The United States faces stiff global competition in the marketplace of the future as other countries such as Germany, Japan, and the nations of the Pacific rim produce better products with a more skilled work force. Germany and Japan spend far more resources on job training for their youth than does the United States, especially on training noncollege-bound youth for technical jobs. In other countries, standards are set and youth completing programs are expected to be able to perform at that level, whereas in the United States, certification often means simply program completion. The Carl D. Perkins Vocational and Applied Technology Act Amendments of 1990, P.L. 101-392, and the Joint Training Partnership Act (JTPA) as well as other legislation aim to make the United States more competitive by educating all segments of the population, concentrating resources on improving programs leading to academic and job skill competencies needed for a technically advanced society. In order to make vocational education useful in preparing a world-class work force, it must become part of an occupational readiness system. Such a system would consider the following: needs of workers and employers; full participation of all citizens, even those who have not traditionally participated in the work force; accountability for outcomes produced and ongoing monitoring and evaluation; overcoming barriers to employment; coordination of resources among government, employers, community-based organizations, and labor; and long-range goals of creating a world-class work force. (11 references) (KC)
VOCATIONAL EDUCATION AT THE CROSSROADS

Claudia Merkel-Keller
New Jersey State Department of Education


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INTRODUCTION:

"The global economy is here. Although the political map has boundaries, the competitive map of financial and industrial activity does not. In the border-free world, labor and capital are highly mobil and are always seeking their highest and best use. ......It is the never-ending enterprise of search and discovery by a free community of explorers that is wealth."

Gary Asmus (1992)

Economic competition is replacing political confrontation and as global markets open and grow. The opportunities are unlimited. For the United States to remain competitive it must reassess its national policies on workforce preparation and readiness. The United States is renowned worldwide for its colleges and university system which provide American students and well as foreign students with extensive opportunities for higher education. Yet only about half of the U.S. youth go on to college. The other 50 percent, the "forgotten-half" of some reports, are thrust into education and training for employment that is often inadequate.

Foreign competitors excel in world trade partly because their workers are better educated and trained. Foreign countries tend to invest proportionately more than does the United States in noncollege education and training. The United States invests heavily in college education but does not do equally well by its young people who seek immediate employment. From the customary end of compulsory education at age 16 through age 24, less than half as much is invested in education and training for each noncollege youth as for each college youth.

GAO FINDINGS:

A recent Government Accounting Office (GAO) Report points out the following:

- Annually, there are approximately 5.5 million dropouts and 3.8 million U.S. students who graduate from high school without the sufficient competencies.

- Some of America's significant competitors in the world marketplace (Japan, Federal Republic of Germany, England, and Sweden for example) have national educational policies which emphasizes preparing noncollege youth and employment.

- Foreign countries expect all students to do well in school. Some U.S. schools, confronted with massive social ills, often expect that many will lag behind. In the United States, academic difficulties frequently are evident in the early years, with many children unprepared for school entry and many in school not keeping pace with expected levels of progress. Certain practices of the other countries such as providing comparable educational resources to all schools, emphasize providing equal educational opportunity to all youth regardless of differences in socioeconomic status and academic talent. For example:
Japan provides uniform teacher salaries and per capita school funding, so that poorer areas have educational resources that are comparable to more affluent one.

Sweden gives extra resources to needy schools, such as those in remote rural areas or with large immigrant populations.

- Foreign schools and the employment community guide students' transition from school to work to a greater degree than in the United States.
- Noncollege students in other countries leaving school receive more directed assistance in finding jobs than do their U.S. counterparts. One major element is the involvement of employers. For example:
  - Joint school-employer programs provide work experience for secondary school students.
  - Japanese employers recruit high school seniors through the schools, basing hiring decisions on schools' recommendations.
  - Employers train over two-thirds of youth in the Federal Republic of Germany through apprenticeships that usually last 3 years. Employers provide on-the-job skill training for 3 or 4 days a week, and apprentices attend school the remaining 1 or 2 days for instruction in mathematics, language, other academic subjects, and vocational skills.
- Competitor nations establish national competency-based training standards which are used across the board to certify competency. The U.S. practice on the other hand usually certifies program completion.
  - Germany in particular, and more recently England, "seek to maintain quality occupational training by testing and certification to meet national standards. Trainees who attain tested levels of competency receive nationally recognized certification, which employers look to as evidence of particular levels of skill. In the United States, certificates for trainees often certify course completion and not necessarily attainment of specific skill levels.
  - Competitor nations invest extensively in jobless out-of-school youth to assure them a job or further education and training. Foreign countries seek to assist most youth who encounter employment problems. For example, Sweden guarantees education, training, or work to every jobless teenager upon leaving school. England guarantees every jobless 16- and 17-year-old-out-of-school youth up to 2 years' work experience and training.
- U.S. employment and training programs reach only a modes proportion of youths in need.
ISSUES CONFRONTING VOCATIONAL EDUCATION:

As recently as last summer, the U.S. Department of Labor's Secretary's Commission on Achieving Necessary Skills (SCANS) prepared a report which indicated that more than half of last year's high school graduates don't have the knowledge and skills needed to get and keep a good job.

SCANS found that the way schools prepare young people for work doesn't reflect the globalization of the economy and the rapid growth in technology. Students don't understand how what they learn in subjects like math or English relates to the world of work. Additionally, they aren't being taught many of the things they need to know to pursue good and rewarding careers.

Vocational education has been the traditional vehicle to prepare American youth for entry-level positions upon graduating from high school. However, as was already pointed out factors both within control of the educational arena and those shaped by the international marketplace, strenuous competition from abroad notably Germany, Japan and the soon to be realized economic block of Eastern Europe and the cheaper labor of the Pacific rim, highlight the need for vocational education to become more for more students.

Many contributing variables affect vocational education as educators prepare the American workforce for the year 2000 and beyond. The difficulty of educating more students through traditional vocational programs becomes even more acute when one considers that not only do students need to know more about the job market they will enter, but what they need to know is changing. In the organizational structure of business and industry for example, middle management positions are declining, and whole departments are being eliminated as services are contracted out and computers are taking over many routine tasks which workers traditionally performed.

Even though experts may disagree on the rate and extent of oncoming changes, the implications for the economy and hence for vocational education are enormous. Vocational Education must drastically reshape its mission and action agenda since as the Council of Chief State School Officers pointed out in a recent study:

- continual change in the economy is certain;
- international competition is causing profound, continuing changes in the nature of work and the skills required to do it;
- the rapid application of technologies, driven by international competition, will continue to have uncertain but significant effect on the skills required for working;
- our nation will remain competitive in the world economy only through increased productivity resulting from a highly trained and adaptable workforce;
since technology is universally and instantaneously transportable across national boundaries, the retention of our technological advantages is no longer assured;

fewer jobs will be available in manufacturing and those jobs will require greater technical skills than manufacturing jobs required in the past; and,

the greatest growth in jobs will be in the service sector, and those jobs will require greater technical skill than previously needed.

Vocational education is a massive national enterprise. In elementary and secondary schools alone, the cost is approximately $6.5 billion a year, of which the federal contribution is about 10 percent. State and local governments spend about $11 for every federal dollar spent on vocational education. In addition, the Department of Labor allocates about $3.2 billion on job training programs, and corporations spend an additional $30 billion to $40 billion on training programs for their employees.

As a result, federal policy operates largely at the margin even though it does serve to focus a national priority on vocational education. Federal policy on vocational training and training for the work as expressed through the Carl D. Perkins Vocational and Applied Technology Education Act Amendments of 1990, P.L. 101-392 and the Joint Training Partnership Act (JTPA) as well as other legislation, even though it contributes, on the margin to a state's budget for training can be an important mechanism to help stimulate the creation of the kinds of education, training and jobs that best meet the economic development needs of this nation and increase the productivity of all workers. The more powerful influences on practice are generated at the state and local levels. Vocational education, however, is also shaped through the effects of broader political, governance, and economic forces. To understand the roles and limits of federal vocational policy, it is important to understand the educational and political context in which federal policy is implemented and the capacity and willingness of the educational community to pursue federal policy goals.

In addition to state and federal policy parameters, there are broad educational, economic and social changes with the potential to effect significantly the nature and extent of vocational education. Among the most prominent of the educational changes are the excellence reforms of the mid to late 1980s coupled with other reform efforts including AMERICA 2000 targeted at setting more rigorous state and local standards for curricula, promotion, testing, graduation requirements, teacher selection and teacher pay. In addition, the rapid growth in postsecondary education over the past two decades has changed the postsecondary curriculum, expanded the opportunities for vocational education, and left many institutions competing to attract students. These and other policies and programs may well influence the location and content of instruction, as well as the balance between vocational and academic education.
IMPLEMENTATION TARGETS OF P.L. 101-392:

The Carl D. Perkins Vocational and Applied Technology Act Amendments of 1990 (P.L. 101-392) reauthorized in 1990 and referred to as Perkins II gives educators a strong directive. The purpose of the Act is "to make the United States more competitive in the world economy by developing more fully the academic and occupational skills of all segments of the population. This purpose will principally be achieved through concentrating resources on improving educational programs leading to academic and occupational skill competencies needed to work in a technologically advanced society." Key components of the new law stress:

- integration of academic and vocational skills;
- provision of services to special populations, i.e. economically disadvantaged, the handicapped, disabled, single parents, foster children, those not properly served because of sex bias, those with limited English proficiency as well as criminal offenders;
- development of a system of state and local standards and measures to include:
  - measures of learning and competency gains;
  - measures of performance;
  - incentives to encourage services to targeted groups; and
  - procedures for utilizing resources in other programs;
- development of a program evaluation and improvement system;
- development of programs to provide a tech-prep education leading to a two-year associate degree or a two-year certificate. These programs are designed to offer strong comprehensive links between secondary school and postsecondary educational institutions in a systematic manner; and
- development of an information data system for vocational education.

Interestingly, Section 611 of the law also directs the U.S. General Accounting Office (GAO) to conduct a thorough study "of the Dual System of Vocational Education in the Federal Republic of Germany, including an analysis of the desirability, advantages and disadvantages of establishing a nationwide job apprenticeship program in the United States similar to the Dual System of Vocational Education in the Federal Republic of Germany."
NON-EDUCATIONAL GIVENS:

Outside of the educational arena, economic conditions also help to shape the vocational enterprise. It has been commonplace to observe that the mix of occupations is shifting and that we are moving from an economy based on manufacturing to one led by the development of technology-oriented and service industries. These changes have led to reassessment of both the basic and vocational skills in the workforce. At the same time, levels of worker productivity remain relatively stagnant and the youth labor force, in particular, appears plagued by a relatively intractable unemployment problem. For poor and minority youth in particular, the unemployment problem not only appears to be getting worse, but may well carry over into higher rates of adult joblessness.

OCcupational Workforce Readiness System:

In order to make vocational education a significant force in preparing a world class workforce, vocational education must become part of an occupational workforce readiness system as is envisioned in New Jersey in which a cohesive and comprehensive employment training system is developed consisting of programmatic and fiscal support from the Departments of Education, Higher Education and Labor. A single state plan would guide the implementation of all workforce readiness programs which address the needs of both the state's workforce and employer community. The system, as outlined by the New Jersey Employment and Training Commission, must be premised on:

Needs of workers and employers

A successful workforce readiness system must be consumer based and market driven. Programs should be designed to meet the needs of workers and employers who are the consumers of training, education, and employment services. Planning and decision-making should be based on the long-term interests of clients and the demands of the labor market. Employers must define their labor force skill needs and contribute needed training resources. Performance requirements mandated by federal or state regulations should support these goals and should encourage cooperative relationships among programs serving the same clients.

Full participation of all citizens even those who have not traditionally participated in the workforce (current emphasis of the amended Perkins legislation)

The system must be accountable for outcomes produced and subject to evaluation by the state. The ultimate purpose of the workforce readiness system is to enhance the income of its clients. While the system may produce positive benefits such as increased client self-esteem, the final measure of the success of the workforce readiness system must be the duration of employment, the wages paid to participants and the ability of participants to choose and/or change their career. Although the state plays a prominent role in the workforce readiness system, it must, in the final analysis, depend upon the market to judge the success of its policies. There will be special
provisions made to insure that local organizations which have a particular concern with the quality of training have a voice in the shaping of employment policy. Program participants, employers and community-based organizations, all of whom depend on a successful workforce readiness system, will be fully consulted.

Accountability for outcomes produced and ongoing monitoring and evaluation

A workforce readiness system requires the full participation of all potential workers. Demographic studies predict a slowdown in the growth of the workforce. To meet the needs of the State's employers for trained workers, all sources of human capital must be tapped. Citizens who have not traditionally participated in the workforce must be trained for skilled jobs so they can earn the wages that will allow them to enter the economic mainstream. Persons with disabilities, at-risk youth, displaced homemakers and non-English speaking people are among those who will make special demands on the system. The workforce readiness system must also be driven not only by the needs of the marketplace but must be responsive, accountable self-adjusting and adaptable. Feedback, monitoring and evaluation of outcomes are a key component.

Overcoming barriers to employment

All partners in the workforce readiness system must take a holistic approach toward meeting the many and varied needs of consumers. New Jersey's workforce will face complex barriers to becoming and remaining competitive in a rapidly changing economy. The system must be structured to insure that these barriers are overcome. Agencies must collaborate to provide support services in areas such as child care, transportation, housing and health care to enable individuals to participate in employment, education and training programs.

Coordination of resources among government, employers, community-based organizations and labor

The system must provide comprehensive services that are accessible to all clients. To maximize the impact of all available resources, a comprehensive system must be based on an active and equal partnership among government, employers, community-based organizations and labor. Since no single agency has the resources and expertise to satisfy all client needs, all agencies must coordinate their efforts and smooth the pathways between programs. Joint planning will be a key to achieving a system of complementary and non-duplicative services. Such a system requires program staff to see themselves as partners in a common effort to serve the client. To deny access to any group or to fail to develop the competence of the workforce will result in an ever growing gap between the affluent and the disadvantaged of the state.
Long range goals of creating a world class workforce

A holistic program of services will be guided by policy established at the State level. Support for a comprehensive, flexible approach must be communicated and understood throughout the system. Locally determined service delivery must be consistent with a coherent, integrated long range view of the statewide goal of creating a world class workforce.

DISCUSSION:

For the year 2000 and beyond, the United States education and workforce readiness system must take dramatic steps to prepare youth for the world of work to ensure America's international economic survivability. This can only occur with vision, determination to change, and broad-based collaboration among the many partners playing a role in the preparation of the American workforce—the schools (secondary, vocational-technical, community colleges, and private proprietary vocational schools) departments of national, state and local government and the business and industry community.

This partnership of the schools, industry, and government must accommodate the following major functions for all segments of the American society in order for this nation to succeed:

- establishment of renewed dignity and esteem for occupational and vocational education as is the case in other countries;
- basic educational skills development including GED, literacy, English as a second language and remedial education;
- core academic skills development including mathematics, language arts, communication skills, reasoning skills, problem solving skills, application skills, analysis skills and higher order thinking skills;
- occupationally specific classroom education and training;
- occupationally specific training and retraining at the work-site including work-based education such as apprenticeship and on-the-job training;
- labor exchange activities including job search, employer relations, job placement, immigration certification, tax credits, occupational test development, occupational analysis and occupational counseling;
- workforce preparation services including the design and implementation of a series of functions to prepare a person for work which encompasses testing, employment counseling, referral to existing training opportunities, design of specialized training to meet employer needs, physical and mental rehabilitation;
- work experience or career exploration for school students;
work behavior skills development which include sound work habits, attitudes and basic vocational and life skills;

- cooperative vocational education for secondary school students; and

- cooperative education for college students.

The future of this nation is at stake and rests in our hands.


