Issue Brief

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EDUCATION PROPOSALS IN TRADE COMPETITIVENESS LEGISLATION

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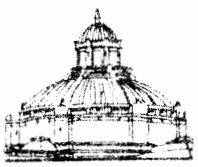

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EDUCATION PROPOSALS IN TRADE COMPETITIVENESS LEGISLATION

SUMMARY

Improvement of America's competitive position in international trade is one of the major issues confronting the 100th Congress. Most legislative proposals have included provisions for increasing the funding levels for Federal education programs, expanding current programs, or authorizing new programs. The primary goal is to improve the productivity of the Nation's workers by raising the skill level of the workforce. Discussions about education's role in addressing the competitiveness issue have included the contribution of education to productivity growth, comparisons of the educational achievement of American school children with that of their peers in other nations, the educational needs of illiterate adults, and the role of technology in education.

Several issues are related to education and proposals for trade competitiveness. One is the extent to which education is related to trade competition, and another is the concern that some of United States' major trade competitors or trade partners are more successful than the United States in some aspects of education. In response to these concerns, efforts have been made to identify the types of additional educational programs and expenditures that might most effectively improve the Nation's relative trade position. For example, what kinds of programs should be provided; for whom should they be provided; what level of funding should be provided? Other issues include the extent to which programs should address national priorities or allow State and local discretion, the implications of cost-sharing requirements on institutions with limited resources, and the implications of providing funds to established research universities, developing institutions, or all institutions.

Competitiveness proposals in the 100th Congress have contained a variety of Federal education proposals -- literacy training for adults; vocational training programs; improvement of instruction in mathematics, science, or foreign languages at all levels of education; replacement of obsolete laboratories and research facilities in higher education institutions; development of partnerships between educational institutions and private businesses; and increased use of educational technology. Many of these proposals are contained in the conference report on H.R. 3, the Omnibus Trade and Competitiveness Act of 1988, which passed the House Apr. 21, and the Senate Apr. 27, 1988. Some are also contained in the Augustus F. Hawkins-Robert T. Stafford Elementary and Secondary School Improvement Amendments of 1988, P.L. 100-297 (enacted Apr. 28, 1988).

ISSUE DEFINITION

Education's role in improving the Nation's relative competitive position in international trade has become an integral part of many of the competitiveness initiatives in the 100th Congress. Concerns include the role of education in productivity growth, educational achievement of American school children compared with that of their peers in other nations, the educational needs of illiterate adults, and the role of technology in education. The principal public policy issues include the selection of program participants (in-school youth, out-of-school underemployed and unemployed persons, or illiterate adults); new initiatives or existing programs; necessary level of funding; conflict between national priorities and State or local discretion; implications of cost-sharing requirements; and provision of funds to established research universities, developing institutions, or all institutions.

BACKGROUND AND ANALYSIS

The first section of this brief focuses on the contribution of education to productivity growth, the primary means by which education is assumed to influence American trade competitiveness. Next, the level and quality of American education is compared to the educational status of our major foreign trade partners and competitors. Brief discussions then address the issues of adult literacy and trade competitiveness, and the potential uses of instructional technology to improve the efficiency of the education system. Next, selected policy issues regarding alternative education provisions in trade competitiveness proposals are analyzed. In the final section, the various education provisions in trade competitiveness legislative proposals in the 100th Congress are listed in summary form.

This issue brief does not discuss trade problems in general, nor does it address the issue of whether education, or trends in productivity growth, are primary causes or solutions to trade competitiveness problems. Further, the job training provisions in the various proposals are not discussed. (Additional discussions of trade and competitiveness may be found in the February 1987 CRS Review, CRS Issue Brief 87003, and CRS Issue Brief 87053.)

Background

The importance of education to employment, productivity, and economic growth has been stressed in many of the recent reports calling for the reform of American education. From the 1983 report of former Secretary of Education Bell's Excellence Commission, A Nation at Risk, to the 1985 report by the Committee for Economic Development's (CED), Investing in our Children, the consistent theme has been that the Nation's education system must address the problems of high school graduates who lack the basic skills in reading, writing, and mathematics that are needed in certain jobs and training programs. The CED report indicated that businesses were being required to provide their employees with remedial training in the

basic skills, and called upon the schools to devote additional attention to basic skills and the improvement of the academic performance of students. This position was supported in a 1987 report from the National Association of Manufacturers (NAM); the contention was that the quality of the Nation's labor force had suffered because of inadequacies in the educational system, high illiteracy rates, poor math and science training, high dropout rates, and inadequate training and relocation of displaced workers. The NAM report advocated that steps be taken to raise the standard of minimum education to ensure that all students master the basic skills necessary to function in a technological, highly competitive world.

In the current discussion of American economic productivity and trade competitiveness, a primary concern has been what actions, if any, should the Federal Government take to improve the Nation's educational system. The intent of these actions would be to improve the capacity of American workers and the American economy. The desired result would be a higher rate of productivity so that the United States could compete more favorably in international trade by producing goods and services of a given quality at a favorable price. Of course, a variety of factors, besides those directly related to technical skills and worker attitude, can influence productivity (for example, management decisions or the state of research and development).

Role of Formal Education in Productivity Growth

Formal education may affect the economy's general rate of productivity in two major ways. First, increased levels of quality or quantity of education received by the Nation's workforce can be viewed as increases in the quality of the labor inputs into the production process. In this context, better-educated workers might be able to accomplish more diverse tasks or to adapt to changing technologies. Second, activities of educational institutions, especially research in higher education institutions, result in advances in knowledge. Research findings can lead to more efficient production processes, and fewer inputs may be required for a given level of output. This latter position on the role of higher education in improving American productivity and trade competitiveness is discussed in the 1985 report of the President's Commission on Industrial Competitiveness (Global Competition, The New Reality).

Economists such as John Kendrick have argued that, over time, education makes a specific positive contribution through increased productivity in the American economy. According to Kendrick, advances in knowledge and changes in worker education and training each have made significant contributions to the total productivity growth rate of the American economy. Other economists, such as Edward Denison and Theodore Schultz, have also determined that education, and especially advances in knowledge, have been major contributors to American economic growth.

Economists also have analyzed the ways in which increased education might contribute to productivity. In 1981-82, a series of reports from the National Institute of Education concluded that education contributed to growth in economic productivity by increasing the development and introduction of innovations into production processes, increasing the capacity of the labor force to adapt to changes in the work environment,

promoting the diffusion of technologies, increasing the size of the labor force, and stimulating inventions. From the standpoint of the individual citizen, the reports contended that education contributes to higher incomes for workers that, in theory, reflect increased productivity; education also contributes to increased worker health, more efficient education of children in the home by their parents, more efficient personal consumption choices, and reductions in income inequality and criminal activity. Obviously, the relationship of some of these factors (for example, more efficient personal consumption choices) to the overall level of productivity in the American economy is less direct than that of others (for example, increased adaptability and technological diffusion).

Some critics have questioned the analyses of the effects of education on productivity growth. Regarding Kendrick's and Denison's estimates of the specific contribution of education to productivity or economic growth, the primary criticism has been that imperfections in both the theory and practice of labor markets make it impossible to measure productivity on the basis of earned income. Another major criticism of these and other analysts has been that they have overestimated the effects of education on productivity or economic growth by suggesting "non-measurable" mechanisms by which education might influence productivity (for example, increased diffusion of new technologies). They suggest that some of these mechanisms are as likely to reduce as to increase productivity. For example, increasing the size of the labor force might reduce the average level of productivity by bringing more "marginal" workers (those who are relatively unskilled and unproductive) into the labor force.

Finally, some have contended that the United States is already "overinvesting" in education, or that current and future technological developments, and labor market projections, suggest reductions in worker educational requirements, not the increases assumed in the analyses described above. For example, Richard Freeman and others have reported that the economic rate of return to college attendance in the United States has substantially declined, and have argued that the Nation has "overinvested" in postsecondary education, leading to a growing degree of "underemployment" of college graduates in jobs where such a level of education is unnecessary. Others have argued that the decline in the rate of return to college attendance in recent years reflects only temporary demographic factors -- primarily the receipt of postsecondary degrees by the last of the "baby boom" population cohort, and relatively slow economic growth in the late 1970s. Some observers contend that conditions already are changing, and that the decline in the rate of return to college attendance has no long-term policy implications.

Regarding skill requirements of future jobs, some have argued that increasing technological sophistication in production processes will actually reduce the skills required of workers; for example, more sophisticated computer systems may become easier to use, as some more complicated functions are handled automatically. Also, most projections of future job growth estimate the largest numbers of new jobs will be in service occupations with relatively low skill requirements (for example, janitorial services, licensed practical nurses, and sales clerks).

Educational Achievement of American Pupils Compared to That of Pupils in Other Nations

Recent international analyses of education systems have focused primarily on comparisons of education in Japan and the United States. Japan is widely viewed not only as one of America's major trade partners or competitors but also as being especially successful in educational terms. This section provides a brief overview of available information on comparative educational achievement (for additional discussion, see CRS Report 86-683 EPW).

Education may be viewed from two perspectives -- quantity and quality. Quantity of education may refer to the average number of years of education received or the amount of funds a nation spends for education. In terms of the average number of years of formal education, Americans compare favorably to most other nations. According to data compiled by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) for 1982, the United States is among the world's highest-ranking nations in the proportion of its population attending secondary schools, and is by far the highest among the major nations in the proportion of its population attending institutions of postsecondary education. However, these proportions refer to enrollment in education programs, not completion of them. For example, a recent study by the U.S. Department of Education (Japanese Education Today) found that almost 90% of Japanese youth graduate from high school, compared to about 71% of American youth. (The United States data do not include those who earn high school equivalency certificates.) Further, the quantity of instructional time represented by a high school diploma may be substantially greater in some other nations than in the United States, due to longer school days and school years in such nations as Japan.

The quantity of education received by a nation's population may also be expressed as the quantity of a nation's resources devoted to education, typically measured as the percentage of Gross National Product (GNP) spent on education. According to UNESCO, in 1984 the United States devoted 6.6% of its GNP to education at all levels. Among nations with developed economies, this percentage was exceeded by only Canada (7.4%), Israel (8.4%), the Netherlands (7.7%), and Sweden (8.0%). The percentage of GNP spent on education was 5.7% for Japan.

National comparisons of the quality of education typically are expressed in terms of academic achievement on comparable tests in such subjects as reading, science, and mathematics. The only international organization that has developed and administered reliable tests of comparative achievement of elementary and secondary pupils in a variety of nations is the International Association for the Evaluation of Educational Achievement (IEA). The IEA includes most economically developed nations, although very few nations with communist governments, plus some developing nations. The IEA has administered tests in mathematics, science, literature, reading, civic education, French as a foreign language, and writing at the elementary and secondary education level; but no comparable tests of the comparative achievement of postsecondary pupils or graduates have been conducted. Except in mathematics and science, in

which subjects IEA tests have been conducted between 1982 and 1986, the most recent available IEA test results are now more than a decade old.

Overall, the scores of United States' pupils on the IEA tests have been relatively higher than the international average in reading and literature, and lower in science, mathematics, or foreign languages at all age levels. On the latest available IEA test results in mathematics, scores for United States' students at age 13 were lower than those for all but two other developed nations, and lower than all other nations for students at age 17. In the recent IEA science tests, the scores of both beginning (first year) and more advanced (second year) U.S. high school students were well below the international average for developed countries -- and, more specifically, below the average for students in Japan and England -- in tests of achievement in biology, chemistry, and physics. However, considering all subjects, all age levels, and the entire period over which IEA tests have been administered (1964 to the present), the only individual nation with scores consistently higher than the United States has been Japan.

At all age levels, schools in the United States appear to place greater emphasis on the teaching of reading, and less on mathematics, science, or foreign languages, than do schools in most other developed nations. This curricular emphasis is consistent with the relative showing of United States' pupils on the IEA tests. This finding may also be particularly significant because many of the trade-related education proposals are focused on the subjects of mathematics, science, and foreign languages, under an assumption that these subjects are the ones most immediately relevant to productivity growth and trade competitiveness.

Some reports and analyses have compared education in Japan and the United States. One study found that the achievement level of Japanese pupils was higher in mathematics at all elementary grades, but that American and Japanese achievement levels in reading were comparable. Other observations included the following: (1) the Japanese elementary curriculum devotes much more time to mathematics, much less to reading, than does the typical American curriculum; (2) average class size is smaller, and formal teacher qualifications are higher, in the United States; (3) Japanese pupils spend much more of class time actively engaged in instruction; and (4) Japanese parents spend more time tutoring their children and purchase more educational resources for use at home. Ironically, Japanese parents were found to be less satisfied than American parents with their children's schools and educational performance. Finally, Japanese parents tended to attribute success in school primarily to pupil effort, while American parents primarily tended to attribute success to native ability.

Comparative data on teachers salaries in Japan and the United States were reported in a recent study prepared for the U.S. Department of Education (A Comparison of Teachers' Salaries in Japan and the United States, by Stephen Barro). On a comparative basis, the salaries for Japanese teachers were approximately the same as those for teachers in the United States. However, salaries for Japanese teachers were much higher in relation to salaries for other occupations in Japan. Thus, teachers are much better paid in comparison to other occupations in Japan than in

the United States. Also, teachers appear to constitute a significantly higher proportion of total staff in Japanese public elementary and secondary schools (approximately 82%) than in United States schools (62%). Total expenditures for public elementary and secondary education, per pupil enrolled, were approximately $2,400 in Japan in the 1982-83 school year, versus $2,726 for the United States.

A recent report (Japanese Education Today) found the Japanese education system to be very successful in (1) producing a high average level of pupil achievement and high rates of pupil retention through high school; (2) providing "a high quality, well-balanced basic education;" (3) "motivating students to succeed in school;" (4) "using instructional time productively;" and (5) "sustaining serious attention to character development." However, this report was critical of the following aspects of education in Japan: (1) little attention to individual differences and needs; (2) "rigidity, excessive uniformity, and lack of choice"; (3) a degree of student alienation; and (4) a postsecondary sector that is less rigorous than Japanese elementary and secondary education, and offers relatively few post-graduate programs.

Adult Literacy

Recent studies suggest that some members of the American workforce have educational problems that have a negative effect on productivity and on competitiveness. Reports differ as to the extent to which the Nation's adults are able to read, write, speak, or communicate at a level sufficient to meet the needs of modern society; however, there is general agreement that a significant portion of the adult population does not possess either the basic or technical skills needed for many jobs. Problems with estimates of the number of illiterate persons include the lack of an accepted definition of illiteracy, and the lack of comparative data over time. Depending upon the definition, estimates of illiteracy, functional incompetency, and marginal incompetency range from 0.5% to 50% of the Nation's adult population.

The consistent observations have been that the lack of basic or functional literacy skills holds back too many citizens from job mobility and improvement and also has many social and economic disadvantages for the Nation's efforts to maintain a competitive position in international trade. For example, adults with low levels of literacy or competency may have difficulty adapting to technological advancements in the workplace as well as in their daily lives (for additional discussion, see CRS Issue Brief 85167).

Technology and Education

Another issue is the current and potential impact of technological developments on education. Even though technological developments have contributed to many changes in American life, the 1986 school reform report from the National Governors' Association (Time for Results) indicates that the availability of technology has had little effect on the schools. The report not only has advocated greater use of technology in school administrative procedures and instructional methods, but also has emphasized the need for research and development and for restructuring the

schools to become more efficient and economical through the use of technology. Other observers contend that in-school use of microcomputers and other forms of technology will increase the capacity of graduates to adapt to technology in the workplace.

Possible technological applications to education include personal computers in the classroom for student use, computer assisted instruction, computers for classroom research projects, computers for administrative tasks, laser disks for information storage and retrieval, and educational television. The general contention of Time for Results is that greater use of educational technology will improve the quality of education, and thereby the overall productivity of the American economy. However, there is little research evidence concerning the extent to which new forms of technology are effective in improving instruction.

Issues

The principal issue related to education and trade competitiveness is what, if any, actions can the Federal Government take to improve the quality of the Nation's workforce and thereby improve the Nation's overall competitive position. The following issues are related to the education components of the various competitiveness initiatives introduced in the 100th Congress and their potential impact on American education.

Target Groups

In the development of proposals for education programs in the trade competitiveness proposals, one issue likely will be related to which potential labor problem should be addressed in the education proposals. One approach might be to provide additional funding to enhance the Nation's research and development capacity by increasing the number of scientists and engineers with postgraduate training; this would suggest graduate and postgraduate fellowships and funded research projects. An alternative might be to improve the competency of management or supervisory personnel; this would suggest technical and management training programs at the baccalaureate level. Programs might be implemented to address the problems of unemployed and underemployed persons who are or should be in the workforce; this would suggest the need for short-term targeted training programs for these persons. An option might be to help entry-level production workers develop the basic skills required for their jobs; this would suggest basic skill and entry-level job training programs in high schools and postsecondary trade and vocational schools. Considerable attention has been given to the need to improve the quality of elementary and secondary education, especially in mathematics, science, and foreign languages; this would suggest additional Federal aid for education at this level and in these subjects.

Several factors may be considered in making the policy decisions as to which problem to address, or which target groups or programs to receive Federal funds. One question might be the extent to which the problem is a national or a local problem. If the problem is national in scope, large amounts of funds likely will be required. (Examples include literacy levels of adults and the lack of basic skills on the part of youth

entering the labor force.) If the problem is local, a targeted Federal program might be considered. (Examples include unemployment as a result of closed factories or technological advancements.) However, the policy may be that a national program is merited because of its critical importance in efforts to improve the Nation's competitiveness. (Examples include shortages of scientific research personnel and obsolete scientific equipment.) If fiscal limitations are imposed, then funds may be provided only for the program(s) that likely will be most cost-efficient. Unfortunately, no generally accepted rigorous, objective method has been found for determining the relative impact that additional expenditures for different types of education, training, or research would have on America's economic competitiveness.

New Initiatives or Existing Programs

When the Congress is considering authorizing a "new" program in response to a national problem, one of the procedural questions is whether to enact a "new" program or to add the "new" activity to the list of authorized activities under a similar current program. If the "new" activity is added to a current program, success may be dependent upon the quality of the current program's management and the amount of additional funds. If the decision is to authorize the activity as a "new" program, some benefit may be gained from the publicity resulting from the identification of a national "problem" and enactment of a Federal program, but start-up of the "new" program may be delayed because of the need to create a new "office" or agency and employ staff to plan and administer the program. Existing agencies may be able to start the "new" activity more quickly and efficiently without adding administrative staff, but existing staff may not have a high level of commitment to the "new" program and may merely adapt current programs and procedures without actually creating a "new" program.

Level of Funding

In designing a program to secure maximum impact from the available funds, the funding level will influence decisions as to type of program. With limited funds, the choice may be to use nationally competitive grants for a selected number of demonstration programs rather than formula grants to States and local school districts. Proposals in the range of $500 million for competitiveness initiatives in education are relatively small when compared with current expenditures for all levels of education; Secretary of Education Bennett has indicated that the estimated expenditures (from all revenue sources) for all levels of American public and private education will be $308 billion for the 1987-88 school year.

Optimal funding levels will be dependent upon the goal of the education programs in the trade competitive initiatives. If the intent is to restructure the Nation's educational system, a major Federal program would be required. If the intent is to provide programs that will address the specific educational needs of those youth and adults who are unemployed or underemployed, or who lack the basic and technical skills required by many employers, targeted programs could be provided through a system of nationally competitive discretionary grants.

National Priorities or State and Local Discretion

Most of the trade competitiveness proposals would authorize programs to serve specific purposes and also to serve specific sectors of the population. With limited funds, one public policy issue is the extent to which Federal funds should be used to address a limited number of specific purposes (national priorities), or to which State and local officials should be given discretion in designing programs to meet broad Federal program objectives. For example, one educational option would be to provide State and local officials with the discretion to select from one or more of the following as the single program emphasis -- improvement of basic skills of school children, vocational training programs for underemployed and unemployed persons who may be current or potential members of the workforce, basic literacy training for adults, or programs to improve instruction in mathematics, science, or foreign languages in elementary, secondary, and higher education. An alternative would be to designate one or more of the previous areas as the national priority and the only permissible use of Federal funds under the program. Under some current proposals, State or local officials would have considerable discretion in making decisions about priorities in allocating funds among the various authorized activities. A State or locality might be able to use all program funds for one priority and provide no funds for others that might be perceived to be higher national priorities.

Cost-Sharing Implications

To demonstrate a commitment of an agency or a community to a particular program and to increase the amount of funds for the program, agencies might be required to provide non-Federal funds as a portion of the total funds budgeted for a program. Requirements of cost-sharing, matching funds, or private sector partnerships often are included in the proposals for education programs in the trade competitiveness initiatives. Even though such requirements may have positive implications by suggesting local commitment, there may be some disadvantages.

One reservation is that such requirements may have a discriminatory impact because geographical areas and institutions with limited financial resources may have difficulty meeting cost-sharing requirements. A principal concern with cost-sharing or matching provisions as methods for funding education at any level has been that such requirements often do not benefit the institutions "most in need;" those institutions typically do not have the resources required to meet the cost-sharing requirement. Also, in some other geographical areas, cost-sharing private sector partnerships may not be feasible because of the sparse population, types of industry and jobs, weakened economic conditions in the area, or the absence of a business or industry with an interest in developing the partnership relationship.

Established Research Institutions or Developing Institutions

One continuing issue is whether Federal grant programs for research and development in higher education institutions should benefit programs in all institutions or maintain and enhance programs in established

research institutions. The General Accounting Office has recently reported that 100 higher education institutions received 86% of the total Federal research funds in 1984. A common assumption is that these established research institutions likely would be the principal beneficiaries of funds for university-based research. They represent a small percentage of the total American higher education system. The Digest of Education Statistics, 1985-86 shows that a variety of other institutions perform training and education functions that could be related to competitiveness; they include 1200 community colleges, 155 universities, and about 1900 other 4-year institutions (including most of the regional State universities that were formerly State colleges). Even though a portion of the funds might be set-aside for those institutions that are not "centers of excellence," most of the research and development funds for program improvement likely would be received by institutions with established research programs in the sciences and mathematics; and developing, or emerging, institutions likely would receive relatively little funding under most proposals. Community colleges and 4-year baccalaureate institutions also likely would not receive funds.

The issue of established research institutions or developing institutions is related to competitiveness initiatives that would provide funds to higher education institutions for replacement of obsolete laboratory research equipment (often referred to as "instrumentation"). Even though there is general agreement about the need for this type of funding, the financial requirements likely would be large in terms of the level of funding for Federal education programs. In 1983 hearings before the House Committee on Science and Technology, the estimated cost of replacing obsolete laboratory in the Nation's "leading universities" was between $1 billion and $4 billion. For all institutions, the potential cost would be greater. For example, in 1986, the House Education and Labor Committee's report on H.R. 4728 (H.Rept. 99-597) indicated that the cost of repairing or modernizing mathematics and science laboratory equipment in all universities and colleges had been estimated to be from $30 billion to $40 billion.

Options and Legislative Proposals

The trade competitiveness initiatives from the Administration and those introduced in the 100th Congress have included a variety of proposals for Federal education programs. Grants have been proposed for (1) literacy training for out-of-school adults; (2) special vocational training programs for underemployed and unemployed persons; (3) improvement of elementary and secondary education in mathematics, science, or foreign languages; (4) graduate fellowship programs for training elementary and secondary school teachers as well as college faculty members; (5) improvement of higher education instruction in mathematics, science, and foreign languages; (6) replacement of obsolete laboratories and research facilities in higher education institutions; (7) development of partnerships between educational institutions and private businesses; and (8) increased classroom use of educational technology. In most cases, these programs would be administered by either local school districts or higher education institutions.

LEGISLATION

NOTE: Only the H.R. 3 provisions for education are discussed here. Some of these provisions also have been incorporated in P.L. 100-297, the Augustus F. Hawkins-Robert T. Stafford Elementary and Secondary School Improvement Amendments of 1988, as described in CRS Issue Brief 87151, Federal Elementary and Secondary Education Programs: Reauthorization Issues.

H.R. 3 (Gephardt et al.)

Omnibus Trade and Competitiveness Act of 1988. Title VI, the Education and Training for a Competitive America Act of 1988, authorizes $670 million to be appropriated in FY88 for programs administered by the U.S. Department of Education (ED), $1.03 billion in FY89 for programs at the U.S. Department of Labor, $85 million in FY89 for the National Science Foundation (NSF) research facilities and science instrumentation programs, as well as the Worker Adjustment and Retraining Notification Act.

Subtitle A (Elementary and Secondary Education) of Title VI authorizes for FY88: $175 million for mathematics and science education programs under Title II of the Education for Economic Security Act (EESA); $30 million for workplace literacy partnerships grants; $25 million for English literacy grants; the establishment of a Federal literacy coordination office (with no additional funds); $20 million for the Foreign Language Assistance Act of 1988; $1 million for Presidential Awards for Teaching Excellence in Foreign Languages; $20 million for elementary and secondary education partnerships in mathematics and science under Title III of EESA; $10 million for the Education Partnerships Act of 1988; $20 million for the Star Schools Program Assistance Act; $50 million for the School Dropout Demonstration Assistance Act of 1988; $200 million for the Secondary Schools Basic Skills Demonstration Assistance Act of 1988; and amendments to the local allocation formula for the Drug-Free Schools and Communities Act of 1986 (with no additional funds).

Subtitle B (Technology and Training) authorizes for FY88: the Training Technology Transfer Act of 1988 (with no additional funds); $2 million for instructional programs in technology education; a requirement that the National Diffusion Network gather and disseminate information for the replication of technical education programs (with no additional funds); $25 million for the basic program and $25 million for the special program for adult training, retraining, and employment development under the Carl D. Perkins Vocational Education Act (Perkins Act); an additional $10 million for industry-education partnerships under the Perkins Act; $2 million for a technological literacy demonstration program; and $5 million for regional access demonstration programs for rural educational opportunities.

Subtitle C (Higher Education) authorizes for FY88: $10 million for a student literacy corps under Title I of the Higher Education Act (HEA); $10 million for a college and university research facilities and instrumentation modernization program under HEA Title VII; an additional $7.5 million for minority science and engineering improvement under HEA Title X; $15 million for the operation of regional technology transfer

centers under HEA Title XII; an additional $2.5 million for library technological enhancement under HEA Title II; $5 million for centers for international business education under HEA Title VI; and a technical amendment to the authorization of the Robert E. McNair Post-Baccalaureate Achievement Program under HEA Title IV (with no additional funds).

Subtitle D (Employment and Training for Dislocated Workers) authorizes for FY89 $980 million for a revised Title III of the Job Training Partnership Act (JTPA) and $50 million for a computerized State job banks system under Title V of JTPA.

Subtitle E (Advance Notification of Plant Closings and Mass Layoffs) authorizes the Worker Adjustment and Retraining Notification Act.

Subtitle F (National Science Foundation University Infrastructure) authorizes the National Science Foundation University Infrastructure Act of 1988, including $85 million for FY89 for the NSF academic research facilities modernization program, and a separate college science instrumentation program (subject to existing NSF authorizations and appropriations).

H.R. 3 was introduced Jan. 6, 1987; referred to more than one committee; Committee on Education and Labor reported H.R. 90, amended as part of H.R. 3 (H.Rept. 100-40, Part 5); House passed H.R. 3, amended, Apr. 30, 1987. Senate version of H.R. 3 introduced June 24, 1987, as S. 1420. Committee on Labor and Human Resources reported S. 406 (S.Rept. 100-73), with provisions subsequently incorporated in S. 1420; Senate passed H.R. 3, in lieu of S. 1420, as amended, July 21, 1987. Conference report (H.Rept. 100-576) agreed to by House, Apr. 21, 1988, and by the Senate, Apr. 27, 1988.

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