fathers and single sons. But it's particularly true for women. At Touche Ross & Co., Susan Schiffer Stauber figures the average working woman spends 17

hours a week on such policies don't cost much even though temporary workers may have to fill in or other staff may have to work overtime. Legislation requiring employers to provide unpaid family leave to care for sick relatives or new babies is on Congress' agenda.

Child care, especially, is politically hot. A \$2.5-billion bill sponsored by Senator Christopher J. Dodd (D-Conn.) and Representative Dale E. Kildee (D-Mich.) would set quality standards for child care, provide payment vouchers to families, and provide states with funds to add new facilities. Michael Dukakis backs the bill's concept without endorsing the dollar amount. George Bush wants a \$1,000-per-child tax credit for

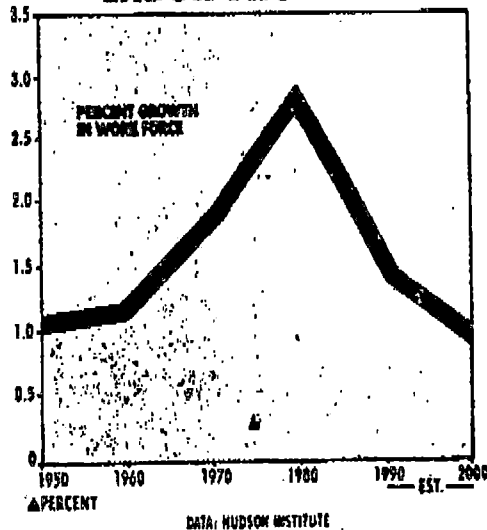
poor families where at least one parent works, to be used for child care or to help mothers stay home. 'CARE-GIVERS.' There is widespread agreement that the federal government has some role to play, beyond the current \$3.9 billion dependent-care tax credit, the \$660 million spent on day care, and \$1.5 billion for the Head Start early childhood program for disadvantaged kids. States, expanding their programs, are crying for more funding. California subsidizes day care for low-income toddlers. Texas school districts provide prekindergarten for 4-year-olds from poor families. Massachusetts is trying to increase the supply of child care with loans to build centers and grants to expand referral programs, train "care-givers," and pay them more.

The problem, however, is falling increasingly into the corporate lap. Boston University researchers Bradley K. Googins and Dianne S.

Burden recently surveyed 1,500 workers in big corporations. Some 43% said employers and government should share responsibility for helping balance work and family life; 41% said companies should take the lead.

About 60% do offer some degree of work-schedule flexibility. But less than 5% of U.S. companies—a grand total of 3,300—help with child care. Most of those either allow employ-

### THE COMING LABOR SHORTAGE



years raising kids and 19 years caring for aging relatives. Her grim joke: "Middle age is the 15 minutes in between."

The productivity issues are greater than a workday lost when the babysitter walks out or Grandma breaks her hip. Family leaves, allowing parents time off to care for a new baby or deal with a family crisis, help retain women workers and boost morale and loyalty among others as well. A 1986 report by the General Accounting Office indi-

### MOTHERS WILL INCREASE THE DEMAND FOR CHILD CARE

► With divorce and out-of-wedlock births running high, the typical child born in America today will spend some time in a single-parent home. Such households, usually headed by women, are more likely to be poor. Children in poor families are at risk for school and social failure

► Only 5% of U.S. companies help their employees with child care. Only about 300 have helped start day-care facilities

► In 1982, a quarter of all mothers not in the work force said they would work if adequate child care were available



# Special Report

ees to save tax dollars by setting aside pretax income for day care in flexible benefit plans, or they provide information and referral advice. Only 250 or 300 companies have helped start child-care centers.

It's likely that more women would enter the job market if they could find good child care. In the 1982 census, 26% of all nonworking mothers with preschoolers said they would look for work if "reasonably priced child care were available." An additional 13% said they

would work more hours. If half the women claiming they are so constrained went to work in the 1990s, the labor force would gain 850,000 workers, notes Columbia University economist David E. Bloom.

**A BENEFIT.** Indeed, some companies are looking at child care as a recruiting device, especially in clerical, food service, and hospital jobs, which depend on women workers. But the impetus is growing elsewhere. Faced with a local labor shortage, Echo Bay Mines Ltd. at Round Mountain, Nev., has enticed parents to hire on for swing shifts by keeping open its on-site day care center 24 hours a day, seven days a week.

Eastman Kodak Co. helps its American employees look for child care. In addition, the company is experimenting with job-sharing. Two Rochester (N. Y.) mothers with young children split the title "professional recruiter"; their 24-hour stints overlap on Wednesdays. Kodak allows up to 17 weeks of unpaid leave to care for a spouse, parent, sick child, or new baby, including adopted or foster children. "We have a lot of money invested in training. This is protecting our investment," declares Mary J. Har-

ington, Kodak's corporate employee relations director.

Corporate efforts to help workers cope with elderly parents are still primitive. Most women must find ad hoc solutions. A quarter of those responsible for aged parents take extended leaves or cut down their work hours. The challenge is to keep them on the job as much as possible by providing social supports for the parents. As the pressures of labor shortage build, companies will also have to see to it that employees don't

exceed those of whites. Immigration, mainly from Latin America and Asia, has accounted for a fifth of America's population growth in the 1980s. Compared with the native-born, immigrants are younger and their families are larger. The youth cohort of the work force is shrinking, but more of its members will be black, Hispanic, or Asian.

These changes may have dire consequences for the U. S. work force. A disproportionate number of these youths are growing up in families that are poor



## DROPPING IN

*After Bostonian Sandra Brown, single parent of three, told her welfare caseworker she was "job-ready," she enrolled in a program at Roxbury Community College where she's studying word-processing and finishing high school. Her employer is helping with the tuition bills*

or headed by single parents. In minority communities, many of today's adults lack the skills to find decent employment. Their kids face worse prospects at a time of dramatic technological change. A disturbing new term, underclass, describes some who are from such disorganized backgrounds that—without intervention or a social miracle—they may never be employable (page 112).

Many young people—especially minorities—are caught in a vicious cycle. About a quarter of all kids are

born out of wedlock to parents who "are poorly educated, frequently young, and unskilled," says George Washington University's Sar Levitan. In the U. S., about 44% of all marriages fail. Female-headed households are more than four times more likely to be poor than are two-parent families. A startling one in four members of the Class of 2000, now entering first grade, is living in poverty.

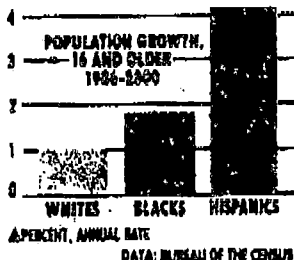
Part of the problem is child support. Fewer than half of fathers not living with their kids pay anything toward their keep. In 1985 more than half of all

forfeit seniority or status if they are forced to take time off for family reasons. "I really think demographics are destiny here," says Dana E. Friedman, work and family research director at the Conference Board.

## YOUNG, TROUBLED, AND IN DEMAND

It has been a long time since America's population profile bore much resemblance to the party that landed at Plymouth Rock. Now this nation of ethnicity and social flux is changing anew. It is becoming less white and more Spanish-speaking. Birth rates among blacks

## MINORITIES: FAST GROWTH AND TOO MANY DROPOUTS

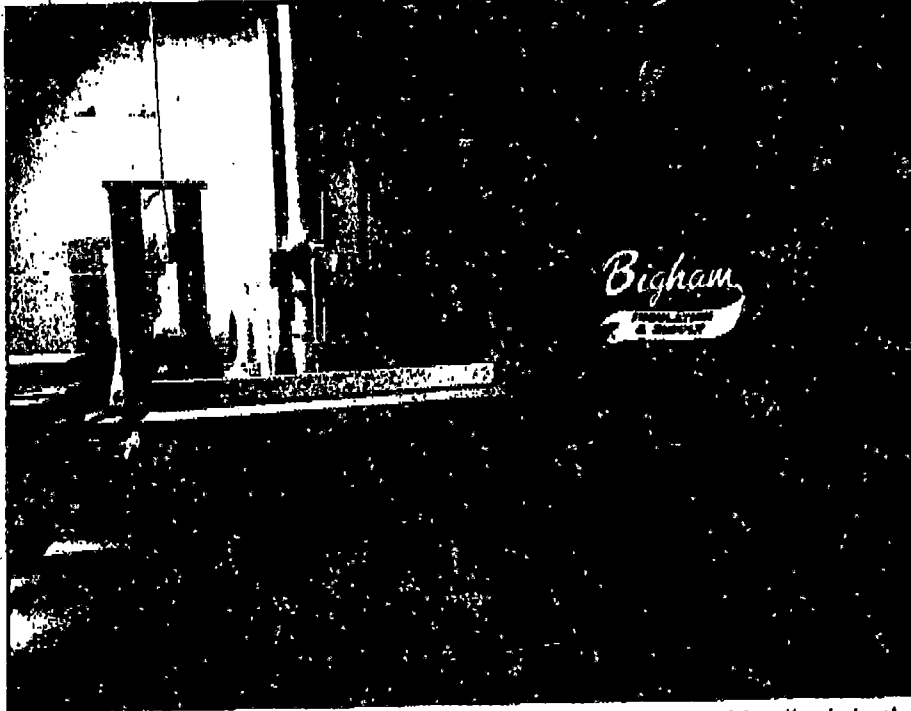


► Among white 18- to 21-year olds, 13.6% have dropped out of high school. Among blacks the rate is 17.5%, among Hispanics 29.3%

► The high school dropout rates in major cities, where minorities are concentrated, range from 35% in New York to as high as 50% in Washington



# Special Report



**RETIRED? RETOOL**  
*Leon Levitt, 81, retired from his sales job a decade ago, but six months later he went back to work as a trainee machinist. "Work adds life to your years—and it actually adds years onto your life," he says. As the work force ages, more and more résumés may resemble that of Levitt, who just cut back his workweek to 49 hours from 55*

gible children are served by Head Start, due to inadequate funding. The challenge is clear. If minority skills are not upgraded, they will deteriorate further. Companies will be forced to substitute capital for the unskilled labor. Technology, after all, has many faces. Given skilled workers, it can upgrade a job task and add value. Or, to cope with work-force shortcomings, it can be used to "de-skill." The classic example is McDonald's Corp. Dependent on young workers with poor skills, the hamburg-

er chain has replaced words on the keys of its cash registers with pictures. That may work for McDonald's. But for society to take that path implies low wages and a declining standard of living.

mothers with child-support orders received less than the full amount due. The average annual payment was \$2,315. Another aspect of the poverty problem is women's pay. Women's earnings average \$16,232, 70% of men's. Many mothers work part-time for far less pay.

Harvard sociologist David Ellwood predicts that more than two-thirds of children who grow up in a single-parent household will spend at least some of their childhood in poverty. They are three times more likely than others to drop out of school, and they are more deficient in skills. Black and Hispanic children, while a minority of the poor, are nearly three times more likely to be poor than whites. A National Assessment of Educational Progress found that only 60% of white young adults could locate information in a news article or an almanac. The number was 25% for blacks and 40% for Hispanics.

Labor shortages in the future could present an unprecedented opportunity to improve the lot of the poor. "The new workers—although they are from

groups disadvantaged by discrimination, lack of education, and language barriers—will be in very great demand," says Labor Secretary Ann D. McLaughlin. Already employers are having to reach further and further along the labor queue. Where necessary, they are patching up the ragtag skills they find there, sometimes at huge expense (page 117).

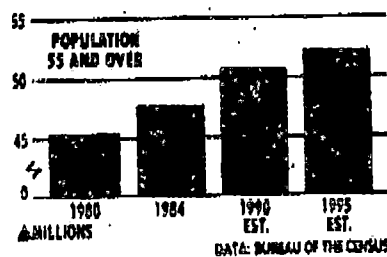
Social thinkers say early intervention, with such proven child-development programs as Head Start—or even earlier with nutrition programs and parenting classes—is the real ticket to building a competent work force over time. Half of all teenage mothers eventually escape poverty through education, with measurable improvements in their kids' achievement and prospects, notes economist Andrew Sum of Northeastern University. "If minorities are to succeed, we have got to start educating children much younger and work through their parents," says Gloria G. Rodriguez, director of a support and training program for poor Hispanic families in San Antonio. Despite its track record, only 18% of eli-

## BRINGING THE RETIRED BACK FROM RETIREMENT

In our time, the shrinking of the American manufacturing sector has written off a generation of middle-aged blue-collar workers caught between the foundry and the computer. And even as the economy faces labor shortages at all levels, the most striking employment trend in recent years has been a shift to early retirement. Only about 15% of men over age 65 are in the work force today, down from 25% in 1970. Only 68% of those age 55 to 64 still work, compared with 83% two decades ago.

Such trends were perhaps understandable as baby boomers crowded into the workplace and companies downsized. Today, though, it is waste on a vast

## OLDER PEOPLE ARE AN UNTAPPED RESOURCE



- In 1950, for every retiree, there were 17 Americans at work. By 1992, it will be 1 retiree for every 3 workers
- In 1984, only 68.4% of all men aged 55 to 64 worked. If retirement trends continue, that will drop to 62.6% by 1995



PHOTOGRAPH BY GERALD DAVIS; CHART BY PAT JERUSA

# Special Report

scale. A typical American who has reached the age of 65 can expect to live an additional 17 years. By 2008 the U.S. National Center for Health Statistics predicts life expectancies at birth will be 84 years for women and 10 years less for men. Today the 58-year-old—who takes early retirement is essentially middle-aged, and retirement may last half as long as his or her work life did.

The good health, skills, and work histories of the "young old" can help the nation out of its demographic fix. "Peo-

years. Smart companies are finding ways to retrain and employ them. In Florida, where 18% of its population is over 65, the future is now—fast-food chains recruit workers in retirement villages. Last year, Kelly Services Inc. in Troy, Mich., put out a call for workers over 55. Now they're 8% of the "temp" rolls. In Boston, one BayBanks Inc. unit has hired 45 retirees as clericals, tellers, and clerks since last November.

Keeping older workers in the job market won't be easy. Says Census Bureau

can Labor Force, Briggs argues that minority youths could soon be competing with immigrants—legal and illegal—for entry-level jobs. Rand Corp. researchers say there's no evidence of this yet. But they warn that U.S.-born Latinos must improve their skills to qualify for the high-tech jobs of the future or compete with new immigrants for low-paid jobs.

Today's immigrants, on average, are less skilled than the native-born. Most lack a high-school education. Only 20% are admitted because their skills are in



**NEW CITIZENS**  
Opening America's "Golden Door" has helped with past labor shortages, but swelling waves of immigration might serve to stall efforts to integrate blacks, Hispanics, and women into the economy more effectively

great demand. But the criteria could change toward more preference for skills. This year, U.S. hospitals, to allay shortages, will hire 20,000 foreign nurses on five-year visas.

The idea of hospitals staffed by skilled foreign professionals and low-paid native-born janitors doesn't sit well with some like Pat Choate, TRW Inc.'s futurist. "Ultimately we have to have an

ple should work longer and be productive longer. We should get away from the rigidities that go along with age 65," argues Alan Pifer, chairman of the Southport Institute for Policy Analysis.

Pifer, who directed the Carnegie Corporation's Project on Aging, advocates continual education and retraining throughout one's working life. The emphasis should be on that restless age around 50 when the kids are gone and "you've gone about as high as you're going to go in the hierarchy. It would be nice if a lot of people could be 'reputed,'" he suggests. As a vision for the nation, that projects a huge agenda: reordering what is now an ad hoc and haphazard retraining process. It also requires new benefits systems, such as portable pensions, to erase disincentives for middle-aged workers to move on.

Many over-60s, furthermore, don't want to be put out to pasture for 20

forecaster Cynthia M. Tauber: "They can afford to retire and will." The elderly have escaped Reagan-era spending cuts. Social Security, medicare, and medical spending on nursing homes have eliminated most poverty among the old. Still, retirement can be boring. If business makes work attractive, the oldsters may come back in droves.

## THE U.S. COULD LOWER THE DRAWBRIDGE AGAIN

Faced with labor shortages in earlier times, America has opened its borders. Immigration is still a policy option—the wild card in the labor-market outlook.

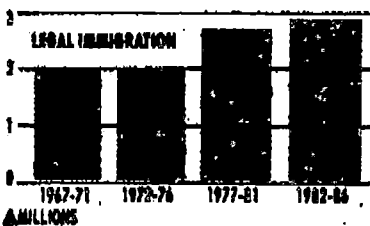
For Cornell University economist Vernon M. Briggs, unleashing even more immigration will stall efforts to integrate women, blacks, and other minorities into the economy. In a recent book, *Immigration Policy and the Ameri-*

economy that works—and do everything with our own people," he says. Yet, he adds, the U.S. should "use its incomparable advantages" to attract the world's talent. Foreigners here to study engineering, say, could be required to stay and work.

Unlike immigration policy, population trends hold few surprises. "We have a lot of control over how demography hits us. It's more of a glacier than a thunderbolt," reflects Jack A. Meyer, president of New Directions for Policy, a Washington think tank. "If we sit back, we're in for some problems." The danger is that the U.S. will fail to address its demographic challenges in time.

By Elizabeth Ehrlich in New York, with Susan B. Garland in Washington, and bureau reports

## WILL IMMIGRANTS FILL THE JOB GAP?



- ▶ Only 20% of legal immigrants are admitted for job skills. Family ties or refugee status are the usual criteria
- ▶ Over half a million legal immigrants arrive each year—more than at any time since the 1920s.
- ▶ Some 2 to 4 million illegal immigrants live in the U.S.



PHOTOGRAPH BY WOLFPICTURE GROUP; ILLUSTRATION BY PAUL CHANGIZIAN

## Special Report



## WHY THE UNDERCLASS CAN'T GET OUT FROM UNDER

In an era of prosperity, legions of welfare mothers and inner-city youths face dead-end lives



Terence Maclin often dreams of escaping Milwaukee's tough North Side. "I plan to build my own business," says the 18-year-old leader of a youth gang known as Two-Four. "Then I can have people working for me."

Maclin's fantasy of the straight life is likely to remain just that. A high school dropout who's been in and out of juvenile institutions since he was 9, Maclin can't read at a sixth-grade level. He's enrolled in a high school equivalency program but chronically cuts classes. And Maclin recently quit the latest in a

series of temporary jobs after a dispute over pay.

In the past, unskilled and poorly educated black youths such as Maclin had a shot at a decent-paying job. But now, many of the breweries that made Milwaukee famous are shuttered. The city's employment boom has been concentrated largely in jobs that require skills far higher than Maclin's. "The odds are very strong that Terence will never make it," says Charles Meyer, a program director at the Westside Center, where Maclin sometimes hangs out.

Young people such as Maclin can be found in decaying inner cities all over America. They represent a chilling phenomenon: a growing black underclass

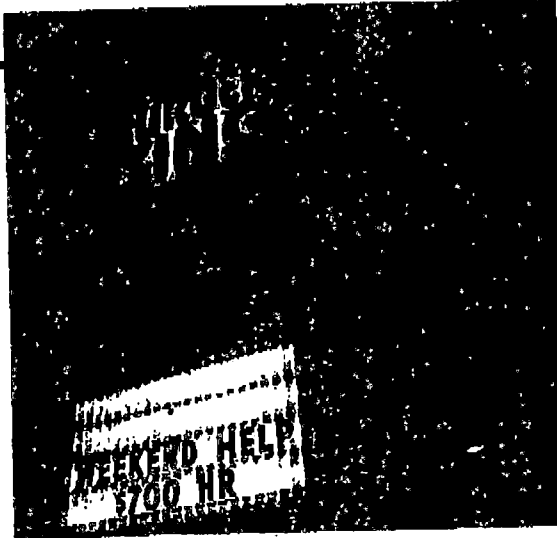
isolated from the nation's economic and social mainstream. This legion of chronically unemployed males and welfare mothers, concentrated in crime-ridden, desperately poor, inner-city neighborhoods, numbers at least 1.5 million.

That figure continues to mount despite a six-year economic expansion. "The rising tide of prosperity left those without a high school diploma untouched," says John D. Kasarda, an economist and chairman of the University of North Carolina's Sociology Dept. "They were not even on the boat."

Although the underclass is relatively small in size, it reverberates across geographic, class, and racial lines. Drug-related crimes and gang wars are shak-

ing the complacency of middle-class communities. As labor markets tighten, business has begun to worry about the growing pool of disaffected youths ill-equipped to take on new jobs. And the cost of coping with society's failures are staggering. The nation spends \$20 billion annually on prisons. Caring for low-birthweight babies born to mothers on welfare who are high school dropouts costs another \$188 million per year.

*Minority youths in urban ghettos such as Dorchester, Mass., (left) often eschew work even where it's available. For some, fast-food jobs paying as much as \$7 an hour don't compare with the enticements of life on the street*



Even when jobs are available, few are perceived as true opportunities because pay is low and prospects for promotion are virtually nil. "Places give you a hassle, say they are not hiring and come back in a few months," complains Corey Newsome, a former member of Maclin's gang. In some tight labor markets, fast-food restaurants pay nearly twice the minimum wage, but local youth unemployment rates remain high.

The growth of the underclass is the result of many complex forces—from racism to the frustration and apathy that persistent poverty can provoke. "It's very difficult to point to any one thing in an environment where so many things are hostile," says David T. Ellwood, professor of public policy at Harvard University. "But everyone agrees that all these negative things start to feed on each other, making it more difficult to latch on to any simple solution."

**'KNOWLEDGE-INTENSIVE.'** Among the most potent factors is the two-tiered economy. The economy's general weakness during the 1970s and early 1980s "hit people at the bottom of the barrel the hardest," says Brookings Institution economist Robert D. Reischauer. Starting in the 1970s, white women, baby boomers, and immigrants flooding the job market have made it even more improbable that less-educated blacks at the end of the hiring queue will be chosen for jobs.

Meanwhile, in the past two decades, manufacturing industries virtually vanished from the cities. Some closed down, skewed by international competition. Others moved to convenient, sprawling, suburban tracts. Just 25 years ago, half of Milwaukee's jobs were of the high-paying blue-collar type. Today less than 30% are. In other cities, the falloff is even more dramatic.

Many of the newer jobs are "knowledge-intensive" white-collar posts, which require

at least some college education. As a result, employment of the poorly educated has fallen sharply. That is particularly true of adult black males who live in cities. Only half of these men work, even part-time, as compared with 80% in 1969, according to Kasarda.

University of Chicago sociologist William Julius Wilson, author of *The Truly Disadvantaged*, argues that antidiscrimination legislation and affirmative-action programs may have inadvertently compounded the problems. Middle-class blacks, who could take advantage of new job and housing opportunities in the 1960s and after, fled the ghettos, leaving local schools to the poor and removing important role models—adults who work at steady jobs. Those left behind no longer hear about work opportunities. Even the habit of waking up to a ringing alarm clock is alien. "Youngsters are growing up in a community where people's lives aren't organized around work," Wilson says.

"Fast-food places aren't paying enough, not for what they want you to do," says Newsome. The lucrative alternatives—drug dealing, pimping, and theft—have no shortage of recruits, though.

The allure of criminal activity is often attributed to the disintegration of the black family. In 1960, 20% of black families with children were headed by women. Today, half are.

**WELFARE TRAP?** Contrary to popular perception, the birth rate for unmarried black women actually has declined since 1960. But the marriage rate among black women has dropped even more sharply—as has the birth rate to married women—so single women still bear more of the community's babies. For Wilson, the explanation is the shortage of "marriageable" black men. "The increasing inability of many black men to support a family is the driving force behind the rise of female-headed households," he says.

Some social scientists, though, believe that cultural factors have become at least as important as economic ones.

"If you've got full employment, you are still going to have an underclass," argues social scientist Charles Murray. "We do not know how to change the attitudes of even adolescents who have grown up in the underclass." Murray's 1984 book, *Losing Ground*, faulted federal welfare policy for discouraging marriage and work while rewarding out-of-wedlock childbearing and unemployment.

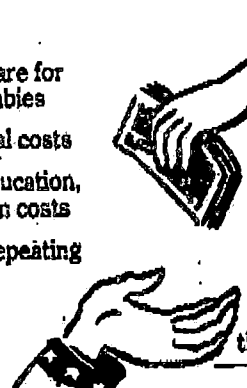
"It's now more acceptable than ever for a father to ignore his responsi-



## HOW SOCIAL INVESTMENT IN CHILDREN PAYS OFF

Prenatal care for poor women	\$3.38 in hospital care for low birthweight babies
Childhood immunization	\$10 in later medical costs
Preschool education	\$4.75 in special education, welfare, and prison costs
Remedial education	\$6 in the cost of repeating a grade

DATA: HOUSE SELECT COMMITTEE ON CHILDREN, YOUTH, AND FAMILIES



## Special Report

bilities," adds Stuart Butler, director of domestic policy studies at the conservative Heritage Foundation. "The assumption is that the government will take care of the problem."

Certainly, most welfare programs do little to encourage work. When recipients who want to work weigh the low-paying jobs for which they're qualified against the loss of welfare benefits, medical benefits, and the additional burden of child care, many figure they're better off staying home. "The system goes around and chokes you," says Bonita Williams, a 24-year-old mother of six who lives at the Milwaukee Fam-

ily Crisis Center. Child care and job training are a focus of the new \$3 billion welfare reform bill pending in Congress. Whatever the causes of the underclass phenomenon, there is no question that the consequences for black children have been disastrous. Three-quarters of them spend at least some time in poverty, compared with one-fourth of white children. One-third of black kids are poor for seven years or more. And those growing up poor are more likely to become parents themselves at an early age. In turn, their babies are at risk from low birth-weight, which tends to increase the chances of brain damage and learning disabilities.

Dr. James P. Comer, professor of child psychiatry at the Yale Child Study Center, says children of uneducated parents are less likely to develop the early language skills and excitement for learning that will prepare them for school. Fully 60% of daughters of single women who are on welfare for 10 years or more will find themselves on welfare for at least a year during adulthood. Urban Institute economist Isabel V. Sawhill worries that underclass communities will be "breeding grounds for another generation of poor people with little hope of becoming part of the mainstream."

most disadvantaged kids. Their point is that intervening at an early age may well improve a child's lifelong prospects (chart, page 113) and save money on other social programs, such as welfare, down the line. Some experts believe that expanding programs such as Medicaid and Head Start is only a first step. Harvard lecturer Lisbeth B. Schorr says that social service agencies have to do a better job of coordinating the services they deliver to poor families, who often suffer from a spectrum of problems. An agency that provides preschool education to a child without addressing a parent's depression or the child's nearsightedness won't help much. "The programs that work best are comprehensive and intensive," she says.

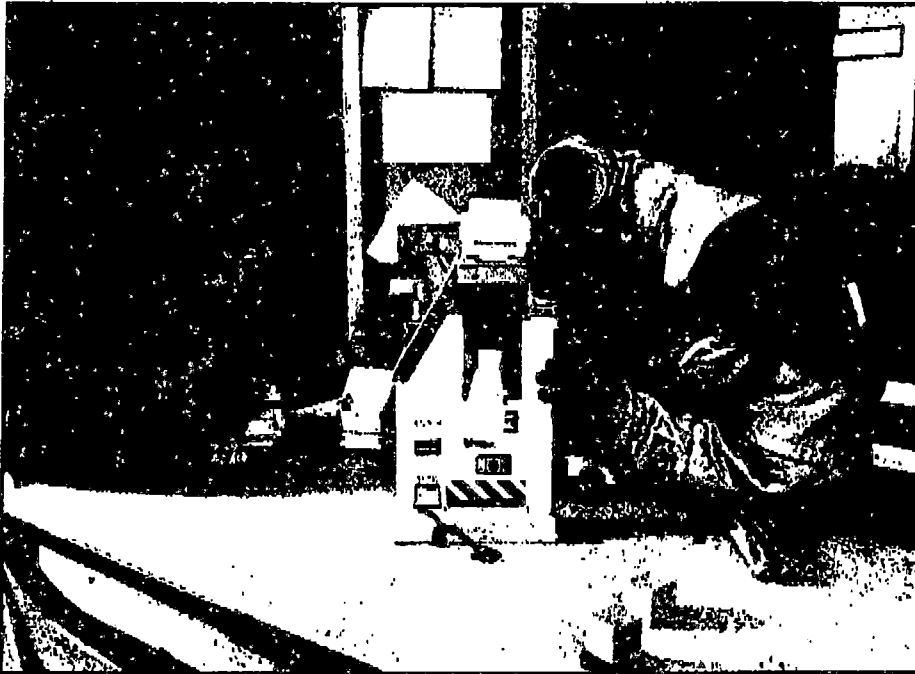
Encouraging the employment of young adults is another necessity. In Boston, a successful business-backed program is teaching 150 poor adults such workplace skills as résumé-writing, interviewing procedures, and telephone etiquette. James B. Marshall Jr., who is in charge of the program, says many youths are intimidated by the prospect of leaving isolated ghettos such as Roxbury to work in a downtown glass tower. Other programs that provide intensive remedial education, job training, and child care have helped long-term welfare mothers enter the labor force.

North Carolina's Kasarda believes that suburban employers must reach out as well through job information networks and provide transportation pools. Marshall says that employers, who are often reluctant to hire inner-city youths, "have to understand that their personnel in the next 10 years is going to be different from what they're used to."

This realization is the product of demographic trends that in some areas are already producing labor shortages among young, entry-level workers. However, federal policymakers, worried about yawning budget deficits, seem unlikely to launch a major new effort to address the problems. There is little political gain to be had from aiding the powerless underclass, and indeed, the Presidential candidates have not taken up their cause.

Yet, argues Princeton sociologist Richard Nathan, "if there was ever a time to work at these issues, it's now, when there's a declining labor force." If America lets this opportunity pass, it will do so at its own social and economic peril.

By Susan B. Garland in Washington, with Lois Therrien in Milwaukee and Keith H. Hammonds in Boston



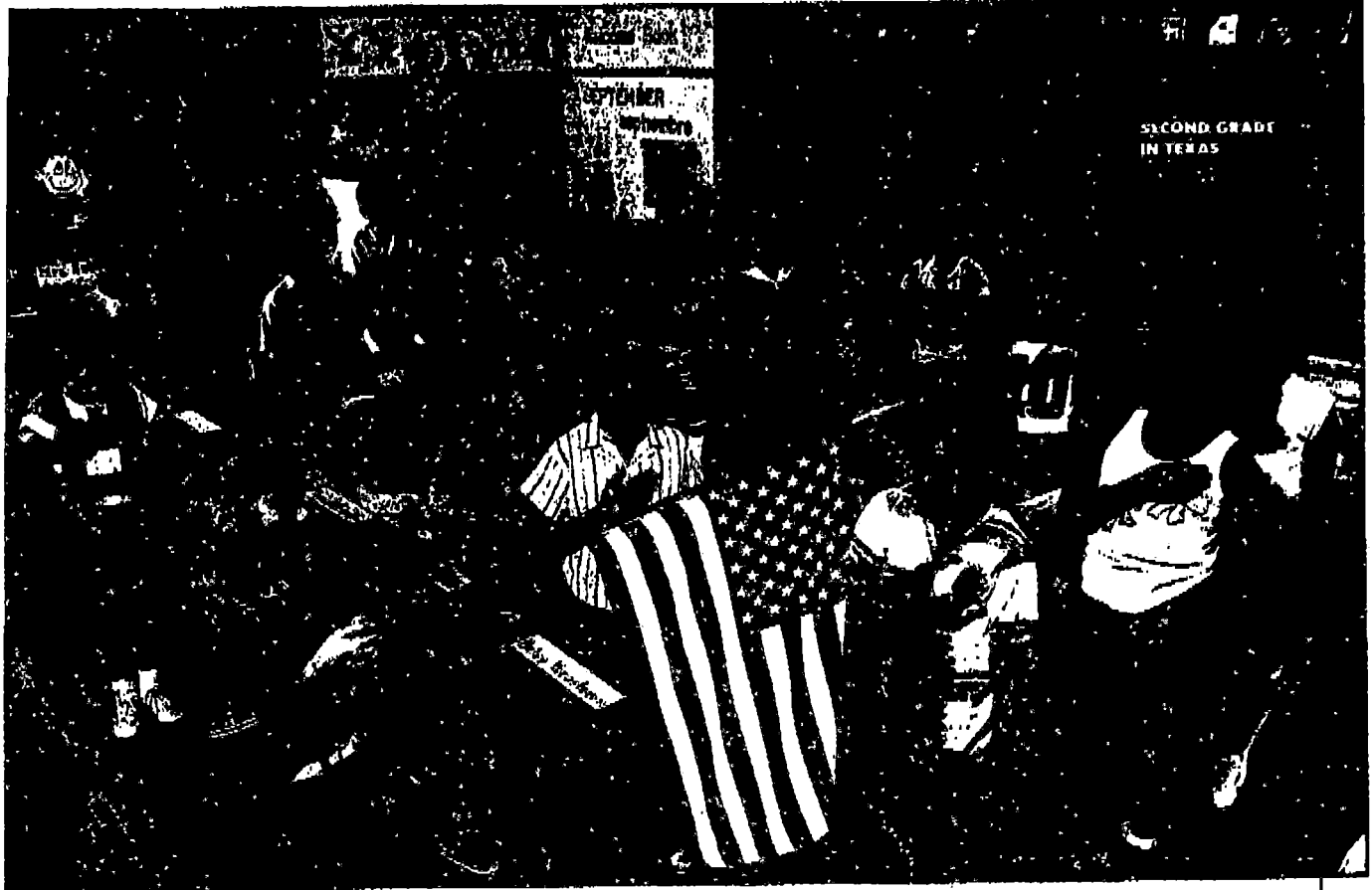
**SAVE THE CHILD:**  
Improved services for children, such as day care for disadvantaged kids in New York's East Harlem, may be the surest way to break the cycle of poverty

ily Crisis Center. Child care and job training are a focus of the new \$3 billion welfare reform bill pending in Congress. Whatever the causes of the underclass phenomenon, there is no question that the consequences for black children have been disastrous. Three-quarters of them spend at least some time in poverty, compared with one-fourth of white children. One-third of black kids are poor for seven years or more. And those growing up poor are more likely to become parents themselves at an early age. In turn, their babies are at risk from low birth-weight, which tends to increase the chances of brain damage and learning disabilities.

To break the chain, some black leaders are calling on the black middle class for assistance. Others are saying that poor blacks themselves must accept greater responsibility—and that their community offers positive models, too. "There are kids who are not on drugs and teenagers who are not getting pregnant," says Robert L. Woodson, president of the Washington-based National Center for Neighborhood Enterprise, which encourages tenant management of public housing projects as well as other community self-help programs. "We need to learn from people who are successful."

Improving the schools that poor children attend is critical as well (page 115). So is reaching the child before school. Last year the Committee for Economic Development, a corporate-funded research group, recommended \$11 billion in additional spending on prenatal care and nutrition for pregnant women and preschool education for the nation's

# Special Report



SECOND GRADE IN TEXAS

## AMERICA'S SCHOOLS STILL AREN'T MAKING THE GRADE

A quarter of high school grads are only marginally literate—and reformers disagree on what to fix



Americans have always asked a lot of their schools: Civilize the frontier with the three Rs, assimilate immigrants, secure U. S.

military might by bolstering high school science. At its most fundamental, democracy aspires to produce literate, responsible citizens. But social and economic change has continually reshaped what school is expected to do—from training homemakers to fostering integration.

A new call for school reform is ringing across the land. This one is different: The nation's economic problems are being placed at the

schoolhouse door. Economic growth, competitiveness, and living standards depend heavily on making investments in human capital. That means attending to the state of America's schools.

It is a worrisome state. Although top-

ranked U. S. students compare well with their peers in industrialized nations, the rest do worse. One million young people drop out of high school every year. Rates approach 50% in some inner cities. Of the 2.4 million who graduate,

as many as 25% cannot read or write at the eighth-grade, or "functionally literate," level, according to some estimates.

Most 17-year-olds in school cannot summarize a newspaper article, write a good letter requesting a job, solve real-life math problems, or follow a bus schedule.

What's needed is a do-or-die battle to turn the schools around. But the front lines are weary—and fresh recruits

Some 35% of the nation's 11th graders write at or below this level:

DATA: EDUCATIONAL TESTING SERVICE

*I have been experience  
at cleaning house we  
do work at a pool  
bring neat keeping  
and clean. In very  
social. I'll get to know  
people really fast.*

DOUGHERTY/OLG

# Special Report

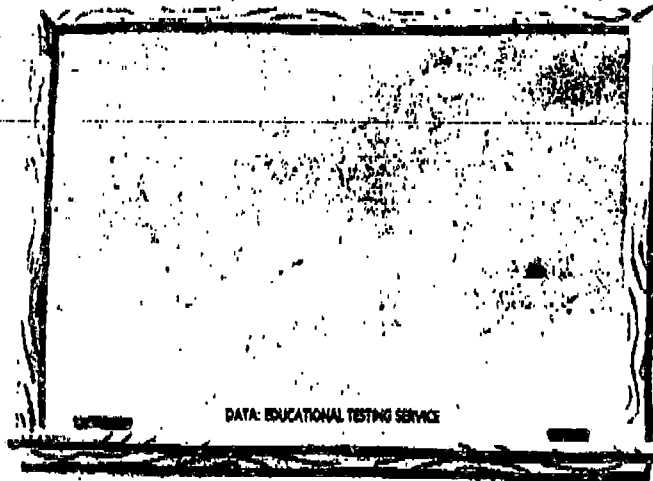
are scarce. Between retirement and normal attrition, America could need to replace 1 million teachers—half the current force—before the end of the century. But only 8% of today's 1.6 million college freshmen say they're interested in teaching, and half of those will typically change their minds. Worse, half of all new hires leave teaching within seven years. And with shortages of educated workers looming throughout the economy, schools will be competing with other sectors for quality candidates.

**'LEMONS.'** The demand for school reform has been percolating since the mid-1970s, when declining results on standardized tests raised concerns about basic skills. It exploded in 1983, after the National Commission on Excellence in Education released *A Nation at Risk*. Warning of a "rising tide of mediocrity" in public schools, it called for rigorous academic standards and a standardized, traditional high school curriculum of history, Western literature, foreign languages, science, and math.

Critics still blast the report as elitist or oversimplified. But few deny that our schools need fixing. "If a company was turning out 90% lemons, we would rethink the whole production process," says Albert Shanker, president of the American Federation of Teachers (AFT). "This is not a question of a few recalls. The system is producing lemons."

Most Americans want to do something about

Almost half (48.9%) of the nation's 17-year-olds could not correctly answer math questions of this type:



vidual learning styles or to respond to students' social problems. They stress the importance of expectation and high standards, holding up such examples as William Lloyd Garrison School, where South Bronx kids from low-income families test at or above grade levels in reading. "You don't change the principles of medicine when patients have poorer health or a poorer state of nutrition," insists outgoing Education Secretary William J. Bennett. When Bennett urges school overhaul, he means a shift of power from the educational Establishment—teachers' unions, administrators, and colleges of education—to parents, citizens, and state legislatures.

Traditionalists point to Japan, where students seem to perform as well as or better at all levels than U. S. kids. Japanese mothers are highly involved in their children's schooling, teachers are respected and well-paid, the school year is longer, and more homework is given. "The Japanese system," says Bennett, "is pretty close to a system of education that is universal and of quality."

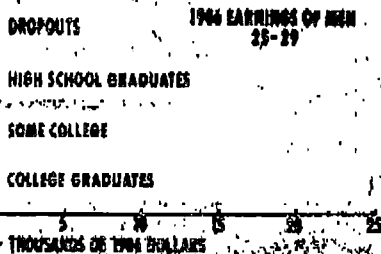
**MASS PRODUCTION.** Those for whom tradition is not a panacea say American schools must change with the times. They argue that the public school system was organized along factory lines in the 1920s by a society enchanted by mass production. Classrooms were standardized, and decisions about teaching methods and content

it. In a 1987 Harris Poll, 90% of those surveyed endorsed the principle that "for the U. S. to become competitive, we must pay more for quality education" and get "tangible results."

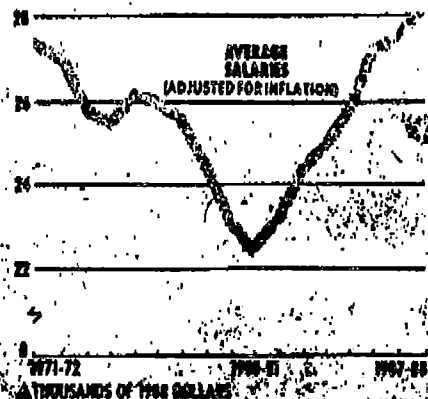
The tricky question: how to get those results. Educators are sharply divided. Some endorse the call for strengthening the traditional curriculum. AFT's Shanker would give teachers a freer hand to restructure the classroom environment. Others say schools must take on new family-like roles to nurture the growing numbers of poor or troubled kids in the system.

Predictably, conservatives deride the idea that schools should depart from traditional teaching formulas to suit indi-

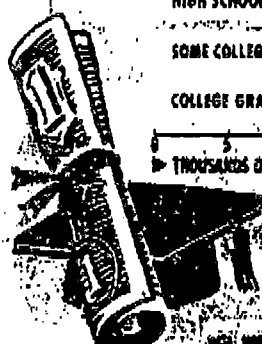
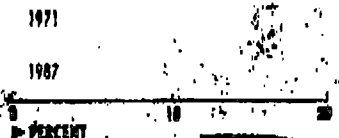
## THE PAYOFF OF EDUCATION IS HUGE...



## ... BUT TEACHERS' SALARIES HAVE GONE NOWHERE ...



## ... AND FEW WANT A TEACHING CAREER



## Special Report

were passed from state offices to superintendents to principals and finally to the chalk-wielding line workers: teachers. After a 50-minute class, the bell rang and pupils moved on. "If the student is viewed as an inanimate object moving on an assembly line, this makes perfect sense," Shanker says.

**THOROUGHLY DISCREDITED.** Successful companies, as Xerox Corp. Chairman David T. Kearns notes in *Winning the Brain Race*, "have discarded the archaic, outmoded, and thoroughly discredited practices that are still in place in most of our large school districts: top-down, com-

mand-control management—a system designed to stifle creativity and independent judgment."

To education reformers, it is significant that the Japanese themselves are beginning to worry that their nation's learning style, heavily based on rote and memorization, doesn't promote creative thinking and flexible skills. "In Japan they do harder and longer what we do, and get better results," argues Adam Urbanski, president of the Rochester (N. Y.) Teachers Assn. "The purpose of reform is to do it differently—to challenge the fundamental structure."

Indeed, concerns about basic skills already have produced some improvements along traditional lines. Educational Testing Service (ETS), a testing-and-research organization based in Princeton, N. J., reports that test scores in math, reading, computer literacy, and science have gone up since the mid-1970s. Most of that came from minority kids, who increased from 16% to 23% of all schoolchildren. But "the bad news is that we haven't budged in improving higher-order skills, critical-thinking skills," says Archie E. LaPointe, head of ETS's National Assess-

## BUSINESS IS BECOMING A SUBSTITUTE TEACHER



New York's Chemical Bank has an alarming problem: it has to interview 40 high school graduates to find one who makes it through the bank's training program for new tellers. The Chemical reaction? The bank has adopted two schools and is helping form a high school debating league. Chemical Chairman Walter V. Shipley believes parental involvement is the ideal: "Unfortunately you don't always have that commitment from parents, so business must try to find more ways to fill the gap."

Passion for school reform is gripping Corporate America. It is marshaling resources, energy, and influence to improve education. Hundreds of partnerships are blooming between school and business. They run the gamut: gifts of equipment, paid work-study programs, teacher training, and literacy volunteers. But there are questions about the effectiveness and reach of these programs. The biggest unknown is whether business will have the patience to stay the course.

Many join-a-school partnerships have been forged. In 1981, New York industrialist Eugene Lang addressed a sixth-grade class at his Harlem alma mater and

offered college scholarships to all pupils who stayed in school. He paid for remedial and counseling staff and became involved with the kids. Of the 54 original pupils who remained in New York, 50 finished high school, and 84 are in college.

The recipe has been followed by corporations as well. More than 1,000 Dallas businesses have adopted the city's 200 public schools. The sponsors provide volunteers and donate funds and equipment. At Tenth Street Elementary School in Los Angeles, 125 Arco Oil & Gas Co. employees—from secretaries to top brass—help out in the classrooms, tutoring immigrant and minority students in English, math, geography, and computer sciences.

Pacific Northwest Bell Telephone Co. in Seattle adopted a local school. But this modest involvement mushroomed in 1983 thanks to Gary A. Frizzell, PNB's new educational relations manager, who happened to be coping off-hours with an apathetic 14-year-old son. He tried to reach the boy

**SCOTT'S CLASS**  
*'Adopt-a-school' programs are sprouting up. At Los Angeles' Tenth Street Elementary School, an Arco professional leads a nature class*

with heart-to-heart talks and a series of letters—which evolved into *Choices*, an outreach program encouraging kids to stay in school. Volunteers from 65 participating companies have addressed more than 800,000 eighth and ninth graders in 41 states. "Business is the user of education's

product—students, and it ought to replenish," says Frizzell, now heading an education foundation for PNB's parent, U.S. West in Denver.

Businesses are focusing on teachers, as well. Two years ago, IBM Vice-Chairman Lewis M. Branscomb headed a Carnegie Forum task force that recommended higher pay, more autonomy, and national competence testing for teachers. Honeywell Inc. sponsors a summer Teacher Academy, where Minneapolis high school math and science teachers team up with re-



ment of Educational Progress (NAEP).

It's higher order skills that a sophisticated economy increasingly needs. "Over the long term, basic skills only give you the right to compete against the Third World for Third World wages," notes Marc S. Tucker, chairman of the National Center on Education & the Economy in Rochester, N. Y. To achieve more advanced goals, "I'd like to see a lot less of kids sitting quietly in rows and a lot more deeply engaged in projects in which they are heavily invested, which require them to learn a lot."

Tucker maintains that most kids don't learn well by listening to a lecture or reading the text. He and others advocate

peer tutoring, team learning, simulation games, and other nontraditional approaches, particularly for disadvantaged children for whom formal classrooms are threatening ground.

So passionate is the debate that reform is threatened with paralysis by analysis. No single educational philosophy can be expected to win the day in a country as heterogeneous as the U. S. What might work in a high-income suburban school district could create havoc in an inner-city ghetto. And there are no quick fixes. "Imagine a business... with 50 totally autonomous divisions and 18,000 subsidiaries, each with its own board of directors and labor agree-

ments," says retired Procter & Gamble Chairman Owen B. Butler. "No effort to change that culture can be expected to succeed in five years."

**TEACHERS TROUBLE.** Whether it's traditionalism or radical reform, better schools require more and better teachers. And here there is trouble. Morale among teachers, who are poorly paid and garner little esteem, is at low ebb. For years the numbers of college students entering teaching has been in decline, and those who do choose teaching often come from the bottom quartile of their college class. The shortage is acute for teachers of math and science and for the minority teachers desperately need-

searchers to develop class projects using state-of-the-art computers and equipment.

Minnesota companies have a tradition of social investing. Honeywell has provided equipment, volunteers, and technical advice to schools for 20 years. Last year it gave \$7.8 million, about 2% of its U. S. pretax profits, to philanthropy. Of that, \$2.9 million went to education.

Not all educators welcome corporate largesse. Some worry there will be strings attached. "We've been in the business of education for 126 years," says Robert Astrup, president of the Minnesota Education Assn., which represents 80% of the state's teachers. "We would like businesses to be advocates—not leaders." Joan Canella, director of the Bank Street School for Children in New York, sees it another way: "The best thing business can do for schools is make it possible to combine work and family, allowing working parents to get involved with the schools."

**MARC KNOCKA** Dade County, Fla., hosts one such experiment. To ease overcrowding and reduce working parents' stress, the school system set up minischools in workplaces. Last fall, American Bankers Insurance Group Inc. opened the first "satellite learning center" to serve employees. It built a \$350,000 schoolhouse for 50 kindergarteners and first graders. The county provides teachers and books.

In Chicago, local companies, including Borg-Warner, Sears, Johnson Publishing, and McDonald's, opened their own school. Privately funded, tuition-free, the Corporate/Community School of Chicago is to be a laboratory-in-action addressing the problems of inner-city schools. Its enrollment, now at 150, will grow to 300 children, from nursery school to eighth grade.

Perhaps the most obvious role for business is to help bridge the

gulf between high school and what comes after. That is, not pushing old-style vocational education but bringing some notion of work life and promise of opportunity to kids floundering on the margins. That was the plan behind the Boston Compact, a 1983 agreement between the Private Industry Council (PIC) and the school system

to offer summer and permanent jobs in exchange for improving the schools.

Last year, 669 Boston companies created summer jobs for 3,000 students, at an average hourly wage of \$5.39. Napoleon "Eddie" Santos, 17 and a senior at Dorchester High School, got his first real job that way. This summer he was one of four full-time in-

**JOB TRAINING**

*Boston's intern program is giving many poor youths their first jobs.*

*Eddie Santos (right) is an apprentice maintenance engineer*



terns apprenticing in maintenance engineering at Beacon Co. Under a separate program, companies hired 1,000 high school graduates, 72% of them black or Hispanic, into permanent jobs. PIC also offers jobs and counseling to dropouts, and guidance to ninth graders.

**UNFAIR BURDEN.** Rebuilding a school system proved tougher. Reading and math scores rose modestly. Attendance went up. But Boston's dropout rate is stuck at 46%. "The business community has done its job. I think everyone's disappointed on the school side," declares Edward E. Phillips, chairman of insurer The New England. To do more, he says, "would be a pretty unfair burden on businesses. We pay hefty taxes to support the system already."

But some corporate leaders insist an even broader burden must be borne. Harold W. McGraw Jr., chairman emeritus of McGraw-Hill Inc., which publishes BUSINESS WEEK, heads the Business Council for Effective Literacy, aimed at millions of U. S. adults who lack functional reading skills. Owen B. Butler, retired chairman of Procter & Gamble Co. focuses on the very young: "The best way for business to invest in educating the disadvantaged is to reach them early. By age 5, they're already so deprived they can't benefit from schooling," he says. Butler lauds such efforts as Success by Six. In that program, Minneapolis employers, civic groups, and schools spent \$647,000 this year on early childhood health and education through the local United Way.

A departure from corporate practice? Not for Butler. "It took us years to develop Tartar-Control Crest, years to make a profit on our investment. So we understood the economics of early childhood programs." For him, the long view on education is just good business.

*By Elizabeth Eshlich in New York, with bureau reports*

## Special Report

ed in poor communities as role models.

Increasing pay can help recruit and retain teachers. But so far efforts in that direction have raised average starting salaries only to the \$18,000 range—hardly enough to entice talented students away from other professional tracks. A few school districts, though, now pay their best or most experienced teachers several times that amount.

To attract more teachers, New Jersey is experimenting with alternatives to the standard-certification route so that college graduates in fields other than education can come aboard. Using audiovisual aids, computers, satellite teaching, team-teaching, and even switching to staggered semesters can cut down the number of teachers required as well.

Moving teachers who have been promoted into management jobs back into classrooms could be one solution to the labor shortage. School systems are notoriously bureaucratic. According to the AFT, from 1975 to 1986 school districts hired one curriculum adviser, program director, or other desk worker for every new classroom teacher. "Before we ask for additional funds, we must reorder our priorities," says Mary Hatwood Futrell, president of the National Education Association (NEA).

How to shrink staff and administrative functions isn't the only thing schools can learn from business. Incentive pay can also help. In Rochester, N. Y., last year, the teachers' union sat down with administrators to bargain for school-based decision-making and pay hikes of more than 40%. The new contract also established a career ladder with a top rung of so-called lead teachers who can earn up to \$70,000 per year in the contract's third year. Top pay requires them to accept assignments in the system's toughest schools, now often in the hands of novice teachers. "They'll be the Clint Eastwoods of teaching," says union head Urbanski.

Reaching disadvantaged kids in tough neighborhoods also may require expanding the traditional role of schools—the

only stable institutions in some kids' lives. A handful of inner-city schools are trying on-site day care for teenage mothers, after-school hours to increase learning time, and intensive anti-dropout counseling. Arkansas, New York City, California, and Minnesota have started prekindergartens for four-year-olds. "Pedagogic reforms are wasted unless you do something about social-capital

ing to do society's work, the schools must respond."

One way to make the schools more responsive to the needs of the students is to force them to compete for students. Some 20 years ago economist Milton Friedman, a Nobel prizewinner, proposed issuing vouchers to families for the amount it costs to educate their kids. Parents would select among the schools,

"paying" with the vouchers, so schools would have to upgrade or lose funding.

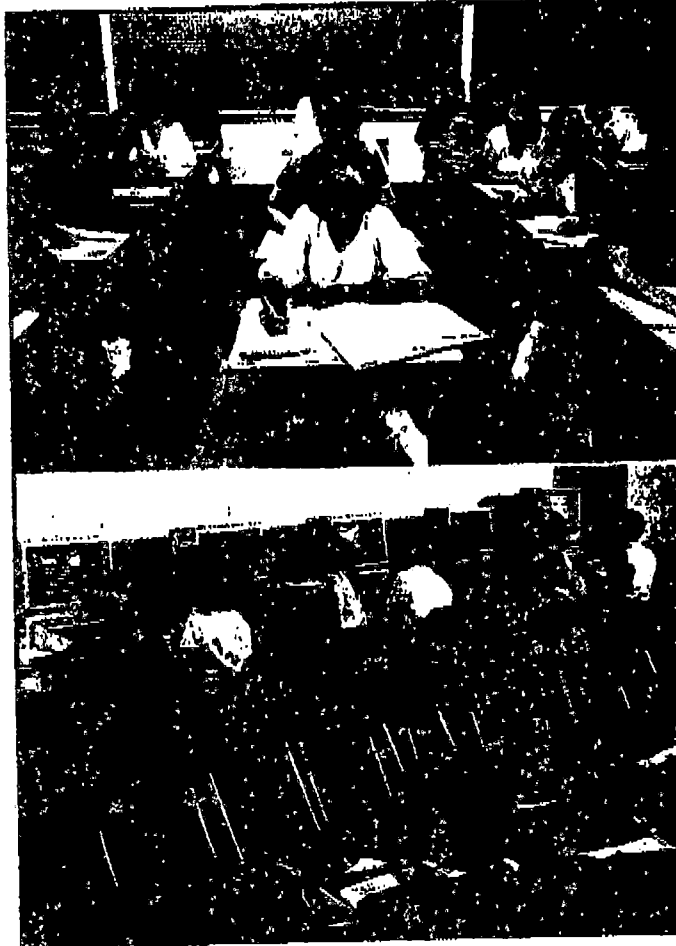
Although no school system has yet issued a Friedman voucher, there is growing support for the idea of parental choice to foster competition, accountability, and parental involvement. The National Governors' Assn. believes that choice within the public schools "can promote equity." Poor kids, claims Heritage Foundation analyst Jeanne Allen, would benefit most, since wealthier families already choose schools by moving to communities with good ones.

In the past, though, choice has sometimes been used to thwart integration. In some places, so-called magnet schools—the best schools in the district—skim off the community's best students, leaving other schools worse off. "You don't improve schools by running away from schools," bristles NEA President Futrell. Minnesota's teachers are suing their state over its new Choose-a-School plan, which lets kids enroll in any public school.

Other experiments are on the way. Boston University is taking on the reorganization of the troubled Chelsea (Mass.) school system. New Jersey has begun a hostile takeover of Jersey City schools, whose performance was close to meltdown. But much of the system still is plagued with inertia and institutional rigidity. If there is to be meaningful reform, adversaries in the education community will have to cede cherished turf and cooperate.

The alternative—bumbling along from crisis to crisis while presiding over decline—is simply not acceptable. Schools are the crucible where children do or don't become productive members of the community. For children growing into citizens—and for a society that wants to prosper—education is just too important to entrust to the status quo.

By Elizabeth Ehrlich in New York



### A RAGING DEBATE

*Traditionalists stress the importance of a strong curriculum and high standards. Others want reforms such as peer tutoring and team learning*

building," says Primerica director and social activist William S. Woodside.

Northeastern University economist Andrew Sum argues that an extended school year, which the Japanese have shown benefits middle-class pupils, can do even more for poor kids who, left to home and peer influences, tend to lose ground in summer. California is moving to year-round schools to increase learning time—and to handle a shortage of classroom space.

**SCHOOL VOUCHERS.** Sar Levitan of George Washington University believes schools must assume even more roles to fill the gap left by working mothers. "I'm not a moralist, I'm only an economist," Levitan says. "If women are go-

## Special Report

# IT'S TIME TO PUT OUR MONEY WHERE OUR FUTURE IS

Investments in education and training will yield sure-fire returns we can't afford to ignore



In the U. S., when you turn 18 or become a citizen, you may register to vote. The process varies from state to state, depending on the requirements of the local board of elections. But one thing is true across the nation: You do not need to be able to read or write. The Voting Rights Act of 1965 and its amendments abolished literacy tests, among other discriminatory local requirements, that had long disenfranchised millions of black and disadvantaged citizens.

Yet today the person who can vote but cannot read and write remains disenfranchised in another, more fundamental, sense. The right to earn a decent wage and make a productive contribution to society can't easily be exercised by the illiterate, the poorly educated, and the unskilled. Disenfranchised, too, is the unemployed steelworker unable to find the job to fit his unneeded skills. Then there's the single mother unable to find affordable day care for her toddler so that she can go to work.

The cold, hard, economic facts make a compelling case for action. The direct costs are clear: Incomes are lost, and unemployment and welfare benefits are paid out. But the overall loss to the economy is bigger still. America's most productive resource, its people, is not being fully utilized.

**TIME BOMBS.** The bean-counters in Washington and state capitals around the country will say there is no money available to invest in educating and training tomorrow's work force. And some economists, such as University of Chicago professor and **BUSINESS WEEK** columnist Gary S. Becker, whose pioneering work measured the rate of return to investments in human capital, would prefer that market forces eliminate the mismatch between jobs and skills. But labor markets take time to work, and time is of the essence. Already the nation has suffered the consequences in the international marketplace; in the future, fiercer competition, changing demographics, and new tech-

nologies will demand that skills keep improving. Ignorance costs far more than knowledge.

In a \$4 trillion economy with a \$1 trillion federal budget there is surely room for some shifts in spending: away from plant and equipment and toward workers; away from the aged and toward the very young; and even away from guns and toward people. Whoever wins the Presidential election on Nov. 8 should spearhead a new national commitment to America's future by investing in its people. Whatever it takes—new money or a reallocation of resources—the commit-

ment should come through loud and clear. The federal government, state and local governments, business, labor, and the electorate will all have to do their part. What should be done? Here are some suggestions:

■ **Instill the habits of learning and working in kids at an early age.** "Early intervention" by means of preschool programs has shown proven results. Numerous studies demonstrate that the younger the child, the greater the long-run payoff of an investment in that child. Often mothers become in-



involved in these programs as well, and they help to nurture and sustain a learning ethic in their kids.

For every dollar invested in preschool programs such as the government's 23-year-old Head Start program or the Perry Preschool program in Ypsilanti, Mich., more than four times that amount is saved in public assistance, special education, and other costs. Children enrolled in such programs are much more likely to graduate from high school and be employed than children not enrolled in the programs. Some experts urge even earlier intervention, saying help should begin in the womb. Each dollar spent on prenatal care saves \$3.33 in the cost of care for low birth-weight babies.

At the moment the government spends about \$2.4 billion a year on the care and education of preschoolers. Compare that with a tab of \$3.7 billion for one year's spending on space research and technology. Or \$38 billion for a single year's worth of military research, development, and testing. Or compare it, even, with spending on the elderly. Since 1980, social programs that benefit children have suffered budget cuts in real terms, while programs benefiting the el-

derly have grown faster than inflation. Prenatal and preschool programs could reach most eligible participants with annual funding of anywhere from \$2 billion to \$10 billion, experts estimate. Increases of such magnitude, observes Isabel V. Sawhill, senior fellow at the Urban Institute in Washington, "won't exactly kill us."

■ **Pay teachers more, and perhaps transform the whole teaching process.** First there was reform, now there's restructuring. The process has begun, but more has to be done to enable the nation's schools to prepare students for life and work. This could involve "team" instruction, with highly qualified "lead" teachers, and new ways to teach thinking skills as well as the basics.

While the impetus and financing for these changes must come at the state and local level, the federal government can play an important role as a catalyst for change. The Education Dept. has a mixed record on this score. Its report, *A Nation at Risk*, shook up public school administrators and launched a reform process, but outgoing Education Secretary William J. Bennett has been impatient with results. And the Education

Dept. could do more to promote demonstration projects and fund education research—efforts that would help educators improve the schools.

■ **Adopt major new incentives to train and retrain workers.** In a competitive and rapidly changing economy, old skills become outdated and new skills are needed. "Most of us, after the age of 25, change occupations three times and jobs six times," observes Pat Choate, director of TRW Inc.'s Office of Policy Analysis. How to prepare people for those changes? Spread the cost of training through new initiatives. An investment tax credit to businesses for money spent on improving worker skills is one idea. Or a tax credit could be granted to individuals for investments in training and education they make on their own. Another incentive to both employers and workers would be a tax-free individual training account, akin to the individual retirement account, which could be jointly contributed to by workers and businesses. For years, any tax break granted industry has been skewed way in favor of physical investment. These proposals would reverse that bias.

■ **Tailor the workplace to the new labor force.** To retain female workers who have many years' experience, and to enable those workers to be more productive, companies should extend child-care benefits to a far greater extent than they have to date. To keep older workers productive, employers should offer new duties and more flexible hours. And granting workers portable benefits could make them more mobile, and thus more responsive to the fast-changing labor demands of employers.

Too frequently, managers have looked at workers as a cost rather than a resource. And every extra dollar spent on workers was viewed as that much more of a burden, whereas it could be, if wisely spent, a means to empower workers to do better. Hundreds of companies now recognize this to be true with respect to training. Investments in training yield tangible rewards, and accordingly business spends approximately \$30 billion a year on training. The rewards of changing the workplace are also large. But a massive cultural adjustment may be necessary to realize them.

There's no doubt that government is in a belt-tightening mood, and business is eager to keep costs under control. But without strong leadership and new spending priorities, America's most precious resource will be neglected. In the words of a familiar advertisement: A mind is a terrible thing to waste.

By Karen Pennar in New York

For information on reprints of this Special Report, call Business Week Reprints at 609 426-5494, or write Business Week Reprints, P.O. Box 457, Hightstown, N.J. 08520.



# INDUSTRIAL EDUCATION

December 5, 1989

Ms. Holly Williamson  
THE WHITE HOUSE  
OEOB 117  
Washington, DC 20500

Dear Ms. Williamson:

It was a pleasure speaking with you last week. I am very please with the president's decision to write an article for our publication, INDUSTRIAL EDUCATION. As you are well aware, all eyes are on education here in the United States, and technological training is a major aspect of the overall education picture of the future.

INDUSTRIAL EDUCATION serves 48,500 teachers and administrators in the secondary and postsecondary levels of education. The editorial content focuses on advanced technology and its interface with the future workplace. The three R's are no longer sufficient to enable a young person to function in society. The need for technological proficiency is extremely important today.

The allocation of funds for education is secondary to the proper use of those funds. I believe this philosophy is in line with the president's thinking on educational spending.

The media has labeled President Bush the "Educational President." We would like to offer him the opportunity to tell our readers and their colleagues where he sees education going, and how they can support his efforts.

I have enclosed several back issues of our publication for your review. I do not wish to direct this too much, as I am more interested in the president's thoughts on education rather than mine. If you wish to have more direction, please do not hesitate to call me.

I look forward to hearing from you when you have additional information for us. This article is scheduled for the March issue, so we will need copy in mid-January. We would also like to run his photo on the cover, as we see this as possibly the most important issue of the year. Please let me know if I can be of additional help.

Sincerely,

  
Andrew J. Cummins  
President

AJC/lt

Enclosures

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October 10, 1989

*17 Fitzwater  
cc: [unclear]*

The Honorable George Bush  
President of the United States  
The White House  
Washington, DC 20500

Dear Mr. President:

As the publisher of a national publication serving teachers and administrators in vocational and technical education, I must commend you on your recent educational initiative. The education summit, held at the University of Virginia, is a major stride toward opening the eyes of all Americans to the need for improvement in our educational system.

Our publication, INDUSTRIAL EDUCATION, serves the vocational/technical segment of the educational market. Our 48,000 readers are teachers and administrators in the secondary and post-secondary levels of education. This represents an important segment of education in general because it focuses on specific job skills training and future job employment for those students who will either go on to an engineering program or into the labor force with a specific skill.

This influential audience would be very interested in knowing how your perspective on education interfaces with their special needs. I would like to request an interview with you so that we may highlight you and your programs for our readers.

The article would focus specifically on you and what your administration is doing to improve education in the United States. We would like to help you take your message directly to this audience, as they are extremely interested in knowing what role they will play in the future of education in this country.

As I am aware that your schedule is much more complex than mine, I will make myself available at your convenience. I look forward to this opportunity and your earliest response.

Very Truly Yours,

*Andrew J. Cummins*

Andrew J. Cummins  
Editor/Publisher

AJC/lt

*position on future of ed  
what he would like to accomplish*

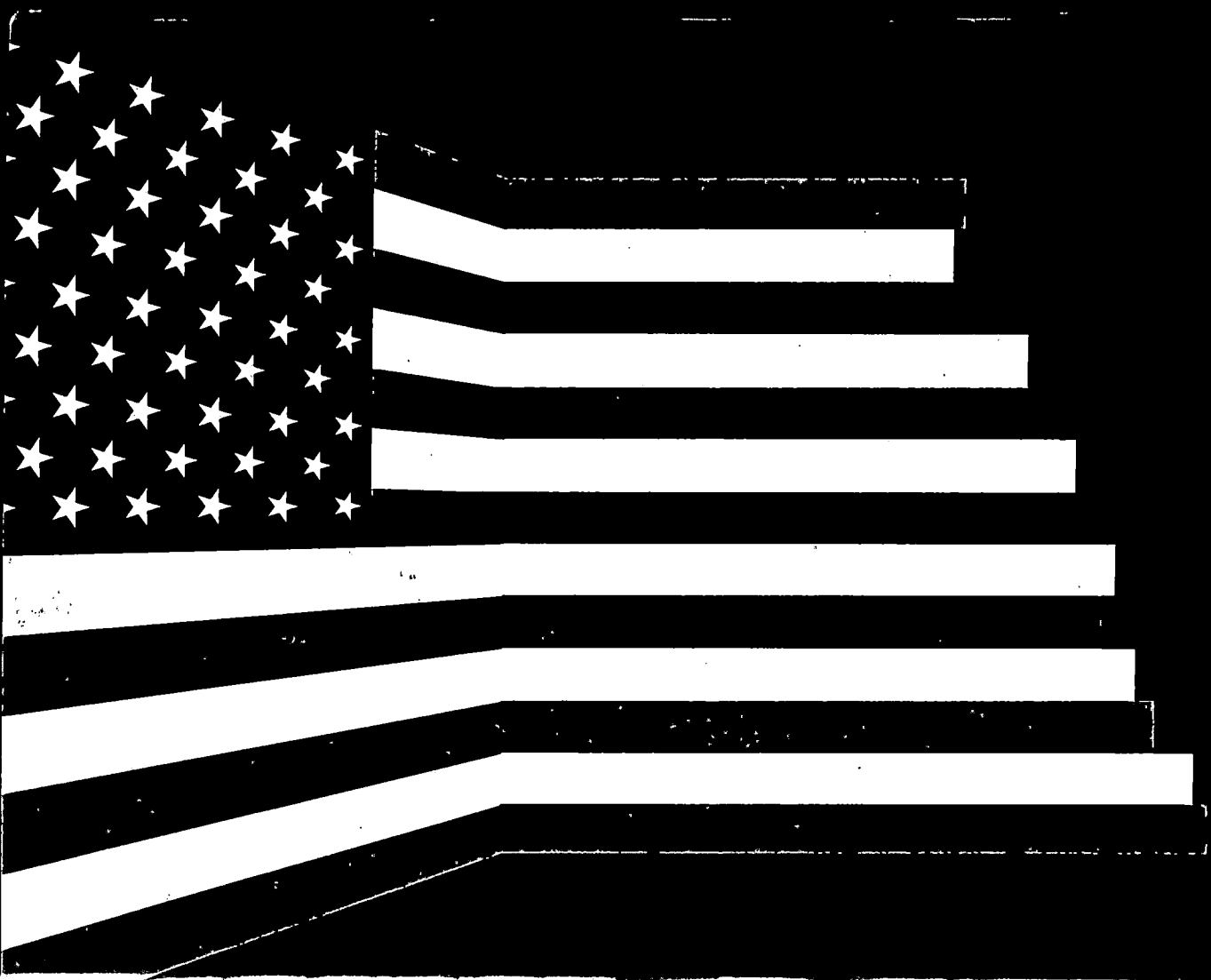
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# WORKFORCE 2000

WORK AND WORKERS FOR THE 21ST CENTURY



factories, mines, and production machinery within a nation's borders.

As the miraculous rebirth of Europe and Japan after World War II has proven, however, the foundation of national wealth is really people—the human capital represented by their knowledge, skills, organizations, and motivations. Just as the primary assets of a modern corporation leave the workplace each night to go home for dinner, so the income-generating assets of a nation are the knowledge and skills of its workers—not its industrial plants or natural resources.

As the economies of developed nations move further into the post-industrial era, human capital plays an ever more important role in their progress. As the society becomes more complex, the amount of education and knowledge needed to make a productive contribution to the economy becomes greater. A century ago, a high school education was thought to be superfluous for factory workers and a college degree was the mark of an academic or a lawyer. Between now and the year 2000, for the first time in history, a majority of all new jobs will require postsecondary education. Many professions will require nearly a decade of study following high school, and even the least skilled jobs will require a command of reading, computing, and thinking that was once necessary only for the professions.

Education and training are the primary systems by which the human capital of a nation is preserved and increased. The speed and efficiency with which these education systems transmit knowledge govern the rate at which human capital can be developed. Even more than such closely-watched indicators as the rate of investment in plant and equipment, human capital formation plays a direct role in how fast the economy can grow.

If every child who reaches the age of seventeen between now and the year 2000 could read sophisticated materials, write clearly, speak articulately, and solve complex problems requiring algebra and statistics, the American economy could easily approach or exceed the 4 percent growth of the boom scenario. Unconstrained by shortages of competent, well-educated workers, American industry would be able to expand and develop as rapidly as world markets would allow. Boosted by the productivity of well-qualified workforce, U.S.-based companies would reassert historic American leadership in old and new industries, and American workers would enjoy the rising standards of living they enjoyed in the 1950s and 1960s.

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industrial ed mag

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susan wolf

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*NEB*

We are spending more than \$350 billion a year on education in this country, but the return on our investment has been disappointing. One in five high school students drops out of school. Almost one in five high school graduates cannot read at the level necessary for most entry-level jobs in business or industry. The challenge is this: How are we going to make independent, productive citizens of our young people and of others not now part of our economy?

School reform is under way. We are raising expectations and standards, encouraging excellence. We are improving the accountability of teachers for what they teach, of students for what they learn, and of institutions for the results of their programs.

*Reform*

One important reform being considered and adopted in many states is a policy known as choice, which allows parents to choose the public schools their children will attend. This approach forces schools to compete for students by offering quality programs, encourages some schools to specialize in areas in which they excel, and enhances parent involvement. In the process, bureaucracies are streamlined to allow individual schools to be more autonomous and innovative. You in vocational and technical education, who have always had to market your programs to prospective students, have extensive experience with the choice concept.

*Choice*

In addition, perhaps no other program has as much potential for bringing individuals into the mainstream of productivity as vocational education. Vocational education can benefit a vast array of untapped talent--dropouts and at-risk high school students who see no opportunities; postsecondary students who see no connection between school and work; the underskilled who need training; the older and more experienced workers who need additional training; the disabled seeking the chance to prove

*Voc Ed  
attracts*

*Productivity  
competitiveness*

-3-

*dislocated workers*

their abilities; dual career families who need flexibility. In fact, it is crucial that vocational education enlist and develop the unlimited potential of such individuals.

You know that the end of the "Baby Boom" is leaving us with a shrinking work force. By 2010, there will be more jobs than job seekers. More than half those jobs will require a year or more of studies beyond high school. In addition to job skills, workers will increasingly need strong basic skills--reading, writing, and computing--and the adaptability to be trained and retrained as technology advances. It is estimated that more than 50 million people will need some kind of vocational training between now and the end of the century.

Obviously, a great part of the challenge ahead falls squarely in the lap of vocational education. Meeting the needs of 50 million people will call for better, new, and well-coordinated programs. It must be our goal to prevent even one individual from slipping through the cracks.

We know that vocational education has launched many successful careers and turned lives around:

*EG*

\*Major General Joe Henry Engle, who has commanded two U.S. space shuttle flights, started out as an industrial arts student in a Kansas high school.

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\*Dorothy Holland, the first woman vice president of Kraft, Inc., began her career teaching home economics in a vocational education program.

\*Internationally known fashion and home furnishings designer, Norma Kamali, is a graduate of a vocational school--the Fashion Institute of Technology in New York.

\*George Shinn worked his way through vocational school as a janitor. Eventually, he owned 22 business schools in 10 states. In 1975 he won the Horatio Alger Award given for rags-to-riches success and is the author of The American Dream Still Works.

\*Frederick J. Napolitano, chairman of the board of Pembroke Enterprises, Incorporated in Virginia Beach, Virginia, began his career as an apprentice bricklayer at the age of 18 and then studied at the Mechanics Institute in New York City.

Although the current federal financial contribution to vocational education is only a small part of total funding--only one in every 10 to 12 dollars expended nationwide--federal leadership can help point the way toward more effective vocational education programs. The Perkins Act, the basic vocational education grant to the states, is currently undergoing reauthorization by Congress. The

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Administration's Vocational Education Excellence Act of 1989,  
which is currently under consideration by the Congress,  
recommends improvements to the Perkins Act in several areas:

*Fed. Role*

ACCOUNTABILITY: Our bill would require the states to develop specific goals for student improvement in basic skills, in job skills, for success in the labor market, and for any other areas the states deem appropriate. Further, we recommend that states be required to use these goals in measuring the quality of federally funded vocational training programs to determine which programs should receive continued support.

SIMPLIFICATION AND FLEXIBILITY: Because activities for special populations needing federal support may differ considerably from one region of the country to another, our bill emphasizes more state and local direction of federal funds. Our bill would retain the requirement that 57 percent of basic state grant funds be allocated for special populations. But, within that amount, most set-asides, hold-harmless requirements, and special formula grant programs would be eliminated to give the states more flexibility.

PROGRAM IMPROVEMENT: Currently, 26 different activities are authorized under the program improvement portion of the basic grant. We propose reorganizing these into three broad categories: (1) professional development of teachers,

-6-

counselors, and administrators; (2) acquisition of instructional equipment and materials and (3) curriculum development, dissemination, and field testing. All would be linked closely to program improvement to ensure that federal funds are used for improvement, expansion, and program innovation rather than for maintenance of ongoing programs.

ECONOMIC DEVELOPMENT: Our bill includes new provisions to ensure that Perkins Act funds are coordinated with state and local economic development. The bill would require the states to use funds for occupationally specific programs solely to train students for jobs in which openings are projected and not likely to be filled without the continuation or establishment of public vocational education programs. Further, the proposal would shift from the state legislature to the governor the authority to review state plans to ensure that vocational education programs are coordinated with the overall economic and job training strategy in the state, including Job Training Partnership Act programs.

*What you can do:*  
In addition to these legislative proposals, I would like to suggest other ways in which you as administrators and teachers can work to improve vocational education programs.

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Too often vocational education is seen as a separate program rather than as an integral part of a school's curriculum. But when vocational programs are tied to regular classroom learning, the vocational student has the chance both to master basic skills and to learn theories that have practical application in vocational classes. Another type of program that can serve vocational students well involves coordinating curricula between a secondary school and a postsecondary institution, making for a comprehensive course of study. I urge you to be creative in coordinating vocational education and academic resources and in coordinating vocational education programs offered by different types of institutions. .

I also hope you will continue to seek out partnerships with the private sector. Business leaders are in touch with current and projected labor needs. They can help set goals in vocational education and can help keep the curriculum fresh and up-to-date. In addition, partnerships with local businesses and the community at large can provide expertise as well as role models to help students see the relevance of their training and to inspire them to set ambitious goals for themselves.

I have asked the Department of Education to work closely with Congress to achieve the most effective legislation possible to

What you  
can do

-8-

enable our vocational education system to meet the challenge ahead. We must offer the chance for a productive life and a place in the economy to every individual in this nation. Vocational education can do just that for millions of Americans, and I do not think it is going too far to say that the future of this nation depends to a great extent on the success of your efforts in vocational education.