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ABSTRACT

Studies mandated to the National Institute of Education (NIE) by the Vocational Education Amendments of 1976 can provide an on-going assessment of vocational education's success in meeting changing needs of the states and nation. They can provide new concepts to help meet vocational education's goals in eight ways. These are (1) clarifying who has responsibility for what, (2) determining reasons for continuing decline in basic skills of students, (3) stopping vocational education's treatment as a stepchild, (4) ending vocational parochialism at high school and community college levels, (5) leaving vocational education in hands of the education community, (6) designing vocational education for the gifted, (7) revealing need for a national policy, and (8) examining all state plans. NIE studies should assess the advisory role of State Advisory Councils on Vocational Education in planning, effectiveness of interagency cooperation, and state plans and programs to help American students compete internationally. Other areas that should be included in the NIE study are state plans as planning or "compliance" documents, postsecondary vocational education, use of the 15 career clusters used for curriculum development and program planning, successful use of curriculum developed by the Office of Education, effectiveness of using existing programs for greater interagency cooperation, and feasibility of moving the United States Employment Service to the Bureau of Occupational and Adult Education. (YLB)

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POLICY ANALYSIS
AND SUGGESTED CHANGES IN
VOCATIONAL EDUCATION

by Roman Pucinski

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America will reach a two-trillion dollar economy by the early 1980's; a four-trillion dollar annual GNP by 1990, and seven-trillion dollars by the year 2000.

This enormous growth -- which staggers the imagination -- will bring with it problems which will test every resource in every community in America. Nowhere will the impact be more severe than on the nation's educational community.

By the early 1980's, vocational educators will have to prepare for gainful employment, 17 million additional workers who will join the growing work force, and another 41 million workers to replace those retiring, dying, or leaving the labor force for some other reason.

This enormous growth will require major changes in the delivery system of vocational education. Congress has anticipated many of these changes in the 1976 Amendments to vocational education.

Planning, improving, and governing vocational-technical education, with particular attention to the K-12 and post-secondary interface with other governing boards, will place an unprecedented burden of responsibility on all elements of the education community.

But the greatest single responsibility will fall on a continuing study of the vocational education delivery system to ascertain if it is meeting the changing needs of the states and the nation. Studies mandated to the National Institute of Education in Section 523(b)(1), of the Vocational Education Amendments of 1976--PL 94-482--can provide the basis for such an on-going inventory. The study can also provide new concepts to help meet our goals.

How can this be done?

First, it is time to end the confusion which has dominated much of the educational community in recent years as to who has responsibility for what.

Congress has made it clear that while substantial improvements must be made in planning procedures to develop meaningful vocational education if states want to qualify for federal funds, it was not the intent of Congress that state boards surrender their primary responsibility for development, coordination, and administration of their own state programs.

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The NIE study must ascertain if the mandate of Sec. 101 of the 1976 Amendments is being carried out to include in the planning process all resources available to the state for vocational education and manpower training including, but not limited to: vocational high schools; community colleges; universities; adult education; area vocational centers; vocational curricula used by the military; vocational education programs in prisons and other correctional institutions; CETA; National Alliance for Businessmen; residential schools; META; work study and cooperative education; OJT; proprietary schools; educational TV and Cable TV (where available); the home as a learning center; educational films and other software; career education; unions; parent groups; local industries; vocational counselors, and vocational rehab.

Second, determine the reasons for the continuing decline in basic skills of American students. We must examine the testing modes and how they are applied. Students subjected to the discipline of vocational education, frequently score higher but because test scores are all lumped together, it is difficult to establish this fact. Also, testing of minority students with tests reflecting caucasian standards and cultural values frequently conceals the minority youngster's native ability to progress educationally. This is particularly true where language barriers exist. Too frequently, minority youngsters are denied vocational education or are relegated to ungraded centers or special education when indeed with proper testing and counselling, they could progress favorably with their peer group. Vocational education and career education--working together-- can help raise the standard of American education by making the entire learning process more meaningful and relevant to the student, thus, improving basic skills. Vocational education must continue to place a high priority on development of verbal skills.

I suggest NIE target the Dunbar Vocational School in Chicago as one of its pilot projects to test basic skills among minority students. Dunbar has an all-black student enrollment but because of the high intensity of interest in sophisticated vocational courses, the school's achievement scores among students are very high. A substantial percentage of Dunbar students go on to college and successfully complete their studies.

Third, stop treating vocational education as a step child. With more than 15 million American students now enrolled in vocational education, it is obvious students have a higher regard for vocational education than some education planners and policy makers. There are still those in the education community who perceive vocational education as a program for the non-achiever, even though voc ed students have a higher rate of successfully completing their college education than those who took college prep courses in high school. NIE can help develop criteria for assessing program quality and effectiveness, but I strongly urge this study be conducted by people with experience in the field with vocational education. Too frequently, vocational education is judged by those who have little or no experience in the field.

Fourth, end vocational parochialism at the high school and community college level. We must recognize that Americans are the most mobile people in the world. One out of every five American families moves every year.

Vocational planners must be free to provide vocational courses to meet the aptitudes and desires of individual students instead of offering only courses that meet indigenous job needs of the community in which a child is growing up. Chances are, that child will not work in the same community in which he or she grew up.

NIE has authority to recommend changes in the Act under Section (E). I suggest NIE study carefully present requirements that vocational planners must determine the indigenous job needs of the community and structure their courses accordingly. Such a policy places extreme limitations on development of vocational curricula in a given community. A student's vocational pursuits should not be determined only by accident of local geography or local job opportunities. Education must deal with total person and his or her career aptitudes. We are shortchanging vast numbers of our students who are forced to pursue vocations tied to local needs and opportunities. Understandably, it would be difficult to persuade a local school board to fund vocational education courses for jobs that are non-existent in the school board's jurisdiction. It is for this reason I suggest NIE explore the possibility of establishing a Title I (ala ESEA for disadvantaged youngsters) for Vocational Education. Funds from this Title would permit a local school board to institute vocational courses that meet individual aptitude needs of a student rather than community needs. The assumption is that such a student would find employment somewhere in his or her chosen field even though it would not necessarily be in the same community where the student grew up. This "non-indigenous-needs" approach to vocational education could not only open new opportunities for students but would make education so much more meaningful to the student. The justification for federal funding would be that mobility is a federal constitutional right in pursuit of economic opportunity.

Fifth, Leave vocational education in the hands of the education community and not in the hands of the Department of Labor. There is a constant effort to move Voc Ed to Labor. Such a move would create a caste system in America at a time when we should be developing an educational system which will help every American graduate with a marketable skill.

Sixth, Vocational Education for the gifted. There is a tendency to place all gifted students in the academic mode. One has a right to ask why shouldn't a gifted youngster have access to vocational education? NIE should be looking at this aspect during the study.

Seventh: In the light of America's enormous economic growth, it is time for a national policy which would guarantee every American development of at least one marketable skill. It is hoped the NIE study will reveal the need for such a policy if this nation is to have the human resources to meet our future needs. The real danger to America lies not in any energy shortage -- although that is important -- but in the shortage of skilled help.

Eighth: A thorough study by NIE of all state plans to determine if they reflect requirements written by Congress to qualify for Federal Aid.

It is obvious, the name of the game in Voc Ed is planning!

Congress has made it clear that State Boards must seek broadly represented input into their state plans. However, the final responsibility for both administration and for policy rests with the State Board and the Chief State School Officer for Vocational Education as well as local boards and superintendents.

This is similarly true with the role of State Advisory Councils on Vocational Education. Their duties to fully participate in the planning and development process of a state plan are mandated by law. There is no question that SACVE's must be consulted along the entire process in developing a state plan. Their input must be felt along the entire route. But it does not mean that the chief state school administrator for vocational education or the state board must accept all of the advisory council's suggestions. The intent of Congress was clear: SACVE's must certify that they have participated in the development process of a state plan but they do not have veto power over the state plan simply because a state advisory council does not agree with its content.

But Congress did insist in the 1976 Amendments that a state plan must describe suggestions made by state advisory councils for the state plan and, if they were rejected, the reason why SACVE recommendations were rejected. Any NIE oversight activities must include an analysis how well is this particular mandate of Congress being followed.

Congress carefully spelled out the delicate roll of a state advisory council and limited its powers to an advisory role.

While Congress insists SACVE's remain totally independent in their ability to advise state boards and chief state school officers in developing meaningful state plans, it emphasizes the "advisory" role of such councils.

In order to give state advisory councils a full cross-section, Congress has included in 1976 a mandate to expand representation on both the National Advisory Council on Vocational Education and on State Council; to include persons knowledgeable in prison vocational education and guidance and counselling.

The 1976 Amendments strengthen the role of SACVE's by emphasizing they must certify that they have been consistently involved in the entire planning of the state plan, rather than merely consulted on the finished product.

The 1976 legislation mandates coordination among all educational agencies and boards to develop a comprehensive state plan to meet the changing needs of vocational education at all levels -- K through 12 and post secondary. NIE should pay particular attention to assessing the effectiveness of the inter-agency cooperation.

From all of the activity at the federal level, it is apparent that a continuing effort is being made to help states develop a vocational education delivery system geared to meet the enormous changes that lie ahead.

For this surge of the '80's will be different from previous eras of economic growth. The decade of the '80's will start from a highly industrialized base. The United States will be one of about six powerful and growing industrial blocs, including Japan, China, South America, Europe and the Soviet Union. Add to these the Middle East -- with its enormous money reserves and consumer demands -- the various clusters of industrial strength in such widely separated places as Taiwan, Indo China, Indonesia, the Philippines, Scandinavia, Korea, South Africa, and Australia.

State Boards will have to broaden their bases in seeking advice in planning from agencies deeply involved in foreign trade. As the world hopefully settles down to a prolonged era of peace, our vocational educational system must develop curricula which will help American students compete in the international arena.

America's vocational-technical educators must provide a delivery system of education which will produce the man and woman power to meet the challenge of this world-wide growth -- a delivery system which will recapture the skills and productivity of the American people. The NIE Study should determine what is being done to recapture skills and increase awareness of productivity.

America has lost some of the technical superiority that has been the base of our prosperity, and our proudest export. We shall never again be particularly rich in natural resources. We have been rich in skills. Our competitive position in world markets was built on the superb technical skills and productivity of our people. State plans -- particularly the five-year plan -- must reflect what programs a state intends to develop to meet these international opportunities.

We cannot afford to lose this edge.

There are signs that America is indeed recapturing some of the edge lost immediately after World War II. Some elements of the electronics industry -- especially the pocket computer -- is coming back home. So is the auto industry and many others. But much remains to be done if we are to meet the challenge of the '80's.

The challenge will be met only through a coordinated approach which will provide a program responsive to the complex interaction of job-related education and training needs of students and adults, the business community, labor, the job market, and the nation's economy. These programs are now spread through the federal, state and local government. Too often, one agency is unaware of the related activities of another, if not actually working a cross purposes.

To achieve this coordinated approach all parties and agencies involved in education will have to accept their state board as the coordinating agency. Petty jealousies and distrusts will have to give way to a clear understanding that this nation no longer has the time to argue over "turfmanship".

To fully implement the coordination, State Boards will have to develop a computer-based information and retrieval system which will be made available to all participating agencies and which will provide a comprehensive flow of information on which to build an effective state plan.

The planning process in developing a coordinated education delivery system must be based on the assumption that sooner or later, every individual must join the world of work. Even the college-bound student should have a marketable skill to be used while pursuing higher goals. It is estimated that a medical student will not collect his or her first fee for 13 years after beginning medical studies.

The notion that we train some students for work and others for more intellectual pursuits will fall by the wayside in the wake of America's enormous growth. The state plan must make clear that there is no conflict between pursuing the highest of intellectual goals and still possessing a marketable skill.

It is becoming abundantly clear that America's educational system in the '80's will rest on four pillars:

- 1) Career Education: a lifelong process of exploration to help the individual find skills best suited for his or her needs. Career education can start as early as the pre-school level and go on through basic adult education to retirement. Career education takes on added significance when we consider the average American will change job skills five to eight times in a working lifetime by the middle '80's. State Boards will have to work closely with the State Advisory Council on Career Education, the Labor Department, United States Employment Service and the CETA Program for an effective state plan.
- 2) Vocational Education: the delivery system for teaching skills to those whose desires have been inspired by career education. As career education becomes more integrated into our educational system and generates massive interest in job skills, the demand for vocational education will grow to unprecedented dimensions. Vocational-technical high schools now have 15 million students. It is not unreasonable to predict that as career education moves forward, every high school student will be participating in some form of vocational education in addition to other studies by the mid-'80's. There is no conflict between career education and vocational education. Working as a team, they can give every American student a marketable skill. State Boards should utilize the impressive research facilities available to State Advisory Councils on Vocational Education to help develop effective state plans in vocational education for the 45 per cent of American students who do not go on to post secondary education.

- 3) Post-Secondary Vocational: the delivery system for advanced vocational-technical education for those who want to perfect a skill beyond the high school level. Community colleges are among the most exciting breakthroughs in American education. One unexpected benefit is the large number of students who go on to full degrees after starting at the community college level.
- 4) Adult Education: Basic adult education must add a new dimension of vocational education to help retrain the vast army of American adults who must be retrained to meet changing job needs. It is estimated that one third of those layed off during economic slumps will never return to their old jobs. American industry itself will undergo enormous changes. Instead of building huge factories for a single purpose for many years, industry will shift to a task force approach under which a task force will be assembled and trained for a specific mission. It may last several years and upon completion, the workers will be recruited and retrained for another mission. The space program offers an excellent example of the task force approach. When the space agency completed its mission of putting man on the moon, it was disbanded and hundreds of space workers had to be retrained for new jobs. This approach will be common by 1980. State Boards must develop a new line of communications with all local, state and federal agencies dealing with changing manpower needs to develop meaningful programs in adult education. Verbal skills in basic education will be mixed in with vocational education if we are to avoid serious pockets of unemployment--as we are witnessing now--despite our economic growth. This nation has added 1.8 million jobs to our work force during the past year even though we are suffering a 6.5 per cent unemployment rate.

Education, in the public mind, has always been -- and still remains -- the key to success. In addition to basic literacy skills, the public still looks to the educational system for preparation of job skills--whether secretary or scientist. Our society is based on the premise that educational achievement and the quality of education determine career advancement--the better the education; the better the job.

We have devised numerous programs, costing billions of dollars, and spread through all levels of government or the educational system, to make up for the deficiencies of the educational system in meeting its historic function of career preparation. There is a wide range of vocational-technical; manpower; apprentice; rehabilitation and other programs. Virtually every agency of government has its own training or retraining program; many pay students their tuition to get their training elsewhere.

The result is duplication, overlap, inefficiency and waste.

NIE should take appropriate steps to properly inventory all of these programs; determine how well are they publicized as to their existence and availability, because the tragedy is that despite their existence, neither our schools nor the manpower training efforts are meeting the needs of the unemployed or the underemployed.

The five per cent vocational set aside in the Comprehensive Employment Training Act (CETA) is working well in some areas but failing badly in others. And while the nation enjoys a record number of people employed, we see deplorable pockets of unemployment -- in some areas as high as 40 per cent unemployed -- because we have failed to provide proper training or retraining among minority groups in the inner city or densely populated rural areas. This should be a keystone of the NIE Study.

There is a wide range of new and sophisticated--and sometimes not very sophisticated--job opportunities developing in America. State Boards should make wider use of curriculum material in newly emerging occupations developed by USOE under Part I or by State Departments under Part C. These materials are in position on the line, available to anyone who wants them. State Boards should examine the material available but not being used in their respective states and ascertain why they are not being used. It is obvious much of these materials escape the entire elaborate combined planning system established within the state. Failure to use these materials is an abhorrent waste of tax payers money.

But there is hope. State Advisory Councils on Vocational Education -- prodded by the National Council on Vocational Education -- are becoming more effective at putting things together.

An examination of state annual plans and now the five year plan -- required by the 1976 amendments -- indicates that considerable progress has been made toward better planning in meeting state vocational-technical needs. State administrators are working more closely with state advisory councils in formulating state plans. State advisory councils are exerting their federally mandated

responsibility to participate fully in the development of state plans. They're asking questions and getting answers. The results show in state plans being forwarded to Washington for review.

In two states, state advisory councils refused to certify a state plan -- as required by law -- because they did not participate in its formulation. The matter was amicably resolved and there now is better cooperation in planning.

But much more needs to be done if vocational-technical education at all levels is to meet the needs of our future growth. State Boards should heed without delay the admonition of the National Advisory Council on Vocational Education which cautioned that the state plan too often is not a viable planning instrument. This admonition was prompted by a growing dissatisfaction among state advisory councils with the lack of quality in the planning that goes into their state plans.

NIE should ascertain whether state plans -- especially the five year plan -- are really planning documents to meet future needs or whether they are merely "compliance" documents to meet requirements of the law.

One SACVE flatly charged: "Our study of the state plan revealed gross inadequacies in planning and in methods of determining state needs..."

Another SACVE recommended that either the state plan be reorganized so as to display goals, objectives and priorities in an interrelated fashion, or the State Board should do so in a separate document.

In its most recent summary of state plans, the National Advisory Council on Vocational Education concluded:

"Criticism of the State Plan is extensive. The Plan, as a viable instrument for setting forth goals and objectives which meet the needs of the people served, is very much in question.

At the forefront of these concerns must be the conviction that the State Plan should be a planning tool, rather than a compliance document.

"Lack of information, such as demographic distribution of students, manpower needs, and job opportunities, is identified as a major hindrance in developing a meaningful Plan. Many state councils are distressed over the lack of guidelines and procedures for implementing goals and priorities, and, in many instances the lack of statewide priorities at all. Virginia particularly points out the gap between the formulation of goals and their implementation in the classroom. Various recommendations have been submitted to solve this problem. Kansas is developing a management-by-objective system for its State Plan; Kentucky has established a five-year plan.

Massachusetts has instituted an approach to comprehensive planning through regional meetings, in an attempt to reconcile the lack of a planning system.

The absence of needs assessment as an integral part of the State Plan is a violation of the statute, and is of concern to several states. The Connecticut Council submitted a resolution with its critical approval of the Plan calling for the U.S. Commissioner of Education not to approve the State Plan because it was in violation of the law in several areas. The plan was, nevertheless, approved after several changes. Minnesota also pointed out the failure of the State Plan to incorporate needs assessment, and, therefore, not be in fulfillment of the law.

"The SACVE's have expressed the need for revision of Office of Education guidelines for State Plans and the need for enforcement of the law at the national level to ensure that State Plans become what they were legislated to do to establish goals and priorities reflective of the needs of the people and the manpower requirements of the State. Implicit to this mandate is the efficient implementation of a workable Plan."

While Congress continues to uphold the "sole state agency" concept for implementing education programs, continued criticism of State Plans by SACVE's could bring new demands for further reforms. State Boards would be well advised not to treat lightly SACVE criticism. This fact can gain strength if NIE prepares its own assessment of State Plans.

It should be quite apparent from the tough line being taken both by the National Advisory Council and its state affiliates that a high priority is being placed on planning, improving and governing vocational-technical education programs.

There are some who continue to take their State Advisory Councils as a passing phenomenon. Such an attitude is a mistake. State Advisory Councils are creatures of federal law; their powers and responsibilities are mandated, and have been even further defined in the 1976 Amendments. NIE should include the relationship of SACVE's with their respective state as part of its study.

Federal law requires state planning and a State Plan. Those SACVE's that have criticized the quality of planning have several studies to support their complaints. State Boards should familiarize themselves with these studies. It would help them avoid difficulties in their own respective states.

A North Carolina University study recently concluded that even though federal law requires voc-tech planning, state wide vocational education planning in a

of states continues to be "somewhat haphazard and fragmentary."

The study attributes this shortcoming to several factors including lack of funds earmarked exclusively for planning; lack of data on labor market needs; and a lack of initiative or leadership in planning from the state level.

The study concluded similar to findings of some SACVE's: state plans are "largely engineered toward compliance and are not often used operationally."

The North Carolina University study further points out: "Suspicion about the quality of data available to state vocational education planners has led to further distrust of the accuracy of projections contained as justifications for program choice in state plans."

Thus, it appears clear that State Advisory Councils on Vocational Education and the National Advisory Council on Vocational Education have set a firm course for more meaningful planning at the elementary, secondary and post-secondary levels.

State Boards will find their greatest challenge at the post-secondary level. With job skills requiring greater sophistication and more advanced training, State Boards will have to work more closely with all other educational components to convince their legislative bodies for additional funding.

The growing range of curricula being offered in community colleges as part of the post-secondary education process accounts for the impressive enrollment gains being reflected throughout the nation. Some states-- in response to this growing enrollment -- are spending as much as 70 per cent of their vocational dollar on post-secondary education. The NIE Study should carefully review this aspect of vocational education.

The National Advisory Council has recommended a base of 25 per cent for post secondary education -- keeping in mind that 45 per cent of this nation's high school graduates do not go on to post secondary education. Vocational education at the high school level continues to be their best hope for developing a marketable skill. But NACVE is not unmindful that in many communities substantially more funds are needed for post secondary education and its more advanced needs.

There is a new surge throughout the nation in support of vocational education from pre-school to post secondary. In 1975 alone, construction on 527 additional community colleges began. Communities which previously viewed vocational education as something for the nonachiever, are now investing millions of tax dollars for area vocational centers. Parents throughout the nation are calling for job-related educational programs and a Presidential Commission on Education recommended the "general curriculum" be dropped -- "buried" was the word used by the Commission -- in the nation's high schools and that career education and college preparation be placed at the same level in its place.

Vocational educators are placing new emphasis on curriculum development and vocational research to meet the changing needs of American industry as industrial planners report that this nation will develop 10,000 new job skills as we surge to a two trillion dollar gross national product.

Howard F. Hjelm, Director, Division of Research and Demonstration, suggested that with the advent of the career education movement, the Office Of Education set about to develop a plan for classifying the 20,000 job titles identified by the Department of Labor in the Dictionary of Occupational Titles into a usable educational scheme. Such a scheme would serve as a basis for bringing about greater emphasis on the real world of work in the educational setting and to provide an administratively feasible plan for the implementation of career education activities.

The plan also envisioned adding the additional 10,000 new job skills now on industry's drawing boards.

Out of this proposal emerged a plan whereby all occupations could be grouped into 15 career clusters. These 15 clusters were then used for curriculum development and program planning purposed at federal and state levels.

Sidney C. High, Jr., Director, Division of Career Education in the U.S. Office of Education, pointed out: "Since the 'world of work' in the United States involves literally thousands of kinds of occupations, approaching that 'world of work' on an occupation-by-occupation basis is an impossibility in terms of educational program development. It is necessary to group the occupations in some systematic way that will be understandable to students, teachers, and to the community at large."

State Boards and all of the agencies they work with should organize comprehensive task forces for each of these clusters made up of the people broadly representing each cluster. SACVE's should be asked to help locate and recruit qualified advisors. These task forces should recommend to the State Board and the advisory council, curriculum needs for each of the clusters. It's an enormous project but one that would make a state plan totally meaningful.

NIE should ascertain how these clusters are being used.

The fifteen clusters:

Agribusiness and Natural Resources: Agribusiness continues to be the nation's largest employer with a future totally unlimited.

Business and Office Occupations: The enormous opportunities in this cluster defy description as we try to manage of two trillion dollar economy.

Communications and Media: boggles the imagination.

Construction: New methods and materials will have to provide 20 million housing units for individual families and factories to house more than 100 million American workers.

Consumer and Homemaking Education: The Home Economics teacher will be faced with unprecedented responsibility to develop courses which will make young men and women ready for the dual role of homemaker and breadwinner at the same. A two trillion dollar economy will bring millions of women into the world of work. It is now estimated that by 1990, women will outnumber men in the nation's work force. Home Ec will have the responsibility of training women for both--the world of work and homemaking. Husbands too will have to assume new homemaking responsibilities as they share with their wives housekeeping chores. Consumer science is a whole new industry with a limitless future.

Environment: Job descriptions unheard of as we try to find a balance between our energy needs and preserving a quality of life for survival.
Fine Arts and Humanities. A free society cannot survive without the arts and humanities.

Health: Perhaps the fastest growing industry in America as we recognize that the entire field of paramedics -- from ambulance attendants to laboratory technicians -- must have our highest priority as we move toward total medical care for every person in America.

Hospitality and Recreation: A nation with more leisure time than ever before will provide vast opportunities in this cluster.

Manufacturing: The backbone of a two trillion dollar economy.

Marine Sciences: Ocean harvesting; perch farms where fish can be grown in tanks instead of lakes; oceanography, and myriad of other new careers.

Marketing and Distribution: the entire field of distributive education will dominate a two trillion dollar economy; their mission will be to move this enormous amount of goods and services.

Personal Services: Tailoring, barbering, business consultation, waitress, chef -- and thousands of other job skills involving personal services.

Public Service: There are now more than four million American involved in some form of government work and the field continues to grow.

Transportation: A key to moving this nation's future.

It is apparent that State Boards will have to develop new concepts for storing and retrieving vocational and technical information within these clusters if the clustering program is to succeed. Add to this the deficiency of information on manpower needs, availability of teachers, and facilities, employment prospects, and available curricula, and it becomes apparent State Boards will have to develop data banks. Some states already are experimenting with state-wide management systems. Some are receiving supplemental data from the State Department of Employment Security.

As the cluster concept takes hold and grows, heavy emphasis will have to be placed on guidance and counselling. NACVE stated in a recent report the need for reorientation of guidance and counselling personnel. States acknowledge that a primary area for concentration is in revising programs and criteria for certification at the colleges and universities which train guidance counsellors. For those already in their field, NACVE reports, many states have conducted in-service workshops and conferences in an attempt to upgrade the vocational knowledge of these professionals.

It has also been recommended that courses be offered for guidance counsellor "aides" who would work closely with the guidance counsellor in helping ease the work load. Another suggestion is to retrain teachers being displaced because of decreasing enrollment as vocational counsellors.

The new mode for vocational education will require a degree of courage in instituting programs which may or may not have a large attendance. State Boards will have to recognize this. Past experience shows that too often vocational administrators offered only the "safe" courses -- those which were popular with students and brought the largest enrollment. Per student expenditures helped persuade school boards these were wise investments. Future programs will have to offer more sophisticated curriculum to smaller groups. There will be criticism but such courses will fill a need. State Boards can get their most effective help in filling these needs by working closely with the U.S. Employment Service. But basically, state boards will have to develop their own "radar" on future job opportunities.

State Boards will find their greatest challenge and greatest reward among minority groups which have not shared fully in previous vocational programs in many communities. The high unemployment rate in these communities is convincing proof how urgently job-related education is needed in these areas. Study after study shows that high quality vocational education can reduce the unemployment problem in these communities. State Boards will have to recruit every agency available to the problem to develop effective plans.

NACVE recently recommended that 25 per cent of all discretionary funds available to education be redistributed to local school districts on an incentive basis for programs which place highest emphasis on education for employment.

But the bottom line for vocational technical education is management.

The Federal Government already has paid for hundreds of millions of dollars in research and curriculum development for training both teachers and students but the information is not being effectively disseminated to the field. It is difficult to understand this phenomenon in a nation which prides itself on communications. The successful utilization of curriculum developed by OE should be very high on the NIE Study.

Management also calls for closer cooperation between State Boards, manpower programs, U.S. Employment Service, Bureau of Labor Statistics, National Center for Educational Statistics, Veterans Administration Counselling and outreach programs, Armed Forces recruiting programs, counselling and placement programs in the schools: all should be attuned to each other. Curriculum development activities should also be tied into many of these facilities so that short-range, as well as long-range and traditional programs can be developed to meet pressing needs.

Since the 1963 Vocational Education Amendments, Congress has been most effective in providing America with a vocational-technical education program designed to help prepare the nation for its enormous economic growth. The NIE Study can help determine how effectively existing programs are being utilized for greater interagency cooperation. Some of these programs include:

- 1) Vocational Education Act -- OE Regional Administrators;
- 2) Part B, Title X - Occupational Education Act of 1972, which authorizes funding primarily for post secondary occupational education programs and OE regional directors,
- 3) Portions of legislation concerning community and junior colleges to assure coordination of the vocational education aspects of their programs with other programs at the secondary and post secondary level;
- 4) Adult Education Act -- the basic education portion as well as those parts dealing with vocational education should be included to assure that the basic education being taught is relevant to the career advancement potential of the individual;

- 5) Comprehensive Employment and Training Act -- all sections of CETA which provide actual skill training, stipends, services directly related to training, counselling, and placement should be included. The provision of stipends might be expanded to apply to other programs in vocational and adult education;
- 6) Vocational Rehabilitation Act ---programs for the handicapped should be coordinated with other job training programs so the handicapped can be pulled into the mainstream of the economy as quickly as possible;
- 7) U.S. Employment Service -- training without placement adds up to an incomplete program. All programs dealing with guidance and placement should be coordinated;
- 8) Indian Education -- all programs of the Bureau of Indian Affairs and the USOE concerning job related education should be included, with new legislation if necessary, recognizing the special status of Indian tribes and permitting them to participate in existing programs for which they are eligible.
- 9) Department of Defense -- provision should be made to take advantage of the training techniques and expertise of the Armed Forces training programs, so that their methods -- wherever possible -- can be applied to civilian training programs and vice versa. Consideration should be given for use of military facilities, where applicable, where vocational education programs exist;

If vocational education is to be treated on a national scale, we should move the U.S. Employment Service to the Bureau of Occupational and Adult Education so that national job needs could be transmitted to local vocational planners -- a sort of radar of national job needs for local schools. NIE should study the feasibility of such a move.

COMPLIANCE

- (1) The Declaration of Purpose should be carefully examined against state plans submitted annually -- and under the 1976 amendments the five year plan -- to determine if:
 - (a) all state resources are utilized in developing voc ed programs
 - (b) if existing programs reflect changing needs of industry.
 - (c) what new programs are being developed to meet changing needs.
 - (d) has sex discrimination and sex stereotyping been eliminated.
 - (e) does home ec reflect the new dimensions spelled out by Congress.

- (f) does coop education and work study provide meaningful training and educational opportunities for skill development.
 - (g) do CETA programs include an educational component for future employment in the private sector
- (2) Are funds allocated for vocational education for American Indians reaching their mark.
 - (3) Five year state plan should reflect the increasing role of voc ed.
 - (4) Do State Advisory Councils reflect a proper cross-section of the state and is the majority of such a council made up of non-educators.
 - (a) Does the state council actually participate in the development of the state plan.
 - (b) List the actual input of state council in development of the plan
 - (c) Determine the actual extent of independence of the state council in advising on the state plan.
 - (5) Examine the annual program plan and accountability report submitted annually by each state to the U.S. Commissioner of Education.
 - (a) Check individual schools to see if indeed carrying programs in accountability report.
 - (b) Would be helpful to do some follow through on students after they leave school to see how they measure up against the accountability report.
 - (6) Ascertain success of placing students and follow through on how many found jobs for which they were trained.
 - (7) Study the recommendations made to Congress by the National Advisory Council on Voc Ed.
 - (8) Careful analysis of work study programs to determine if they are merely "make busy" jobs or do they have a meaningful education factor.
 - (9) The same study needs to be done on cooperative ed programs
 - (10) Home Economics has been substantially broadened in the 1976 Act and programs should be studied to see if they reflect those changes in 1978.
 - (a) Percent of male student taking home ec
 - (b) Do the courses reflect aspects of family life
 - (11) Residential Schools - what plans for future and where?
 - (12) Research - Assess effectiveness of State Research Coordinating Units
 - (13) Energy Education - Identify new curricula for supervisory personnel
 - (14) Exemplary and innovative programs - Are any new programs being developed for hard core unemployed?
 - (15) Curriculum Development for new skills
 - (16) Vocational Guidance and Counselling -- Are States spending no less than 20% for vocational guidance. If not, why?
 - (17) Vocational Ed Personnel Training, Upgrading
 - (18) Grants to Assist in Overcoming Sex Bias - Are Programs Effective?

- (19) Special Programs for the Disadvantaged
- (20) Consumer Education
- (21) Vocational Education Data and Occupational Information Data Systems
- (22) National Center for Voc Ed Research
- (23) Bilingual Vocational Training
- (24) Use of Federal Funds
- (25) Grants for Development of Instructional Material
- (26) Remodeling of existing facilities - What programs do State Plans Include?

Vocational and technical education has an enormous responsibility as America enters into a new form of competition with newly emerging industrial powers of the world. This nation is fortunate because it has a strong tradition in vocational-technical education going back to the turn of the century. We have the concept; we have the facilities; we have the dedication; we have the experience; and we have the will to succeed.

As the nation surges forward into a new era of economic growth, vocational-technical education must be a close partner in this venture. The new emphasis on area vocational centers at the high school level and in community colleges at the post secondary level indicate that America is ready for the challenge.

The Mandate given NIE in Section 523(b)(1) of the 1976 Vocational Education Act -- properly carried out -- can assure that vocational education will meet its enormous challenge for the last quarter of the century.