

## DOCUMENT RESUME

ED 330 816

CE 057 482

AUTHOR Lewis, Morgan V.; And Others  
TITLE Assessment of Needs in Vocational-Technical Education in Iowa.  
INSTITUTION Ohio State Univ., Columbus. Center on Education and Training for Employment.  
SPONS AGENCY Iowa State Dept. of Education, Des Moines.  
PUB DATE Jan 91  
NOTE 64p.  
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC03 Plus Postage.  
DESCRIPTORS Academic Education; Articulation (Education); Competence; Coordination; Curriculum; Delivery Systems; Equipment; Facilities; Instructional Materials; Job Placement; \*Needs Assessment; Postsecondary Education; Public Opinion; Relevance (Education); School Districts; Secondary Education; Skill Development; \*Statewide Planning; \*Vocational Education

IDENTIFIERS \*Carl D Perkins Voc and Appl Techn Educ Act 1990; \*Iowa

## ABSTRACT

To fulfill an eligibility requirement of the Carl Perkins Vocational and Applied Technology Education Act, an assessment was conducted of the public vocational-technical programs offered in Iowa. Existing data and reports were reviewed, state staff were interviewed, and site visits to community colleges, area educational agencies, and high schools were conducted in Merged Area V, VI, and X. As part of the site visits, public meetings were held in these areas. A teleconference was also held to obtain comments and suggestions from across the state. The assessment focused on issues that were identified from a review of the new Perkins amendments and the standards for vocational programs set forth in Senate File 449, and from concerns raised by the Committee of Practitioners. The issues are: (1) relevance of programs to the workplace; (2) adequacy of facilities and equipment; (3) competencies, curriculum, and instructional materials; (4) integration of academic and vocational instruction; (5) student skill attainment and job placement; (6) articulation of secondary and postsecondary programs; (7) service to special populations; (8) vocational equity; (9) coordination and cooperation; and (10) the image of vocational education. The assessment concluded that for Iowa to implement the standards of Senate File 449, the major needs for program implementation and expansion are at the secondary level. The state plan for vocational education should include incentives to encourage local districts to cooperate among themselves and with the community colleges in the planning and delivery of vocational programs. (Six references and an appendix are included. The appendix contains needs assessment recommendations, lists of individuals contacted and teleconference participants, and background data.) (NLA)

ED 308 19

U.S. DEPARTMENT OF EDUCATION  
Office of Educational Research and Improvement  
EDUCATIONAL RESOURCES INFORMATION  
CENTER (ERIC)

- This document has been reproduced as received from the person or organization originating it.
- Minor changes have been made to improve reproduction quality.
- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

*Chansen*

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

**BEST COPY AVAILABLE**

## THE CENTER MISSION STATEMENT

The mission of the Center on Education and Training for Employment is to facilitate the career and occupational preparation and advancement of youth and adults

The Center fulfills its mission by conducting applied research and using the full range of resources of The Ohio State University in evaluation studies and by providing leadership development, technical assistance, and information services that pertain to—

- the delivery of education and training for work,
- the quality and outcomes of education and training for employment
- the quality and nature of partnerships with education, business, industry, and labor,
- an opportunity for persons in at-risk situations to succeed in education, training, and work environments,
- the short- and long-range planning for education and training agencies, and
- approaches to enhancing economic development and job creation

**ASSESSMENT OF NEEDS IN VOCATIONAL-  
TECHNICAL EDUCATION IN IOWA**

**Morgan V. Lewis  
Gary M. Grossman  
Robert E. Norton  
Sandra G. Pritz**

**Center on Education and Training for Employment  
The Ohio State University  
1900 Kenny Road  
Columbus, Ohio 43210-1090**

**January 1991**

## FUNDING INFORMATION

**Project Title:** Assessment of Needs in Vocational-Technical Education in Iowa

**Contract Number:** No number assigned

**Source of Contract:** Iowa Department of Education

**Contractor:** Center on Education and Training  
for Employment  
The Ohio State University  
Columbus, Ohio 43210-1090

**Executive Director:** Ray D. Ryan

**Disclaimer:** This publication was prepared pursuant to a contract with the Iowa Department of Education. Points of view or opinions expressed do not necessarily represent official position or policy of the Iowa Department of Education.

**Discrimination Prohibited:** Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance." Title IX of the Education Amendments of 1972 states: "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance." Therefore, The Ohio State University operates in compliance with these laws.

## TABLE OF CONTENTS

Foreword .....	iii
Executive Summary .....	iv
<b>PURPOSE AND BACKGROUND .....</b>	<b>1</b>
Conduct of the Study .....	2
<b>FINDINGS AND RECOMMENDATIONS .....</b>	<b>5</b>
Relevancy of Programs to the Workplace .....	5
Adequacy of Facilities and Equipment .....	7
Competencies, Curriculum, and Instructional Materials .....	9
Integration of Academic and Vocational Instruction .....	11
Student Skill Attainment and Job Placement .....	14
Articulation .....	15
Service to Special Populations .....	19
Vocational Equity .....	22
Coordination and Cooperation .....	24
The Image of Vocational Education .....	26
<b>POLICY IMPLICATIONS .....</b>	<b>27</b>
<b>REFERENCES .....</b>	<b>28</b>
<b>APPENDIX .....</b>	<b>29</b>
Needs Assessment Recommendations .....	30
Individuals Contacted for Study .....	32
Public Meetings and Telenet Conference .....	40
Background Data .....	43

## FOREWORD

In the 1980s the United States came to recognize that a highly skilled workforce is critical to successful competition in a world economy. Together with this recognition came the increasing evidence that our young people were not being prepared as well as their counterparts in other major industrial nations. Improvement in public education became a major priority in virtually every state.

Iowa can be proud of the accomplishments of its educational system. The state consistently ranks at or among the top in student achievement on every measure on which interstate comparisons can be made. Nevertheless, the policymakers for the state saw a need to improve the skills of its students, especially those who do not plan to complete four years of post-high school education.

The response to this need was Senate File 449 which requires a strengthening and expansion of secondary-level vocational education. Many of the initiatives in this legislation are reflected in the Carl Perkins Vocational and Applied Technology Education Act. These two pieces of legislation provide the framework for future initiatives in vocational-technical education in Iowa.

The Center on Education and Training for Employment is pleased that the Iowa Department of Education asked for our assistance in defining these new directions. It is our hope that the assessment which is presented in this report will help to ensure that future efforts are directed to those areas where significant program improvements can be realized.

This assessment was conducted by four senior members of the Center staff: Morgan Lewis served as project director; his colleagues who took lead responsibility for developing different sections of this report were, Gary Grossman, Robert Norton, and Sandra Pritz. The sections that each developed are identified in the report. Mary LaBelle served as project secretary.

On behalf of the Center staff who conducted this assessment I wish to express their appreciation for the excellent cooperation they received from all those they worked with and contacted, both at the state and local levels. The cordial way in which they were received made their work in Iowa most enjoyable, personally as well as professionally.

Ray D. Ryan  
Executive Director  
Center on Education and  
Training for Employment

## EXECUTIVE SUMMARY

The Iowa Department of Education contracted with the Center on Education and Training for Employment (CETE), The Ohio State University to assist in an assessment of the public vocational-technical programs offered in the state. An assessment of these programs is a requirement to qualify for funds available under the Carl Perkins Vocational and Applied Technology Education Act.

A four-member team from CETE conducted the assessment by reviewing existing data and reports, interviewing state staff, and conducting site visits to community colleges, area educational agencies, and high schools in Merged Area V, VI, and X. As part of the site visits, public meetings were held in these areas. A telenet conference was also held to obtain comments and suggestions from across the state.

The assessment focused on the following issues which were identified from a review of the new Perkins amendments and the standards for vocational programs set forth in Senate File 449, and from concerns raised by the Committee of Practitioners:

- o Relevancy of Programs to the Workplace
- o Adequacy of Facilities and Equipment
- o Competencies, Curriculum, and Instructional Methods
- o Integration of Academic and Vocational Instruction
- o Student Skill Attainment and Job Placement
- o Articulation of Secondary and Postsecondary Programs
- o Service to Special Populations
- o Vocational Equity
- o Coordination and Cooperation
- o The Image of Vocational Education

The assessment concluded that for Iowa to implement the standards of Senate File 449, the major needs for program improvement and expansion are at the secondary level. The state plan for vocational education should include incentives to encourage local districts to cooperate among themselves and with the community colleges in the planning and delivery of vocational programs.



## PURPOSE AND BACKGROUND

The new amendments to the Carl Perkins Vocational and Applied Technology Education Act (PL 101-392) require that an assessment be conducted of the vocational-technical programs offered by a state prior to the development of the state plan for the use of the Carl Perkins funds. The Iowa Department of Education asked the Center on Education and Training for Employment (CETE) of The Ohio State University to assist in this assessment by providing a third-party report on the needs of the programs in the state. This is our report of that assessment. The manner in which we conducted the study is described below.<sup>1</sup>

In addition to the new Perkins requirements, Iowa has a new state law, Senate File 449 (SF 449) that sets new state standards for vocational education. An intent of SF 449 is to put more emphasis on secondary-level vocational education. The law requires that each school district that wishes to be reimbursed for its vocational courses must offer and teach integrated sequence of three vocational units in four of six vocational areas: agriculture, business/office, health, home economics, industrial, and marketing. Instruction must be competency-based and articulated for transfer with advanced standing or credit.

SF 449 was passed unanimously by the legislature with strong support from associations representing business and industry. The spokespersons for these associations see the need for more vocational education at the secondary level. They are concerned about the ability levels of recent graduates, despite the fact that Iowa is among the national leaders in percent of students graduating from high school and average ACT scores. The political leaders are worried about the out-migration of young people because there are not enough good jobs to retain them in the state. Iowa was one of only three states to experience a drop in population from 1980 to 1990, and had the largest actual decrease.

Even though SF 449 has broad support among employers and the legislature, it is being resisted by some educators. The Iowa School Boards Association has gone on record as advocating its repeal, although there is some question that this resolution accurately reflects the opinion of the majority of the members. The association was not originally opposed to the passage of the bill. The community colleges are worried about the bill, because they think it will direct a larger proportion of vocational funds to the secondary level. The district superintendents in Area X, the counties surrounding Cedar Rapids, sent a position paper to the director of the Iowa Department of Education outlining their arguments why an increased emphasis on job specific training at the secondary level is not appropriate.

---

<sup>1</sup>The report is written in the first person plural to indicate that its conclusions and recommendations represent the consensus of the four member study team that conducted the study.

These differing opinions about SF 449 make it more difficult to conduct a needs assessment. The prevailing state and federal legislation lay out clear goals for what vocational education is to accomplish, but some of those we talked with during our site visits and the individuals who attended the public meetings feel the initiatives set forth in SF 449 are basically wrong.

From a needs assessment perspective, however, it is necessary to take the position that the purposes for vocational-technical education set forth in the Carl Perkins Act and SF 449 represent the goals for the system in Iowa. These are, after all, the current statements of public policy enacted by representatives of the people. With these as the goals, it is our responsibility, as third-part consultants to the Iowa Department of Education, to assist the Department staff to assess how well the existing system is accomplishing these goals and to determine where the discrepancies between what exists and what is desired are the greatest.

The way the Perkins funds are used is of keen interest in Iowa because these funds considerably exceed the categorical state aid for vocational education. State funding is categorical only at the secondary level. The state designates \$3.6 million for vocational education and the funds flow to local districts on the same basis as the foundation formula. These funds are currently reimbursing the districts for approximately 12 percent of their expenditures for salaries and travel for vocational instructors. State funding at the postsecondary level is not categorical. When it was, the postsecondary institutions received \$ 8.4 million. The Perkins funds have in the past been distributed 75 percent to the postsecondary level and 25 percent to the secondary.

### Conduct of the Study

The new Perkins amendments require that an approved plan for vocational education be on file with the US Department of Education by July 1, 1991. Before this plan is submitted for approval, there must be an assessment of the vocational-technical programs offered by the state, the plan must be drafted to respond to the needs identified by this assessment, and there must be opportunities for review of the plan by designated parties which must include public hearings. These requirements set the parameters within which this third-party assessment was conducted.

The first step in the study consisted of the assembly and review of existing information on the context and conduct of vocational-technical programs in Iowa. These included published reports, statistical data, and unpublished internal documents, such as the reports of evaluations of selected districts and community colleges. An initial listing of the desired information was prepared and interviews were conducted with state staff and other informed individuals to identify other potential resources.

After the assembled materials were reviewed, an initial synthesis of the information they contained was prepared for review by the Bureau of Technical and Vocational Education. This represented a preliminary assessment of the existing situation in Iowa with regard to the key concerns of the Perkins amendments and SF 449, such as the

implementation of competency-based education and the integration of academic skills into vocational instruction. This synthesis was shared with key state officials for their comments and clarifications.

The initial meeting of the Iowa Committee of Practitioners was convened by the Bureau. The members of the committee were asked to identify topics and criteria that should be included in the assessment. The results of their discussion was summarized and shared with CETE staff prior to their site visits.

During the week of January 14-18, 1991, the four CETE staff members who prepared this report visited Iowa for additional interviews with state staff and to conduct site visits to three merged areas: V, VI, and X. The areas were selected because in the judgment of state staff they reflected a variety of conditions that made them representative, one of which is the extent of cooperation among local districts and between these districts and the community colleges in their areas. They also were within reasonable travel distance of one another so that the visiting teams could use their time in the state most efficiently.

In each of the merged areas, visits were conducted to three or four high schools, the community college, and the Area Educational Agency. At the high schools and community colleges, interviews were conducted with administrators, instructors, counselors, students, and advisory committee members. At the AEAs, interviews were conducted with those staff who worked most closely with vocational-technical programs. In the three areas visited, meetings were held in the evening to which any concerned individuals were invited. The appendix lists the individuals who signed in as attending the meetings in each of the areas.

In addition to the meetings in the three areas visited, a telenet conference was held from 1:00 p.m. to 3:00 p.m. on January 18, 1991. There was participation from all of the areas where public meetings had not been held. Written statements that were presented at the public meetings or as part of the telenet conference or were sent to CETE after the meetings were conducted are also included in the appendix.

### Organization of the Report

An analysis of the new federal legislation and SF 449 identified several topics of major concern. The site visits and public meetings confirmed all of these and added a few others that are not directly addressed in the legislation. The topics in this report primarily concerned with instruction are as follows:

- o Relevancy of Programs to the Workplace
- o Adequacy of Facilities and Equipment
- o Competencies, Curriculum, and Instructional Methods
- o Integration of Academic and Vocational Instruction

- o Student Skill Attainment and Job Placement
- o Articulation of Secondary and Postsecondary Programs

Other topics discussed are:

- o Service to Special Populations
- o Vocational Equity
- o Coordination and Cooperation
- o The Image of Vocational Education

The report concludes with a section on Policy Implications.

We, the CETE staff who conducted the study, divided the major responsibility for these topics among ourselves on the basis of our background and expertise. The staff member responsible for each of the sections is identified by a footnote. All of us, however, shared our notes, findings, and conclusions with each other and this report reflects our consensus with regard to the needs in Iowa and the actions required to address these needs.

## FINDINGS AND RECOMMENDATIONS

In each of the following sections, the author presents an overview of the general topic and the situation as we saw it in Iowa. The section concludes with some suggested actions for addressing the needs that were identified by our study.

### Relevancy of Programs to the Workplace<sup>2</sup>

An area that is of major concern in any assessment of vocational-technical education programs is the question of "How relevant are the existing vocational-technical programs to the actual needs of the workplace? To answer this question, we looked at the types of programs being offered, the processes being used to keep the programs relevant, the outcomes of these efforts, and at what the persons interviewed said were the major needs.

Without going into a lot of specifics, it is fair to say that the program offerings are generally in line with the employment needs of the state at both secondary and postsecondary level. The secondary schools we visited primarily offer agriculture, business and office, home economics, and industrial technology. The thinking is that these courses provide general entry level skills that are applicable in a number of occupations and often lead to further study at one of the community colleges. At the community colleges visited, a wide variety of programs in many vocational and technical fields were in evidence.

We were told that several processes were being used to help ensure program relevancy. Spoken of most often was the use of advisory councils to advise the school or college administration on overall program needs and offerings, and the use of occupational advisory committees to advise the teachers regarding specific courses or service areas. We were also told that the teachers and administrators utilize informal feedback received from parents and employers in many cases. Another procedure for keeping programs relevant involves the use of cooperative education work experiences and supervised clinical experiences in hospitals and nursing homes. Some vocational teachers reported the establishment of partnerships and other linkages with local businesses. The conduct of student and employer follow-up surveys was reported, however, by only a few schools. The state conducts a program review every five years.

Some of the outcomes of efforts to offer programs that are relevant to the workplace included the following:

1. One community college reported phasing out a dental assisting program because of a lack of employment opportunities and student interest.
2. It was reported that most agriculture programs have moved from an emphasis on production agriculture to include agriculture related areas.

---

<sup>2</sup>This section was written by Robert E. Norton.

3. The advisory committee members we interviewed were very positive about the qualifications of the vocational program graduates.
4. Nearly 90 percent of the 500 companies responding to a survey said that adult training courses through the community colleges had met the needs of their organization.
5. Nearly 96 percent of the 500 companies responding said they would recommend community college courses to other businesses and industries.

In spite of the generally positive report with regard to program relevance, the following needs were identified:

1. Several administrators at both the secondary and postsecondary levels said it was difficult to keep teachers up-to-date technically. Several suggested specific staff development funds should be allocated by the state for this purpose.
2. We were told that to be most relevant the state developed occupational competencies must be verified locally, with the input of expert workers and employers. Only the basic core competencies should be required statewide.
3. We were told that many of the small rural schools cannot provide a variety of relevant vocational programs for the secondary student without a cooperative effort with other secondary schools and/or a community college. Several administrators and teachers suggested that the state should provide appropriate incentives to encourage such cooperation.
4. One administrator speaking on the relevancy issue urged that schools and colleges maximize their efforts to involve business and industry in substantive ways. Such a close relationship would cause the schools to focus more on the needs of the consumer of their products. Teachers and counselors, especially, need to understand the changing world of work.
5. Several persons emphatically spoke about the need to do more at the high school level for the "60 percent of students who do not elect to get postsecondary training." Some respondents referred to these students as the "forgotten majority." Supporters of this view said job skills are not changing so fast that obsolescence is a problem. Much of the foundation remains the same and students can learn to learn in vocational programs as well as in others. An automotive instructor wrote that students can transfer the problem solving skills they learn in automotive technology into understanding the operation of many mechanical, hydraulic, electrical, and electronic devices used in other fields.

## Adequacy of Facilities and Equipment<sup>3</sup>

Vocational education has traditionally prepared skilled workers and technical personnel in many fields. Properly taught secondary and postsecondary programs can teach, in an applied form, many of the cognitive skills of problem solving and analytical thinking. Properly taught, however, means that facilities are available in reasonable size and condition and that equipment is up to date, serviceable, and available in reasonable quantity. There seems to be wide agreement on the need for good facilities and up-to-date equipment to keep training current with the changing technologies, but considerable disagreement as to who should have what.

The 14th Annual Report of the Iowa Vocational Education Advisory Council (1983) devoted special attention to reviewing the equipment needs of secondary vocational education programs. Twelve state panels identified the equipment needed to teach in as many different programs. The council also obtained survey responses from 481 secondary vocational instructors regarding the availability and status of the recommended equipment. While the report is admittedly a bit dated, the visiting team feels its findings still apply to most but not all of the secondary programs. While the report presents some findings for each of the occupational areas studied, its overall conclusion was: "The replacement/new/additional purchase needs are very significant and are necessary in order to cause the instructional content to be contemporary. Adequate quantities of up-to-date equipment are primary to meeting the vocational education needs of the state."

Facilities and equipment vary widely in the high schools we visited. At some schools the industrial technology and business education facilities and equipment are top notch. The machining equipment in one industrial technology laboratory is comparable to a dedicated machine shop, and the business education program has a full room of new IBM computers. The vocational agriculture program has a large attached greenhouse and shares the industrial technology equipment. In that same school, however, the home economics facility is currently small and has limited equipment.

At another high school vocational agriculture and industrial technology programs are taught in a separate building across the street from the main high school. Both are being offered as shared programs, but enrollments from other high schools are very low. The vocational agriculture facilities are good, but the industrial technology program is housed in a small, dark, unattractive room. This room also houses a precision metal program, which also is offered on a shared basis. The equipment for precision metal is very inadequate.

At a third school the business education rooms are dark and unattractive, and the students have no access to personal computers for word processing. The vocational agriculture greenhouse is unrecognizable as such. These examples are, of course, just a

---

<sup>3</sup>This section was written by Robert E. Norton.

small sample of the facilities and equipment across the whole state, and, indeed, of those we observed, but they reflect the wide variability present in the state.

Several secondary administrators and teachers reported that additional equipment and the upgrading of current equipment is essential if high quality vocational education is to be offered. One secondary administrator wrote a "commitment must be made to keep current with technology in equipment and training...We at the secondary level recommend a larger piece of the vocational dollar...at least 50 percent" go to supporting teacher training, equipment modernization, and curriculum revision at the secondary level. The administrator went on to say "To continue to neglect and cut back in the secondary schools will only feed the growing dropout, unemployed, and underemployed" problems that are currently requiring expensive remedial and rehabilitation services.

At the postsecondary level, we observed that the facilities and equipment were generally excellent or at least good. The facilities we visited appeared excellent and well designed for the uses being made of them. Representatives of one community college expressed a need for renovating some of their 100-year old facilities. The dean of another community college reported that funds for the repair and maintenance of equipment were very short.

Several pleas were made by postsecondary representatives to keep facilities and equipment current at the community college level so as to maintain their capacity to provide relevant training to meet the needs of business and industry. Many schools and colleges were quite successful in getting donations from automobile manufacturers. A secondary principal reported that an equipment pool sharing arrangement is used for expensive equipment via the AEA office (e.g., CNC lathe, laser equipment, CAD system). One home economics program reported excellent success in obtaining new appliances on a yearly basis via a leasing arrangement with General Electric.

A community college administrator argued that equipping labs with up-to-date expensive equipment is not practical for all entities. In addition, student demand to support such elaborate labs would not be possible in the rural small school districts. Cooperative efforts between secondary and postsecondary education for these student experiences would be the most economical.

In summary, the major equipment needs seem to be as follows:

1. The need for equipment update is greatest at the secondary level, but needs to be examined on a school by school and program by program basis to get an accurate picture.
2. Equipment must be kept current at both the secondary and postsecondary levels if training is to keep up with technology and be relevant to the needs of business and industry.



3. Schools and colleges should be encouraged to develop sharing arrangements, seek donations of equipment (which often result when linkages with business and industry are good), and consider leasing arrangements.

### Competencies, Curriculum, and Instructional Materials'

Both Senate File 449 and the new Perkins amendments require vocational programs be competency-based. SF 449 states that a minimum set of competencies will be established by the Department of Education and will include: new and emerging technologies, current industry employment skills, job seeking and job keeping skills, leadership skills, entrepreneurial skills, and basic academic skills.

The state has been working on developing competency lists for over 20 different vocational areas. The state has used a modified DACUM with technical committees made up of incumbent workers to identify the skills to be taught. The lists that the committees developed were sent to a stratified random sample of secondary and postsecondary local advisory committees across the state for review and validation. The comments and suggestions from these reviews are currently being considered by the state level technical committees.

The state also plans to have Iowa state curriculum staff identify the basic skills needed by students in each occupational area. The basic skills identified will then be reviewed by service area committees made up of vocational, language arts, mathematics, science, and social studies teachers.

Once both the occupational competencies and basic skills have been identified and verified, these lists will be incorporated into Program Development Guides for each of the six service areas. In addition to the competencies and basic skills, the Program Development Guides contain information about the use of advisory committees, role of the vocational student organizations, articulation models and processes, model secondary and postsecondary programs, and program adaptations for students with special needs.

We feel the state is to be commended for their extensive involvement of business and industry representatives at both the state technical committee and local advisory committees level. In the field we received a wide range of responses to the competency lists, but there was agreement that there should be lists. Many teachers and administrators reported general satisfaction with the competency identification process used and the products that resulted. Some specific lists were felt to be inadequate while others were believed to be too demanding. Several persons reported that inadequate time was allowed for the local advisory committees to review and respond to the surveys. The visiting team felt the survey forms could have been better formatted so as to facilitate responses and their tabulation. The formatting and time factors could have contributed to the reported

---

\*This section was written by Robert E. Norton

poor rate of response received from the postsecondary level. Some administrators reported the need to halt local curriculum revision efforts which were already underway before the state got involved. Some teachers reported the lists as being very close to what they were already teaching.

A number of concerns or needs were detected as we talked to the teachers, administrators, and advisory committee members about the competencies. The major needs are as follows:

1. Concern was expressed by administrators that the competencies identified are really minimal, and that minimums often become the maximums. The visiting team feels it must be made clear that the local schools and community colleges are expected to add to the minimum competencies, others that are more advanced and/or relevant to the labor market area being served. Vocational teachers and administrators should be encouraged to involve local expert workers in this process after the state provides guidelines and training. It was repeated several times that competency development at the state level violates the strong sense of local control valued by most educators. This concern can probably be overcome easily if the local educators/advisory councils are permitted to do some local modification of the lists.
2. Considerable staff development is needed to help teachers and administrators understand what competency-education is and how it can be effectively implemented (many think it is individualized instruction). Teachers and administrators were almost unanimous in their expression of need for staff development help as they seek to implement the competencies in accordance with recommended strategies. The lists and program development guides alone will not suffice, teachers and administrators need training in how to successfully manage CBE instructional programs.
3. Program Development Guides for each vocational service area need to be carefully and comprehensively developed this year. State staff are already planning for this and have established a tentative table of contents for the guides. It will be important to have both secondary and postsecondary instructors, administrators, and guidance personnel serving on the development teams.
4. Several teachers and administrators said they wanted help with the selection and/or development of suitable curriculum and instructional materials which address the identified competencies. Therefore, the visiting team strongly recommends that one part of the Program Development Guides give special attention to identifying available high quality instructional materials that address as many of the competencies as possible. This could help the teachers avoid "recreating the wheel" and spending time ( which most do not have) developing CBE instructional materials.

5. Several persons interviewed indicated that much work is needed to improve upon the competency assessment process--that it is too subjective and paper-oriented. Teachers felt assistance was needed with more objectively assessing student competency attainment in both the academic and vocational skill areas. As a result of the concerns raised, the state should probably include in either the Program Development Guides or separate documents, information and recommended procedures (with examples) for assessing student competency attainment in both academic and vocational skills.
6. Some teachers and some advisory council members expressed concern that more attention be given to the development and assessment of positive work attitudes. The new Perkins definition of vocational education includes specific references to "work attitudes...Employers say workers are hired because of their knowledge and skills, but usually promoted or fired due to their attitudes."
7. A number of respondents spoke of the need to develop some type of competency transcript or career passport that students could use to show employers what competencies and skills they have achieved and to what degree. A number of postsecondary institutions and some states have already implemented this type of procedure, and others like Ohio are in the process of doing so currently.
8. One state staff member and a few teachers reported a desire to see vocational courses set up on a semester basis without prerequisites so as to maximize the flexibility and opportunity for college preparatory students to take some vocational education.

### Integration of Academic and Vocational Instruction<sup>9</sup>

The integration of academic and vocational instruction is an issue that will require special emphasis in Iowa, given that the issue is targeted by both the Carl Perkins Act and Senate File 449. In response to the Carl Perkins Act, the state must address in its plan (Sec. 113) an analysis of "the capability of vocational education programs to provide vocational education students, to the extent practicable with ... strong development and use of problem-solving skills and basic and advanced academic skills (including skills in the areas of mathematics, reading, writing, science, and social studies) in a technological setting." In Senate File 449, it is stipulated that units of instruction will relate a minimum set of competencies to "reinforcement of basic academic skills" (Sec. 2, Section 256.11) and that the vocational program sequence will address "the strengthening of basic academic skills" (Sec. 4, Section 258.4).

---

<sup>9</sup>This section was written by Sandra G. Pritz.

The concept of integration involves relating vocational instruction to academic instruction for the purpose of promoting gains in vocational students' academic achievement but also, conceptually at least, for the purpose of promoting nonvocational students' ability to use academics meaningfully. The legislation cited emphasizes the first purpose. Yet this challenge overlaps significantly with the mission of the entire educational system and implies, ideally, the joint planning and coordination of instruction of both vocational and nonvocational teachers.

### Summary of Current Status

At the state level, efforts to date have been concentrated on raising the awareness of teachers (both vocational and nonvocational) concerning the need for integration and some of the resources available. A state department staff member has been primarily responsible for this effort and has held a series of workshops for both AEA and district personnel.

The principal vehicle has been the applied academics curricula developed through a consortium effort, of which Iowa is a member, by the Center for Occupational Research (CORD) and the Agency for Instructional Technology (AIT), namely Principles of Technology, Applied Mathematics, and Applied Communications. Four pilot projects were conducted, with special success where the courses were team taught. Samples of the materials were submitted to the Iowa Curriculum Assistance System (ICAS) for teacher use. No estimate was offered as to how widespread the use of the programs is.

The state department has spearheaded the development of occupational competency lists for the various vocational programs per Senate File 449. The next step is to identify related academics competencies so that, as a minimum, these can be reinforced in vocational classes. Preliminary identification, to be subject to verification by academic (language arts, mathematics, science, and social science) and vocational educator committees, is taking place through a contract at Iowa State University utilizing a matching with the Snyder taxonomy of basic skills (developed and extensively used in Arizona).

The perception of state department staff that secondary vocational educators are generally accepting of the definition (or redefinition) of their role as encompassing reinforcement or strengthening of basic and advanced academic skills was confirmed by our visits with both administrators and teachers, who expressed high interest in the integration concept. Although there is recognition of the potential for more explicit teaching of the academic skills inherent in the vocational content, few in the field were aware of the competency identification process underway or of other resources.

At a few of the sites the CORD and AIT applied academics curricula had been or were in use. The most vocal proponent was an industrial arts instructor teaching applied mathematics to a class of "at-risk" students in a very small semi-rural high school. He commented that almost all the students are doing very well, are surprised by their own success, and that they respond to understanding why they are learning the mathematics.

Several other comments related to the use of the applied academics curricula will be included in the Needs section.

Area Education Agency staff with whom we spoke were generally supportive of the integration concept but had had minimal direct involvement. Limited discussion with community college staff indicated that at the postsecondary level, basic academic skills tend to be viewed as prerequisites for vocational programs.

### Needs to be Addressed

Overall, those giving input at all levels recognize that there is significant work to be done to meaningfully implement the integration concept. It is clear that this is seen primarily as an issue for secondary education, although with the assistance of the AEA's and community colleges. The Carl Perkins legislative requirements do pertain to postsecondary as well as secondary education. However, fewer experiences are available for guideposts. It is suggested that the state department needs to act as a catalyst for heightened awareness and dialogue at this level, preparatory to pilot projects to develop an information/experience base.

At the secondary level, the first and foremost need is for a comprehensive plan to be developed at the state level for the integration effort. The state department has coordinated the identification of the academic competencies to be addressed, and educators in Iowa are clearly looking to the state department to provide leadership for the next steps. Since one of the next steps related to the vocational competencies is slated to be development of program guides, it is important that each of these guides include detailed information about how to incorporate (integrate) the academic competencies into the program.

A variety of strategies are being employed across the nation, and the documentation of these efforts (sparse as it is) should be plumbed for helpful information. We heard expressed in the field repeatedly that the approach selected to achieve a particular outcome needs to be suited to a school's situation. The integration issue is a case in point, implying that the program guides could helpfully point out a menu of options with information about the situations in which they tend to be successful. The strategy mentioned most often was team teaching. It is recognized that personal relationships are central to the integration effort and that barriers to interdisciplinary work of vocational and nonvocational teachers must be addressed.

The plan for integration should include strong follow-up on the use of the applied academics curricula, although with recognition that (as was pointed out) use of these curricula cannot by itself constitute integration. Those we spoke with mentioned Principles of Technology most often as desirable to use, even if expensive to equip.

The single greatest obstacle to continued progress in using integration strategies, and possibly other strategies as well, is widespread lack of certainty that academic credit can/should be granted for such courses and that this credit will be fully acceptable for

purposes of admission to Regents institutions. A related issue is the nature of the teacher's certification if academic credit is to be awarded. The decisions made on these issues have implications for the power of these courses to attract numbers of students but also a broad range of students. Rather than allow these courses to have diluted status, the goal should be to use them as a proving ground for the statement made at one public meeting that "Vocational Education is part of a world-class education." A clear need exists to involve interdisciplinary task forces with strong representation of all groups whose concurrence is necessary to settle these issues so as to gain students credit as earned without sacrificing academic rigor.

An additional priority need related to integration is for staff inservice, and this need was expressed repeatedly at all levels. If the program guides are sufficiently comprehensive, these can provide a resource on which to base inservice. Many vocational teachers feel more adequate applying academic skills than teaching them explicitly (and vice versa for academic teachers). They need help learning the methods and resources that can be used. Further, inservice should include such topics as cooperative learning and individualization based on learning styles. Information should be provided about the counselor's role and the administrator's role as well as that of teachers.

Several administrators, teachers, and AEA staff were in favor of designated funding for pilot integration projects from which information could be extracted and shared. Funding for interdisciplinary planning to initiate integration efforts was also sought.

If the foregoing needs are successfully addressed, the integration of academic and vocational education has the potential of providing a more balanced curriculum, higher "status" for vocational education, and an alternative avenue to academic competence for a group of students not now being reached.

#### Student Skill Attainment and Job Placement<sup>6</sup>

Job placement is not a major concern at the secondary level. Enrollments drive what classes are offered, not the job placement of the students who are graduated from these programs. Among the schools we visited, for example, we were told of two attempts to offer training in nursing to respond to local demand. Both of these were not continued because insufficient students enrolled. Part of this lack of interest, it was explained, is because students can get similar training from nursing homes and be paid while learning.

The most recent data on skill attainment and job placements are from follow-up surveys of students who completed or left programs during the 1984-85 school year (Iowa Department of Education 1987a, 1987b). Statewide samples of both secondary and postsecondary students were surveyed one year after leaving school. Sample of employers

---

<sup>6</sup>This section was written by Morgan V. Lewis.

of secondary and postsecondary completers were drawn from those respondents who reported the names and addresses of their current employers, and these were surveyed also.

The employers who returned mail questionnaires rated the skill attainment of both secondary and postsecondary students quite highly. On most of the scales, 75 to 85 percent of the employers chose the two top ratings, about 10 to 15 percent chose the neutral point, and very few chose the two lowest ratings. A recent survey of employers found high levels of satisfaction with the adult training and retraining offered by community colleges (Iowa Department of Education 1991).

About half of the secondary students who were employed were in jobs they described as related to their training, about 90 percent of postsecondary students were. About 40 percent of the secondary students were continuing their education at the postsecondary level.

There is not at present any statewide system to measure student skill attainment. The development of the competency lists and the certification of skill attainment for articulation with postsecondary institutions are initial steps toward such a system. Considerable work will be necessary, however, to satisfy the requirements for performance standards set forth in the new Perkins amendments (Sec. 115).

### Articulation<sup>7</sup>

Articulation between units of secondary and post-secondary education has become a priority in most states. To greater or lesser degrees, the attempt has been made to align various elements of the state's educational system such that a student can move from high school to an appropriate community college, vocational-technical institute, and/or university placement in such a way that the programs of each are effective extensions of the one antecedent to it. Thus, a student is able to, in the context of a general career direction, rationally select and pursue a secondary program that can be developed in greater sophistication at the various postsecondary institutions. Ideally, the student undertakes a competency-based program permitting progress at her/his own speed, and can obtain appropriate credentials either more quickly or have an opportunity to develop more advanced skills than would otherwise be the case.

An effectively articulated secondary-postsecondary program is one that should have value for the educational system as well as the student. Secondary institutions would presumably be aware of the course content for which they are responsible to deliver, also being knowledgeable concerning the options an student has at the postsecondary level. The college, technical institute, and university, on the other hand, can much more easily make assumptions about the background and experience their incoming students have and plan their curriculum accordingly. As such, far fewer resources should be required to provide

---

<sup>7</sup>This section was written by Gary M. Grossman.

beginning or remedial work. Effectively articulated programs, in short, allow colleges to perform their unique functions because high schools have performed theirs.

### Articulation in Iowa

The articulation model is certainly appealing. It is the strength of this logic, clearly, that has driven various attempts by the states to develop effectively articulated programs over the past quarter of a century. Yet, no state has developed a truly well-defined, consistent approach to articulation that compares to the promise of the model. There are a variety of reasons that have been cited for this relative failure, including a lack of resources, other priority educational issues, matters of "turf," etc. Regardless of the reason, states continue to make attempts to realize the model more fully, encouraged in part by federal law, the Perkins Act in particular, but genuinely due to the desirability and economy of the approach.

Iowa is certainly no exception to the norm. Articulated programs, particularly in vocational-technical education, have been under consideration for some time. There are, in fact, some effective programs in certain areas across the state. However, the performance of state-funded institutions in this regard has been inconsistent at best. While some efforts have been made, these could be considered the exceptions that demonstrate the rule, because they are relatively rare. The state has simply not made the progress in program articulation that it had hoped.

The lack of apparent success of articulation in Iowa is perhaps ironic, as conditions in Iowa may be among the most favorable for this approach to effectively develop. Unlike some other states, the K-12 and community college system is housed in the same state agency, vocational-technical education at both the high schools and community college level are located in the same administrative division. Indeed, the several community colleges in Iowa had their origins in secondary school programs themselves. Further, vocational-technical education has a long and respected history in the state, and quality education in general is, by all measures, a point of pride for Iowa's citizens. Finally, not only have Iowa's efforts been encouraged by federal mandates, they have also been driven by state law, most recently SF 449. Clearly, Iowa's educational and political leaders believe that effective articulation is a good idea, one that has not yet been sufficiently productive. It is in this context that the study team considered the question of articulated vocational-technical programs in Iowa.

### Results of the Study

The study team visited a number of community college and secondary sites, as well as a several of the Area Educational Agency (AEA) offices. While the sample of sites was not representative in terms of formal survey methodology, the visits did constitute a somewhat larger percentage of the state's community colleges than would be required under standard sampling theory and also permitted the study team to examine the relationship between a community college and several secondary programs with which it is associated.



This opportunity allowed the team to assess the informal as well as the formal relationship between institutions, which was found to be the single most important factor determining the extent to which articulation arrangements were currently in effect. This foundation, plus the fact that the strong consensus that emerged from the discussions that emerged allowed the team to feel rather confident about its appraisal of sentiment toward articulation in the state of Iowa.

### Barriers to Effective Program Articulation

As suggested before, the current existence of effective articulation arrangements, be they formal or informal, depend largely on the relationship of principal actors at the post-secondary and secondary levels. That is, to the extent that instructors, perhaps, have a history of or interest in working together, an effective program will tend to be in place. Where such liaison does not occur, either no arrangement will be in place or whatever one does will tend to be ineffective. Further, "turf" concerns have been raised as impairing the success of articulation efforts. Indeed, the study team heard reports of suspicion or even hostility between secondary and postsecondary institutions. While the team is in no position to disprove such statements, it encountered no evidence of this. On the contrary, statements were made to the effect that there was no trouble at all working with the local community college or high school. While sometimes concerns were raised about more policy-oriented issues, or fears stated about the impact or administration of a state or federal law, this tended not to be translated into a problem in working with local entities. Indeed, the general consensus expressed both a willingness and an excitement about developing joint programs that worked for both parties.

A particular barrier about which the study team heard repeatedly concerned a series of difficulties in working with the state department of education. Often this dealt with the provision of mandates without funding to do the required job, but more substantively, the respondents stated that its progress was hampered by countervailing requirements in other areas. While SF 449, for example, required schools to develop vocational programs in 4 vocational areas and to create articulation agreements with community colleges, they were increasing the graduation requirements in academic areas. This would have the effect of "squeezing off", as one respondent put it, the supply of students to these vocational areas. This, of course, reduced the amount of funds school could receive that would reimburse their costs for establishing the programs in the first place.

A related concern expressed concerned the perceived dominance of the Regents' institutions (4-year state-funded universities). "it is the educational tail that wags the dog" one respondent declared. Indeed, the largest barrier to which most administrators referred was the impact of the universities in defining curriculum, while serving a minority of the state's youth, particularly special needs and at-risk students. While this perception had a number of points of impact upon education in Iowa, it was believed by some to make genuine articulation impossible, regardless of how strongly it was desired. "In order to work well," one community college administrator reported, "it can't be just '2+2'. It has to be '2+2+2'. And I just don't see that happening." That is, the Regents' institutions would need to cooperate and support the process by modifying their entrance requirements such

that students could progress through to the baccalaureate level, particularly in technical areas, without unnecessary restrictions that do not speak to issues of student competency or achievement. Unless the universities do move in this direction, they will deny the rest of the state educational system a powerful incentive with which to attract students and deny many of the brightest Iowa youth from appropriate experience in vocational-technical education.

A final consideration expressed by a number of educators interviewed concerning barriers to effective articulation, and impacting a number of areas, is that the requisite articulation of vocational-technical programs across the state involves in some cases the installation of new curricula that may call for students to have access to equipment and facilities that particularly small rural schools may not currently have. While some sharing between high schools or between schools and community college is taking place, it is as inconsistent and idiosyncratic as any other sort of arrangement. Clearly, for effective articulation to occur, all schools must have sufficient access to appropriate facilities and equipment to make the required skill development possible.

### Ideas for Implementation

SF 449 has, caused considerable excitement in the state of Iowa for a number of reasons. One of the positive areas of interest across the state concerns the opportunity it affords (some may say forces) for the articulation of programs. While a number of barriers exist, and this report can name only the most prominent ones, most Iowans with whom the study team met are generally enthusiastic about the prospect of articulation. While the time spent was far too short to come up with specific recommendations to assist the state in implementation, a few things do stand out as areas for consideration and action.

1. The state department can best serve the interests for program articulation by serving as a conduit for communication between the secondary schools themselves and between schools and community colleges to facilitate the articulation process. Insofar as effective articulation seems to require relationships across institutional lines, the state department is well positioned to bring appropriate people within an area together. Further, while calls are being made for "statewide program articulation," this notion could threaten the value of local control so prominent in Iowa schools. It can remedy that by setting general guidelines and assisting each region/area to develop creative yet independent ways of addressing them, perhaps by helping in the acquisition process of a key piece of equipment or providing other necessary supports on a case-by-case basis. It can also consider utilizing its authority with discretion, viewing its role as encouraging the process rather than defining it.
2. The Regents' Institutions must be brought aboard as partners in this process. Ultimately, that which is good for the youth of the state is good for the institutions which serve it. Insofar as a quality implementation of program articulation will change (and likely improve) the qualifications of the state's graduates in vocational-technical education, it can proactively assist the process

now rather than respond only when articulation success at the secondary and community college levels create market pressures to force a reaction later.

3. Repeated emphasis in interviews around the state concerned the marketing or "image" of vocational-technical education. Effective program articulation involves the creation of incentives for student participation. These incentives are highly marketable and can be the basis of the presentation of vocational-technical education and its promise.
4. The incentive structure can be enhanced by finding ways of providing advanced standing for secondary students who go on to community colleges in the areas in which articulation agreements are in place.

Effective program articulation contains a great deal of promise for all participants, a point about which Iowa educators seem highly aware. SF 449 does, among other things, provide a strong rationale for appropriate parties to begin working together. Much can be done to assist the quality of that work. As one high school principal stated, "Articulation can work if we can get our acts together." It is the conclusion of the study team that there are sufficient incentives and interest within the state to support that process.

#### Service to Special Populations\*

The new amendments to the Carl Perkins Act do not contain the set-asides previously specified for services to disadvantaged and handicapped students. Any state applying for Perkins funds, however, must provide "a description of the manner in which the State will comply with the criteria required for programs for individuals who are members of special populations and a description of the responsiveness of such programs to the special needs of such students;" [Sec. 113(b)(3)].

One of the provisions of Senate File 449 is that the Department of Education "shall conduct a survey of courses and programs offered at the community college and vocational technical school level which are designated for handicapped students" as a means of determining if modifications should be recommended. Although this requirement is not directed solely to the Bureau of Career and Vocational Education, the Bureau did participate in the study that was submitted as required by the beginning of this year, and some of the recommendations need to be considered in determining suitable directions for services to special populations in vocational programs.

---

\*This section was written by Sandra G. Pritz.

## Summary of Current Status

Under the previous system, the flow of funding through setasides tended to produce different outcomes for small and large districts at the secondary level. Small districts did not qualify for enough funds to file separate applications. Rather, they pooled the funding from their applications through their Area Education Agencies to obtain services from the AEAs. By necessity, these services were mainly in the form of staff development and curriculum assistance and only minimally in the form of direct services to special needs students. A typical example would be the provision of a workshop on the topic of serving special needs students in vocational programs. Although funding would not generally allow for an extensive or intensive experience with follow-up, such inservice has been helpful and has sometimes been supplemented by assistance from Chapter 1 and special education teachers.

In districts large enough to receive their allocation independently, funds have often been used for the purchase of equipment for the programs in which special needs students are mainstreamed with a priority for enrollment. Thus, the equipment benefits all students in the program, not just those with special needs. Similarly, at the postsecondary level, it was indicated that much of the disadvantaged/handicapped funds has been used to equip and staff remediation centers that are available to all students.

It was reported that there is a good relationship between the secondary and postsecondary systems with regard to working with special populations. An example of a coordinated program that was reported to be successful is Vocational Education for Special Students (VESS), designed to enable mildly handicapped students ages 17 to 21 to obtain entry level vocational training along with supportive services such as tutoring, counseling, and therapy and survival skills courses in an extended transition period. This is a joint program of the Arrowhead AEA, Iowa Central Community College in Fort Dodge, and the local school districts to provide sufficient training at the community college site.

## Needs to be Addressed

Among those we talked to there is a real diversity of opinion about how well the needs of special populations are being met at all levels. The postsecondary system has received larger allocations than the secondary system in the past, and some people observed that the disparity is evident in the services provided. The postsecondary institutions claim that their needs are greater because they must provide extra services for special population students who have had negative life experiences since leaving high school. A considerable amount of concern was evidenced about how important it is to be able to maintain the services at least at their present level.

Concern was also expressed by special educators that loss of the Perkins Act setasides for specific use for disadvantaged and handicapped students would have a negative impact on available services. There may, however, be some benefit from increased flexibility in the kinds of services that can be offered, given the change in the funding flow.

It was also mentioned that the effort spent on application and funds administration now needs to be spent on direct technical assistance.

Staff development surfaced repeatedly at all levels as an area of great need, with the comment that it should be focused on educators other than special education specialists who are already knowledgeable in this area, because the vast majority of other educators have had no formal professional preparation for dealing with special population students. In fact, at the postsecondary level no special needs certification is required for the special needs coordinator role, an issue that should be examined. Further, because teachers are faced with a large range of students (increased by mainstreaming), they need to have strategies for individualization in their repertoire.

It would be desirable for the guide on special needs programming currently under development at the state department to be completed and used as a resource for staff development. Because it seems that access and assessment are relatively strong, this guide should stress procedures for individualized planning and follow-through and the need for teamwork between secondary and postsecondary systems and among vocational teachers, nonvocational teachers, guidance counselors, and special education staff in the delivery of a coherent sequence of services.

A related need is for curricular adaptations for special needs students, including LEP students. Funds to adapt physical facilities were identified as a future need.

Two groups were most often mentioned as having unmet needs relatively larger than other special populations, namely the mild to moderately handicapped and those who are identified as at-risk or dropout-prone. Both of these groups tend to be overrepresented in vocational programs. If any point of consensus could be cited, it would be that vocational programs are an effective tool for dropout prevention and for reaching the at-risk population effectively. In the schools we visited, estimates of the percentage of students considered disadvantaged ranged from approximately 25-75%. An additional point is that this population needs to be stretched to meet higher academic standards through quality educational programming.

In addition, these programs are seen as a way to increase the self-esteem of disadvantaged students and give them skills for independent employment, most often directly after their secondary education. We visited an alternative school (Metro High School in Cedar Rapids) where it was clear that all these benefits were fully exploited on behalf of the students, all of whom were recruited to the school because they were seriously at risk.

An improved data collection system was one of the needs cited in the Postsecondary Handicapped Education Study (1990), specifically to include the number of students with handicaps who enter schools, complete or drop out of programs, and who are placed in employment or other training. Iowa's previous statewide followup studies of special education graduates and dropouts have pointed out information helpful for planning improvements in programs and also in the data needed.

Finally, concern has been expressed over the use of Pell Grants as the qualifier for special needs funding, given that they reflect economic but not other types of disadvantage. Perhaps a need exists to explore how the funding can be implemented so as to ensure the incorporation all types of need in its designated uses.

### Vocational Equity<sup>9</sup>

The central issue to which equity concerns in vocational-technical education have been directed is as old as the discipline itself. Jobs tend to be stereotyped by gender, systematically discriminating between members of both sexes, irrespective of occupational skills, abilities, interests, or other relevant considerations. It stands to reason, then, that a way to effectively address this inequity is to recreate job training programs in such a way that the pool of available workers is changed. This could, if desired, create some balance between those individuals trained for various occupations, helping ensure that employers have available sufficient numbers of persons to make "non-traditional" choices. Further, this intention would be backed by legislation making it illegal to hire according to criteria other than skill-related ones. Hence, discriminatory hiring becomes virtually impossible.

In a perfect world, approaches to equity work perfectly. However, the world of employment and training is less than perfect. The system breaks down at several points, most clearly at the training level. Programs emphasizing trades and industries are still overwhelmingly male-dominated and oriented. At the other extreme, business/office and home economics occupational training are, in most places, the principal vocational programs for women. In addition, there are a variety of factors perpetuating these trends including attitudes developed by students and their parents in the socialization process about jobs that men and women presumably do. However, these attitude biases are not solely those of non-educators. The literature is substantial suggesting that counselors and teachers, particularly older ones, tend to perpetuate such biases. As these attitudes remain in place, they impact not only students directly but also establish a resistance to change at the system level. These processes exist also in Iowa.

### Barriers to Sex Equity in Iowa

The study team uncovered little in the way of explicit attempts at discriminatory patterns of programming or admissions, either at the secondary or post-secondary levels. However, upon visits to the classrooms, we saw few women in traditionally male programs or men in traditionally female programs. This in itself is no proof of discriminatory attitudes by the school, only being suggestive that the equity effort in the state has a considerable way to go toward success. Of course, some places appeared to be better positioned on this issue than others, even in relatively rural areas. Asked about the

---

<sup>9</sup>This section was written by Gary M. Grossman.

problem by the study team, four female students at one small high school reported very good gender mixes in their high school.

In terms of addressing this issue, setaside funds for sex equity and displaced homemakers in the new Perkins legislation is one of the few remaining population specific goals. The distribution of these funds in Iowa has tended to encourage competitive proposals from local schools and community colleges. The best proposals tend to win the funds. The difficulty here is that those schools best equipped and staffed to propose winning programs will be those which already have the expertise with which to create them. This may bias the distribution of those funds to institutions which may not be in quite as great need compared to those schools which do not have such staff support but do in fact require assistance.

The problem is perhaps at its most crucial with respect to displaced homemakers, for whom the current availability of job opportunities may be at its most urgent. While most areas have programs available, they are most likely to be of a career awareness or occupational exploration variety. This is not likely to address the areas of most urgent need for these individuals. Further, while these persons certainly require those services typically found in most sex equity programs, they also tend to have special requirements for support in such areas as tuition assistance, transportation, funds for classroom equipment and tools, and, perhaps most critically, child care. At the community college level, all campuses should have assigned sex equity professionals who could obtain and coordinate these services for displaced homemakers, providing child care if possible.

Finally, the educational system in Iowa could be more aggressive with respect to all aspects of the employment training process. Employers, as well as educators, tend to have gender stereotypic views. Clearly, more could be done to assist them in developing new attitudes which may be among the most important contributions to sex equity that educators could make.

### Ideas for Consideration

The issue of sex equity appears to be relatively non-controversial among Iowa educators. There seems to be an understanding of the problem and a general recognition that something should be done to encourage sex equity in the workforce. Indeed, a number of quality efforts are underway, some of which already incorporate the suggestions made below. However, the study team thought it useful to encourage these efforts by citing the following items:

1. Staff development in sex equity issues was widely reported to be a need for Iowa educators. The study team would tend to agree. Further, this need would seem to be on-going, due to the turnover in personnel and the degree of the problem, particularly in vocational-technical areas.
2. Employer attitudes were identified on several occasions as presenting barriers to program completers. The state department could consider reaching out to

the business and industry community to discuss employer opportunities and benefits in non-traditional hiring practices.

3. The state could encourage or explicitly mandate that funds for displaced homemakers under Perkins include support for child care, equipment, tuition, etc.
4. Efforts could be made to recognize those programs with the highest quality sex equity and displaced homemaker programs by establishing an annual awards program for secondary and postsecondary teachers, administrators, and institutions.
5. Special training programs for vocational and guidance counselors could be provided to assist them in best serving their students in order to avail both men and women in opportunities in non-traditional occupations.

As has been indicated, the types of needs the study team found in Iowa are by no means unique to the state. Indeed, the primacy of sex equity in federal law is indicative of its perceived importance nationally. As well, there are some exemplary programs within the state that comply both to the letter and the spirit of state and federal law. These efforts should be encouraged and expanded, not only to benefit individuals, but also to best secure Iowa's future.

#### Coordination and Cooperation<sup>10</sup>

At the state level, vocational education coordinates with programs offered under the Job Training Partnership Act (JTPA) primarily through the 8 percent setaside of JTPA funds. Sometimes funds from the Perkins Act are added to the 8 percent for specific projects, such as those directed to community-based organizations or corrections. These funds are distributed on a competitive (RFP) basis for projects jointly determined by staff from the Department of Education, the Department of Economic Development, the state-level JTPA administrative entity, and the Department of Human Services, which administers welfare programs. The attempt is made to direct funds to problems not being adequately addressed by on-going programs. Some examples include training for the insurance industry, asbestos removal, and automated manufacturing, programs for at-risk youth, and training and coordination for volunteer literacy tutors.

At the local level, in eight of the JTPA service delivery areas, the community colleges serve as the administrative entities. In most of the state the service areas of the community colleges and the JTPA SDAs are contiguous. This arrangement usually leads to good working relationships between the staff responsible for JTPA programs and those responsible for the regular instructional programs of the college. Staff frequently complain

---

<sup>10</sup>This section was written by Morgan V. Lewis.



that the JTPA paperwork is much more burdensome than that required for regular programs, but if the JTPA staff helps the schools, especially in documentation of eligibility, this problem is minimized.

Coordination with the JOBS program is also primarily through the community colleges. In Iowa, JOBS is called Promise JOBS and the intake and processing of clients is performed for the Department of Human Services under a contract to the Iowa Employment Service. If it is determined clients need education or training, they are referred to JTPA which assigns them to appropriate programs. The ABE and GED training for welfare clients, and some skill training is provided by the community colleges. The community colleges also contact all welfare recipients who do not have high school diploma to invite them to take part in ABE/GED programs.

Coordination with related noneducational programs is not a major concern of the secondary districts. The limited secondary involvement in coordination activities probably explains why the Regional Planning Boards required by SF 449 were rarely mentioned by secondary administrators. Even when asked about RPBs specifically, it was apparent secondary administrators had not given them much attention.

AEA and community college administrators, in contrast, have given RPBs a lot of consideration, and all of it indicates to them that RPBs were not needed. The real fear among community colleges is that RPBs will be another layer of bureaucracy that the colleges will have to go through to do what the colleges feel must be done to meet the education and training needs of their areas. The AEA administrators point out that they have elected boards which are representative of all the community districts in their areas. It is the opinion of the AEA administrators that their boards, together with the boards of the community colleges, can appoint joint committees that can perform all the functions assigned to the RPBs, at no or little additional cost. The present planning is to allocate \$50,000 for the RPB in each of the 15 areas, for a total of \$750,000. The community college and AEA administrators feel those funds can be better used to provide services to students.

Whatever form the regional planning process takes, there will be an increasing need for this function to be performed. As has been noted at various points in this report, SF 449 will require increased cooperation among local district and between these districts and the community colleges. Regional leadership can assist this process by assessing the needs of employers and present and future workers and by bringing parties together to offer shared programs to meet these needs in the most efficient way.

## The Image of Vocational Education<sup>11</sup>

In Iowa, as in every other state where Center staff have conducted studies, we heard many references to the "image" of vocational education, especially the image at the secondary level. Image is a problem because vocational preparation is perceived as less desirable than the college preparatory program, and this perception is often based on limited, often inaccurate information about what vocational education actually teaches.

Repeatedly in the public meetings and in individual interviews with administrators and teachers the strong desire among parents and students for college preparation was noted. Typically counselors reported that when ninth grade students are asked what they plan to do after high school, about nine out of ten say they plan to go to college. Of course, not all of these plans are carried out, but once students start college preparatory programs, little room is left in their schedules for vocational courses.

It was often noted that the average age of community college students in Iowa is 27. Many of the individuals we talked with thought that this is due to the lack of good career guidance. Many of these older students had planned while in high school to go to four-year institutions and either changed their plans or entered these institutions and dropped out. They then drifted from one low-skill job to another until they realized that if they were to obtain a preferred job they must acquire some specialized training. It is when they reach this point that they enter the community colleges.

The most frequent suggestion to deal with this emphasis on college preparation was to "market" vocational education more aggressively. A marketing campaign would have two major emphases. The first would be to provide better career information and opportunities for occupational exploration to students prior to high school. The second would be to inform the public in general, and parents in particular, about the kinds of jobs and earnings that vocational education can lead to.

Those who advocate this approach believe it will encourage young people to develop career plans that are more consistent with their interests and the employment opportunities available to them. Improved occupational information and career guidance could help students to use their high school years more productively and to avoid the occupational floundering (Hamilton 1987) that many undergo after they graduate.

---

<sup>11</sup>This section was written by Morgan Lewis.

## POLICY IMPLICATIONS

If Iowa is to implement the provisions of Senate File 449, the need in vocational-technical education is primarily at the secondary level. The postsecondary system is, by design and as a result of past funding practices, superior to the secondary on virtually any measure of program quality.

If the people of Iowa had chosen to continue the emphasis on the postsecondary level, the lower quality of the secondary programs would not necessarily have been a problem. The Iowa educational system is consistently among the best in the nation as measured by criteria such as performance on college entrance examinations and the percentage of students who graduate from high school. Senate File 449 indicates, however, the intention of the elected representative of the people to strengthen and expand opportunities for vocational instruction at the secondary level. Given the emphasis in Senate File 449 as a stated goal of the educational system in Iowa, the major need for program improvement is clearly at the secondary level.

Having said this, it was apparent from the information we reviewed and the site visits we conducted that it would be impossible for every school district in Iowa to meet the requirements of Senate File 449 on their own, no matter how much financial assistance they received. Many districts simply do not have enough students interested in vocational courses to make it feasible to offer a sequence of three integrated courses in four different vocational areas. As the programs are improved and increased career guidance is offered, more students may be attracted into vocational courses. Even if interest increases, however, many districts will still have to cooperate with other districts or the community colleges to satisfy the standards in the new legislation.

Another factor that must be considered is the deep and widespread support for local schools. The small communities we visited are proud of their schools. The individuals we talked with feel that the level of local support and attention students receive in these schools more than compensates for the smaller number of options they are able to offer.

Given this context, it is our judgment that Perkins funds will have maximum impact if the following emphases are reflected in the state plan for the use of these funds:

- o The need for improvement of program quality is greatest at the secondary level.
- o Mechanisms should be included in the plan that provide incentives for cooperation among local education districts and between these districts and the community colleges that serve their merged areas in the planning and delivery of vocational programs.
- o There is a widespread need among vocational teachers to improve their knowledge and skills in the methods of competency-based education and in techniques to integrate basic academic skills into vocational instruction.

## REFERENCES

- Hamilton, Stephen F. "Apprenticeship as a Transition to Adulthood in West Germany." *American Journal of Education*. 95, 1987: 314-345.
- Iowa Department of Education. *Results and Recommendations of the Postsecondary Handicapped Education Study as per Senate File 449*. Des Moines, IA: Author, 1990.
- Iowa Department of Education. *Report on Secondary Student and Employer Follow-up. 1986 Sample Survey*. (Pub. No. CE-87-R1), Des Moines, IA: Author, 1987(a).
- Iowa Department of Education. *Report on Postsecondary Student and Employer Follow-up. 1986 Survey*. (Pub. No. CE-87-R2), Des Moines, IA: Author, 1987(b).
- Iowa Department of Education. "Community Colleges Receive High Marks from Iowa Businesses and Industries." News Release, January 7, 1991.
- Vocational Education Advisory Council of Iowa. *14th Annual Report to the Iowa Board of Public Instruction*. Des Moines, IA: Author, 1983.

**APPENDIX**

## NEEDS ASSESSMENT RECOMMENDATIONS

Completed by the Committee of Practitioners

### Curriculum

1. Role of "testing."
2. Types or methods of testing or assessment.
3. Dealing with Special Populations, especially LEP's and Special Education students (ability of programs to provide services).\*  
\*Also categorized with Staff Development.
4. Assess private sector:.\*
  1. Amount of training done.
  2. How much of the training is directed in the basic skills.\*Also categorized with Partnerships and Image.

### Students

1. Ease of transition (credit driven and direct entry into workforce) for students.
2. Student input.

### Staff Development

1. Assess guidance counselor involvement in career/voc.ed
2. Assess guidance counselor preparation.
3. Counselor's knowledge of the future workforce needs.
4. Assessment of voc ed staff.
5. Certification of staff.
6. Availability of staff.
7. Staff perception of their role.\*  
\*Also categorized with Image.

### Partnerships

1. Need for increased linkages between voc. ed and workplace (or with CBO's and AEA's).
2. Linkage between high schools and community colleges (or with CBO's and AEA's).
3. Linkages between community colleges and universities.

## Policy

1. Commitment to voc. ed by school boards and boards of trustees.

## Image of Vocational Education

1. Perceptions about voc. ed (at all levels); attitudes of policy makers in educational institutions.
2. Status of voc. ed programs as serving only "at risk" students. Status of including "gifted and talented" students in voc. ed.

## INDIVIDUALS CONTACTED FOR STUDY

### State Level

#### Department of Education Division of Community Colleges

Joann Horton, Administrator

#### Bureau of Technical and Vocational Education

Phyllis Herriage, Chief  
Roger Folske, Assistant Chief

Steven Boal, Program Management Services  
Lee Crawford, JTPA Services  
Margaret Ellibee, Agriculture Education  
Jim Fliehler, Program Management Services  
Thomas Grimm, Program Management Services  
Myril Harrison, JTPA Services  
Gerald Lamers, Agriculture Education  
George Lawry, Program Management Services  
Victor Lundy, Trade and Industrial Education  
Kenneth Wold, Program Management Services  
Mary Wiberg, Vocational Equity

#### Bureau of Educational and Student Services

Robert Yeager, Assistant Chief  
  
James Athen, Career Information Systems of Iowa  
Beverly Gillette, Adult Education  
Sandra Schmitz, Special Needs  
Miriam Temple, Adult Education

#### Other Divisions

Oliver Himley, Chief, Bureau of Federal School Improvement  
  
Gary Hendricks, Guidance Service  
Jan Huss, School Administration and Accreditation  
Pat Sitlington, Career/Vocational Education for the Handicapped



## Others

Philip Dunshee, Administrative Assistant to the Governor  
Harlan Giese, Executive Director, Council on Vocational Education  
Tom Glenn, Member Iowa Board of Education  
Jay Hosterman, Iowa School Boards Association  
David Klienfelter, Rural Schools of Iowa

## Committee of Practitioners

Philip Burmeister, Superintendent, Mt. Ayr Community School District  
Mary Jane Murcheson, Vice-President Iowa Parent-Teachers Association

## Merged Area V

### Iowa Central Community College

Jack Bottenfield, President  
Melvin Schroeder, Vice President, Academic Affairs

Joan Abram, Director, Special Needs  
Wally Buons, Director, Secondary Joint Effort  
Bill Giddings, Director, Adult and Community Education  
Carol Koepplen, VESS, Vocational Education for Selected Special Students  
Barb McClannahan, ICE, Individualized College Education

### Department Heads

Gary Astor, Marketing and Agriculture  
Ray Beets, T & I  
Luvern Bierle, Business Administration Office  
Delores Kollasch, Health Occupations

### Faculty

Barbara J. Anderson, Office Occupations Instructor  
Mary M. Conrad, Coordinator, Administrative Secretary Program  
Jo Elberg, Nursing Faculty  
Harold J. Frentress, Coordinator, Food Marketing Program  
Wayne C. Goodno, Mechanical Drafting  
Mindy Hadjis, Nursing Instructor  
Karen Johnson, Nursing Instructor  
Barbara Kolesar, Medical Assistant Education  
Lonnie Lasher, Telecommunications  
Iona Lynch, Nursing Instructor  
James F. Wiggerman, Machine Trades

Iowa Central Advisory Committee

Jerry Beck, Office Occupations  
Steve Gibson, Nursing  
Pat Koster, Electronics  
John Mors, C-100  
Ron Rasmussen, Machine Shop  
Toni Sullivan, Medical Assisting

Area Educational Agency

Donald D. Ambroeon, Chief Administrator  
Jim Buddenhagen, Consultant with responsibility in Curriculum, Career Education,  
and Vocational Education--Industrial Technology  
Beverly Fisher, Special Education Supervisor  
Sherri Forbes, Vocational Education for Special Students, VESS Coordinator  
Harlan Hawley, Transition/Work Experience Coordinator  
Carol Kolpplin, Vocational Education for Special Students Coordinator  
Fritz Krueger, Special Education Director  
Glen P. Lookingbill, Director, Educational Services Division

Ft. Dodge Community Schools

David Haggard, Superintendent  
Bob Willis, Assistant Superintendent for Curriculum

Ft. Dodge Senior High School

Dick Clark, Principal  
Rick Kuhlman, Assistant Principal  
Trudy Yoder, Coordinator, Applied Arts and Sciences

Marvin Berg, Electronics  
Carol Ebner, Home Economics  
Phillip Hanson, Drafting  
Mike Schroeder, Vocational Welding  
Herb Teiglend, Power Mechanics  
Glen Wenger, Vocational Auto  
Gary Winkler, Machine Shop

Jefferson Community Schools

Robert Schmidt, Superintendent  
Diane Blackmer, Curriculum Director  
Bruce Bahnon, School Board Member  
Helen Lehman, Parent

Roger Aegerter, Curriculum Coordinator, Patton/Churdan and East Greene

Jefferson High School

Gerald Waugh, Principal

Dan Benitz, Vocational Education Director  
Dave Briggs, Vocational Agriculture  
Tim Buenc, Technology Coordinator  
Dave Destival, Industrial Technology  
William Limurg, Guidance Counselor  
Rose Olhausen, Home Economics  
Suzanne Sievers, Home Economics  
Robert Vander Platts, Business Education

Lake City Community Schools

Vernard A. Keerbs, Superintendent  
Kevin Brummer, Curriculum Director

Southern Cal Community High School

Walter C. Block, Principal

Russ Adams, Business Education  
James Angove, Industrial Technology  
Kenneth Gordon, Guidance Counselor  
Julia Jacobs, Business Education  
Ed Ricks, Agriculture Education  
Beth Stephas, Home Economics

Merged Area VI

Iowa Valley Community College District

John J. Prihoda, President, IVCCD  
Beverly Nelson, Assistant President  
Bill Simpson, Dean of the College, MCC  
Gerald J. M'Crigh, Assistant Dean, MCC

Conrad Dejardin, Director, Continuing Education, IVCCD  
Frank R. Hartzler, Rehabilitation Counselor, MCC  
Mary Kraljic, Placement Officer  
Bill Martin, Special Needs Administration, IVCCD  
Janet Mead, Counselor, MCC  
Darwin Miller, Chair, Agriculture and Building Trades Department  
Gary Pesser, Dean of Instruction, FCC  
Diane Roselle, Counselor/Placement Officer, MCC  
Greg Snere, Chair, Department of Marketing  
Mark Steinberg, Research & Development, IVCCD

#### District VI Iowa Valley Advisory Council

Douglas Bruster, Employee Relations Manager, Lennox Industries, Inc., and  
Chairman of the Advisory Committee  
Jan Ferguson, Project Manager, Fisher Controls International  
Blair Kline, Project Coordinator, Mid-Iowa Community Action  
Rosemary Schrack, Administration/LPN, Sunny Hill Care Center, Tama  
Dean A. Stalzer, Owner, Farmer, Iowa Falls  
Richard Vybrial, Owner, White Greenhouses Co.

#### Marshalltown Community Schools

Steve Williams, Superintendent

#### Marshalltown High School

Bob McCormack, Principal  
Karen Clorey, Home Economics  
Larry Fox, Guidance  
Eldon Ott, Marketing and Distributive Education  
Dick McBride, Industry Technology  
Donna Packer, Office Education Coordinator

#### Advisory Council Members

Kay Beach, Office Manager, Dental Clinic  
John A. Bush, UAW Education Committee  
Kevin Lageschulte, Designer Fisher Controls and Program Director for M'Town  
Junior Achievement  
Nancy Meyer Dairs, Marshall County Child Care Services

Area Educational Agency

Larry Erior, Director of Educational Services Division  
Marvin Lewis, Director of Special Education Division  
Sandy Schaefer, Education Consultant  
Linda Vann, Work Experience Coordinator

Alden Community Schools

James Jess, Superintendent  
Joel Ebert, Curriculum Director

Alden High School

Mike Niece, Principal  
  
Kenneth Ford, Industrial Technology  
Bill Herr, Business Education  
Pat Schumacher, Advisory Committee  
Cathy White, Home Economics

Eldora Community Schools

Ingvert Appel, Superintendent

Eldora High School

James Sogard, Principal  
  
Jan Dirks, Business Education  
Dick Fisher, Business Education  
Glenn Hinders, Counselor  
Howard Marsh, Vocational Agriculture  
Randy Tjaden, Industrial Technology

Merged Area X

Kirkwood Community College

David Jensen, Dean Vocational Education  
Richard Lake, Assistant Dean  
  
David Bunting, Dean of Iowa City Campus  
Bob Burnes, Director Developmental Education  
Keith Chapman, Agriculture  
Charles Hinz, Special Needs

Vivian Klaus, Assistant Dean, Health Science  
Dale Simon, Assistant Dean, Business

Area Education Agency

Ronald Fielder, Administrator

Cedar Rapids Community Schools

Stephen Daeschner, Superintendent  
Steven Chambliss, Executive Director, Middle and High Schools  
Walter Hartman, Curriculum Facilitator

Jefferson High School

Robert Tesar, Principal  
David Hoyt, Assistant Principal

Ann Bey, Business Education  
Jim Cox, Industrial Technology  
James O'Brien, T&I Coordinator

Metro High School

Mary Wilczynski, Principal

Joyce Jeanblanc, Food Service  
Kathleen Knudtson, Language Arts (Vocademics)  
Diane Lewis, Day Care

Vinton Community Schools

Everett Hidlebaugh, Superintendent

Vinton High School

Larry McNabb, Principal

Curtis Corwin, Industrial Technology  
Duane Fisher, Ag Science and Technology  
Ruth Owens, Home Economics/Health  
Bill Reams, Industrial Technology

Benton Community Schools

Harold Merchant, Superintendent

Benton High School

Donald Gibney, Principal

Robert Hanson, Vo-Ag Teacher

Bonnie Rohlena, Home Economics Teacher

Karen Schlue, Home Economics Aide

## PUBLIC MEETINGS AND TELENET CONFERENCE

As part of the assessment, public meetings were held in three merged areas and a statewide telenet conference was conducted. The dates and locations of the public meetings were as follows:

January 15, 1991,	Merged Area V, Iowa Central Community College, Ft. Dodge
January 16, 1991,	Merged Area VI, Iowa Valley Community College, Marshalltown
January 17, 1991,	Merged Area X, Kirkwood Community College, Cedar Rapids
January 18, 1991,	Telenet conference with participation from all merged areas where public meetings were not held.

On the following pages are the names and affiliations of all individuals who attended the public meeting and entered their names on the sign-in sheets. Following these lists are prepared statements that were presented at the meetings or sent to CETE following the meetings or the telenet conference.



Merged Area V, Ft. Dodge

Vicki Rueckert, Vocational Education Council/Superintendent, Storm Lake  
Dave Havlik, Humboldt High School  
Sherri Forbes, Vocational Education for Special Education/AEA/ICCC  
Wayne P. Aspholm, Vocational Education Council  
Mary Unberg, Iowa Department of Education  
Bob Dunker, Western Iowa Tech  
Ann Brodersen, Self-employed  
Bill McAnall, ICCC  
Dave and Delores Hoover, Parents  
Harold D. Prin, Superintendent, Algona CSD  
Floyd Hutzell, ILCC Technology, Algona  
Duane D. Mutzger, Parent-Voc Tech Task Force, SD  
Jan Sower, Middle School Home Economics Teacher, Algona  
Julia Jacobs, Southern Cal High School (Business Education)  
Clark Garner, Algona Community School  
Carol Koeplin, Arrowhead/ICCC  
Glen V. Leesebybill, Arrowhead AEA-5  
Judge Brown, Board of Education, Ft. Dodge

Merged Area VI, Marshalltown

Ray Olson, Iowa Western Community College  
Karen Clover, Marshalltown High School  
Nate Northey, AEA-7  
Jim Eckhardt, West Marshall  
Tom Higgins, West Marshall, LDF/SEMCO  
Otis Elkie, IWCC  
Larry Erion, AEA-6  
John Legg, South Tama County Schools  
Mike Pfantz, West Marshall  
Linda Lewis, AEA-6  
Joy Lettow, Alden  
Kathy White, Alden  
Steve Williams, Marshalltown  
Donna Packer, Marshalltown  
Mike Milligan, Wellsbury, Steamboat Rock Community School  
Bob Crouse, Grundy Center Community School  
Linda Vann, AEA-6  
Joyce Huff, Marshalltown High School  
Sandra Schafer, AEA-6  
Bill Simpson, Marshalltown C.C.

Merged Area X. Cedar Rapids

Ronald Rath, Kirkwood Community College  
Gordon Maney, Conveyor Engineering  
Harold Merchant, Benton Community School  
Louis Doty, Deep River, Millersburg School  
M.C. Joe Rayer, Grant Wood AEA  
Ken Steine, College Community Schools  
Jack Mann, Belle Plaine (instructor)  
Sandra Mann, Belle Plaine (instructor)  
Curtis Corwin, Vinton/Shellsburg Community Schools  
Sandy Miller, Williamsburg Community Schools  
Sally Fairchild, Metro High School  
Jerry Ferguson, Tipton Community School  
Mike Malloy, Williamsburg (instructor)  
Ron Rath, Kirkwood Community College  
Everett Hidlebaugh, Vinton/Shellsburg  
Patty Miles, Prairie High School  
Harlan LeClere, Monticello Community School  
Sue Updegraff, AEA-1  
Charlotte Lee, Muscative Community College  
Louis Doty, Deep River, Millersburg School  
Ralph Stotts, Millersburg DRM  
Bonnie Rohlena, Benton Community  
Midge Kjome, Northeast Iowa Community College  
David Oaeyr, Scott Community College  
M.C. Joe Rayer, Grant Wood AEA  
Chuck Hining, College Community Schools  
Chuck Hining, College Community Schools  
Guy Stackhouse, KCC  
Rich Lake, KCC  
Maurice McDonald, Midland Community  
Ted Miller, Williamsburg (farmer)

**BACKGROUND DATA**

Submitted at Area V Public Meeting by

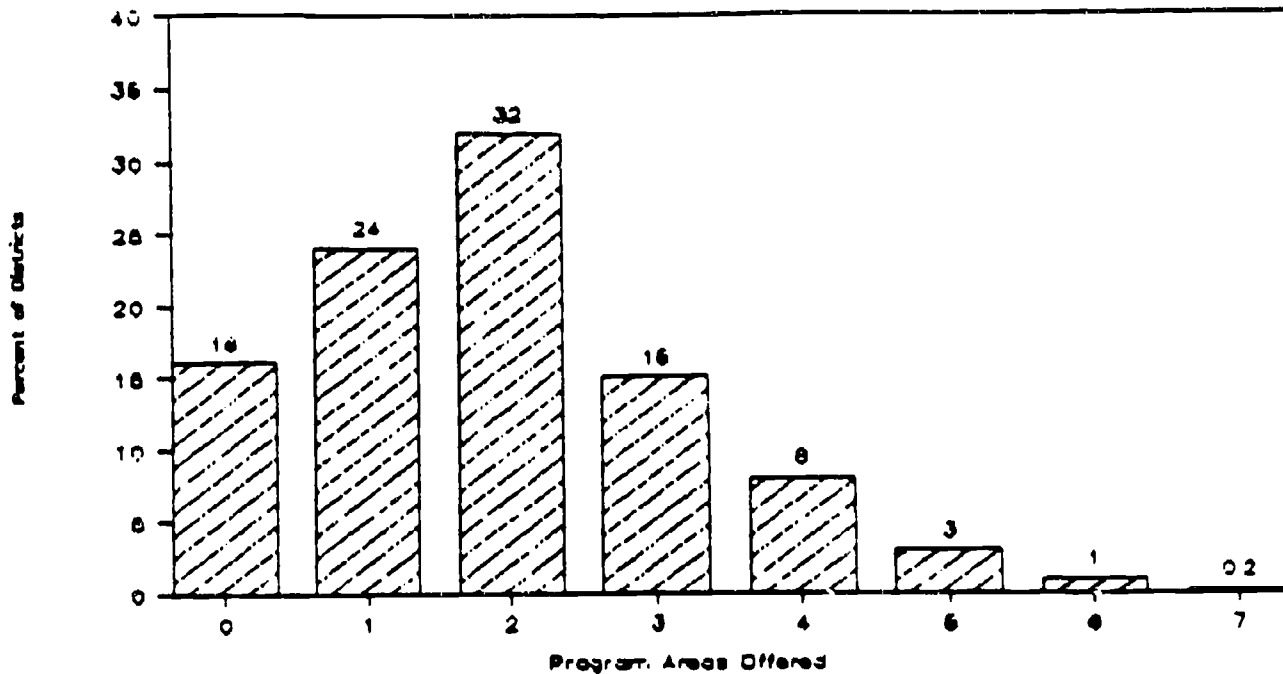
**Vicki Rueckert, Member  
Iowa Council on Vocational Education**

and

**Superintendent  
Storm Lake Community Schools**

GRAPH 9

Diversity of State Approved Vocational Education Programs  
Areas Available to Secondary Students in Iowa's 436 Districts  
1986-1987 School Year



Source: Iowa Department of Education, Reimbursed Vocational Programs Reported by District (Computer Data), March and April 1988

TABLE 1

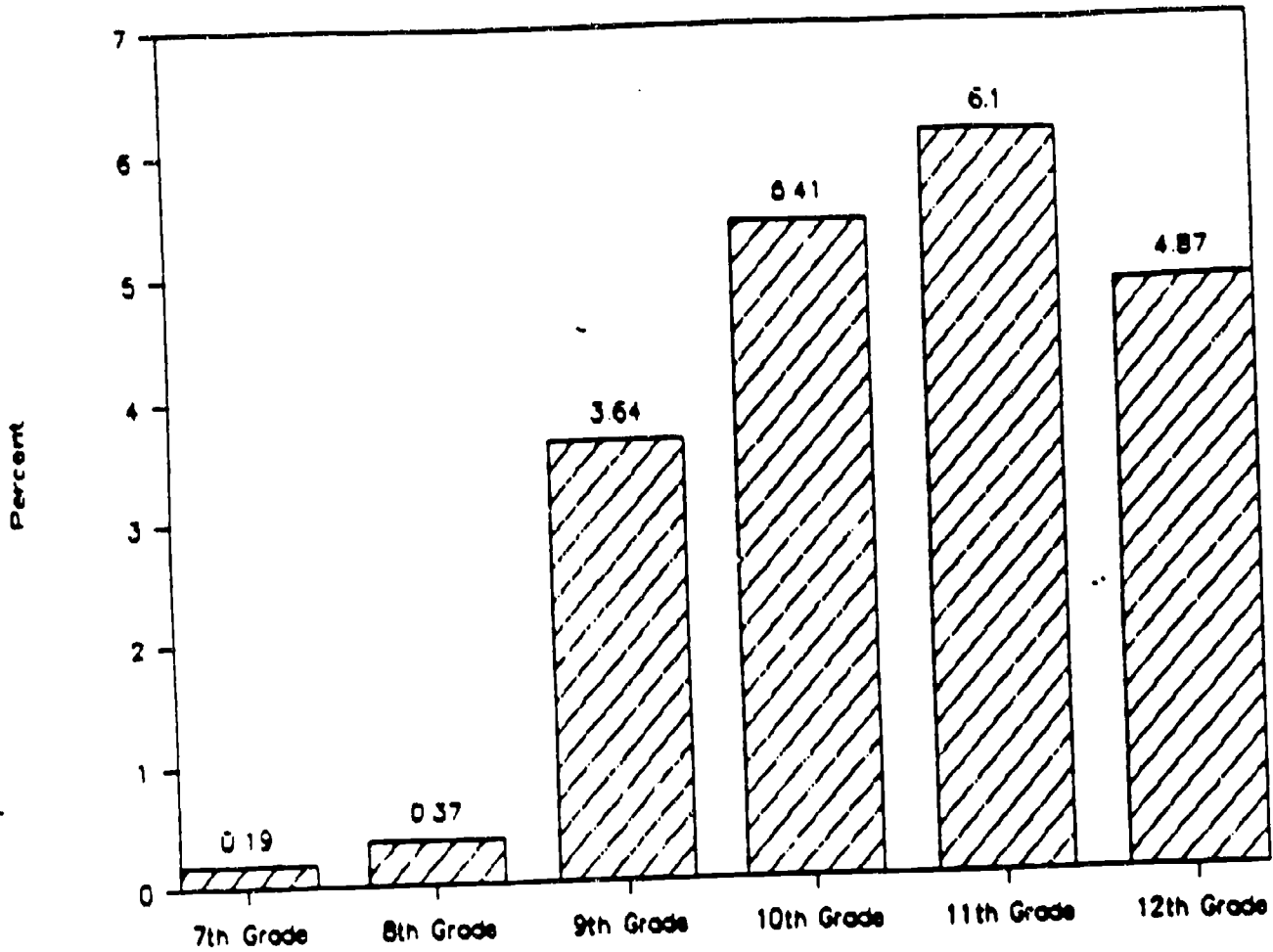
Number and Average Vocational Program Units (Reimbursed and Nonreimbursed) Per District for School Year 1985-1986 (Grades 9-12)

Size of Dist.	# of Dist.	AVERAGE UNITS								Avg. Units
		Indus-trial	Agri.	Busi-ness	Home Eco.	Mrktg.	Office	EBCE & MO	T & I	
250 & less	56	2.87	1.45	4.5	2.88	.00	.02	.004	.62	12.4
250-399	89	2.94	2.16	5.02	3.54	.02	.006	.13	1.01	14.6
400-599	92	3.58	2.69	5.95	3.69	.01	.02	.27	1.11	16.2
600-999	96	3.55	3.48	6.14	3.48	.00	.13	.18	1.53	18.53
1000-2499	71	5.74	3.55	7.02	4.19	.32	.38	.69	2.98	24.88
2500-7499*	24	9.09	1.73	11.09	5.93	1.48	1.29	.48	4.41	35.3
Over 7500*	8	23.94	1.44	21.91	11.17	1.88	2.38	1.29	22.48	86.5
Avg. Units	---	4.38	2.66	6.36	3.88	.18	.21	.29	2.0	---

\* Districts that may have multiple high school attendance centers  
Source: Iowa Department of Education

\* Unit = One hour of instruction, five days a week, for a school year.  
\*\* Statement by Phyllis Herriage, Director, Bureau of Career and Vocational Education, Department of Education, at the January 26, 1989 Council meeting.

Average Grade Level Incidence of Dropping Out From FY 1980 Through FY 1985



Source: Iowa Department of Education, Iowa Guidance Surveys, The Dropout - FY 1985, Page 48

GRAPH 10

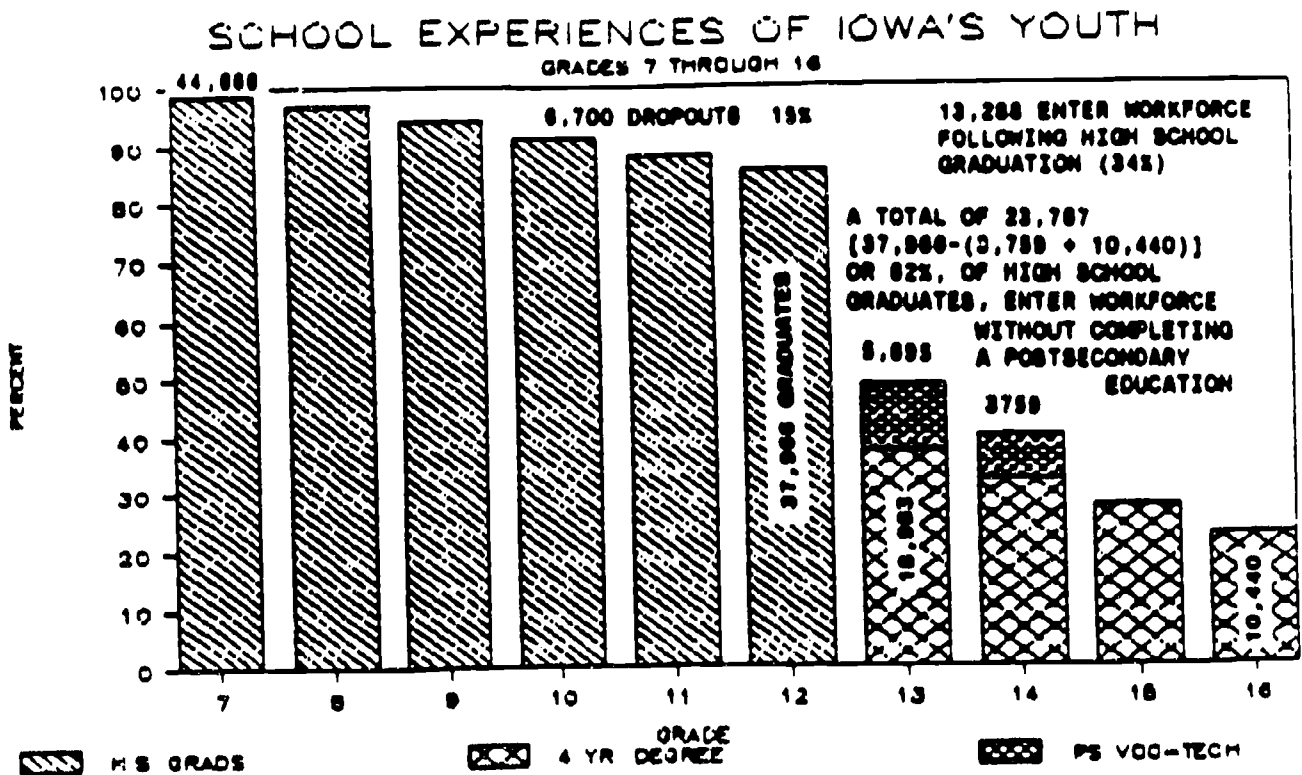


TABLE 2

Number of Different State Approved and Reimbursed Postsecondary Vocational Programs Offered by Merged Area Schools

AREA SCHOOL	I	II	III	IV	V	VI	VII	IX	X	XI	XII	XIII	XIV	XV	XVI
# OF DIFFERENT PROGRAMS	44	28	22	23	20	22	44	29	56	54	56	38	14	25	24

Source: Iowa Department of Education, Postsecondary Program Data Files

TABLE 8

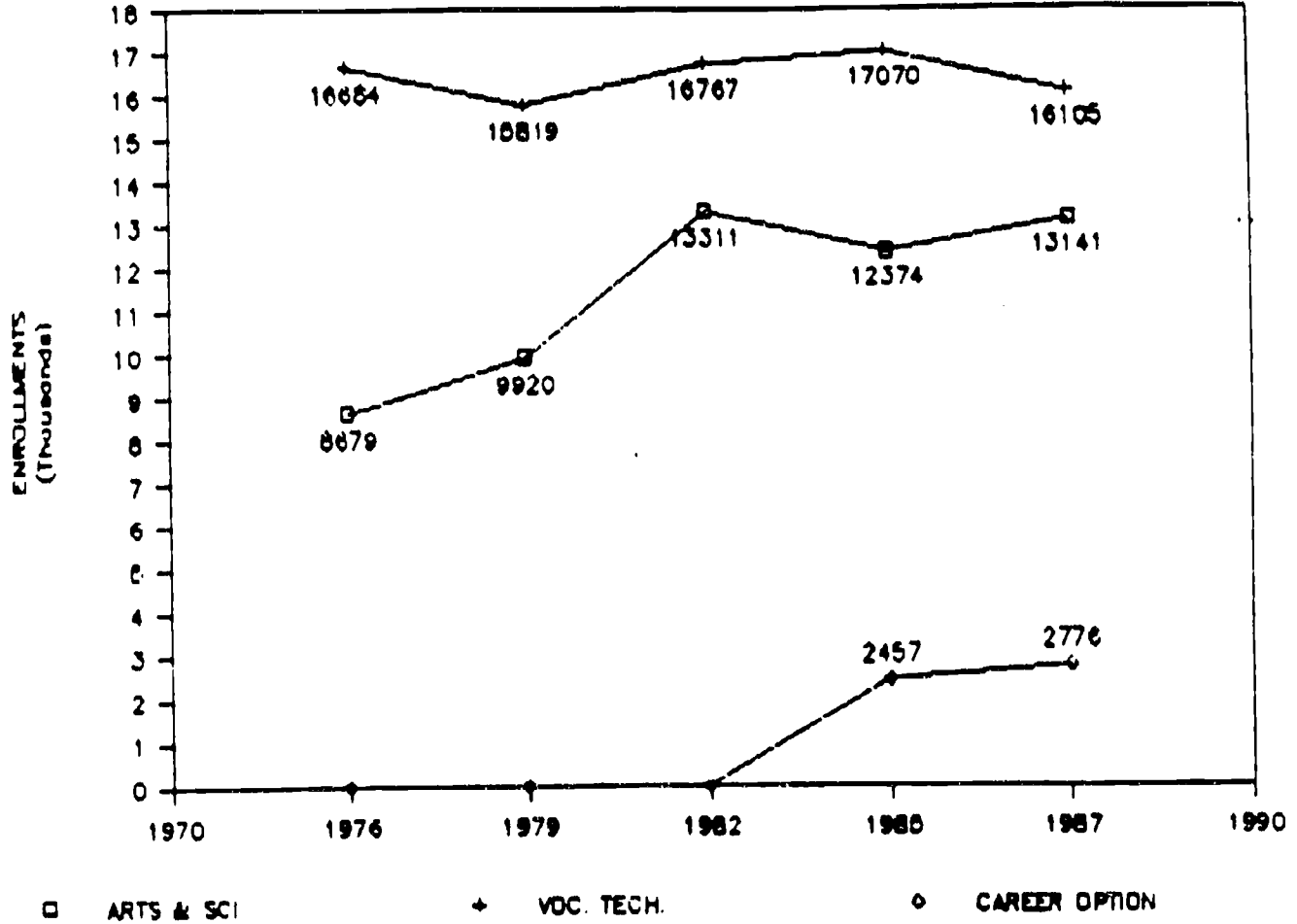
State Approved Vocational Program Area Availability and Enrollment Percentage by Size Category of School Districts in 1986-1987

SCH. SIZE	ENROLLMENT RANGE	# OF DIST. IN SIZE CATEGORY	# OF DIST. W/ NO VOC. PROGRAMS	% OF DIST. W/ NO VOC. PROGRAMS	% VOCATIONAL ENROLLMENT IN GRADES 9-12 BY PROGRAM AREA							
					AGRI-CULTURE	HOME ECO.	MARKETING & DIST.	HEALTH	OFFICE	INDUS. ARTS	T & I	BCC/ MULTI-OC.
1	0-499	185	48	25	32	59	0	.2	3	3	1	1.2
2	500-749	104	15	14	29	59	.03	.09	8	3	1	1.2
3	750-999	44	6	13.6	29	58	0	0	3	7	1	2.1
4	1,000-1,499	37	0	0	21	61	1	.2	5	5	5	2.3
5	1,500-1,999	26	1	.04	21	60	2	.5	7	4	4	3.7
6	2,000-2,999	16	0	0	13	50	4	.1	8	19	3	3.5
7	3,000 & UP	24	1	.04	2	46	5	.3	23	16	8	1.1
AVERAGE					21	56	1.72	.2	8	8	3.3	2.2

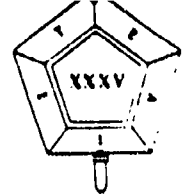
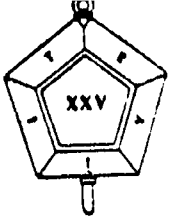
SOURCE: Department of Education, Reimbursed Vocational Programs Reported by District (Computer Data) March & April, 1986

GRAPH 4

Full-Time Equated Enrollment  
Trends in Iowa Area Colleges



Source: Fall Term Enrollment Reports, Iowa Department of Education



1990-1991

Board of Directors

OFFICERS

PRESIDENT

Bob Stone  
Des Moines Community School  
1022 Main Street  
Des Moines, Iowa 52803

PRESIDENT-ELECT

Nathan Northey  
AEA 7  
3721 Cedar Heights Drive  
Cedar Falls, Iowa 50613

SECRETARY

Tom Baughman  
Adair High School  
801 S 9th Street  
Adair IA 50003

TREASURER

Scott Schoneberg  
Des Moines Central Campus  
1800 Grand Avenue  
Des Moines, Iowa 50309

IMMEDIATE PAST-PRESIDENT

Jack Dudley  
North Scott High School  
200 S. First Street  
Eldridge, Iowa 52748

AREA REPRESENTATIVES

ONE

Sue Updegraff  
Keosauqua AEA - AEA 1  
Elkhart, IA 52043

TWO

Cliff Salmons  
NIACC  
Mason City Iowa 50401

THREE

Clark Conner  
O. B. Lang Middle School  
Algona Iowa 50511

FOUR

Don Trout  
Sutherland Community School  
Sutherland, Iowa 51058

FIVE

Charles Foy  
Odebolt-Anwar High School  
Odebolt Iowa 51458

SIX

Steve VanderPol  
Adair-Centre Community Sch  
Adair, Iowa 50601

SEVEN

Bruce Huber  
Grundy Center Jr/Sr High Sch  
Grundy Center Iowa 50638

EIGHT

Mike Zimmer  
Cerrito Central High School  
Des Moines Iowa 52742

TEN

Francis Moe  
Twp. Midd. Schools  
Cedar Rapids, Iowa 52404

ELEVEN

Dale Schumacher  
Perry High School  
Perry, Iowa 50230

TWELVE

Philip Nugent  
Deshler Community School  
Deshler, Iowa 51442

THIRTEEN

Gary Janssen  
Paragut Community School  
Paragut, Iowa 51639

FOURTEEN

Ron Landphair  
Mount Air High School  
Mount Air Iowa 50860

FIFTEEN

Tom Chenoweth  
Evans Junior High School  
Ottumwa, Iowa 52531

SIXTEEN

Joe Spillane  
Oak Street Middle School  
Burlington, Iowa 52601

POSITION STATEMENT: Iowa Industrial Technology Education Association

RE: Public hearings related to the assessment of vocational education in Iowa and determining the allocation of Carl Perkins funds for secondary and post-secondary institutions.

The new Carl Perkins legislation and SF 449 will require the addition of more Preparatory/Occupational courses to the secondary school curriculum. For many school districts this will also mean developing alternative delivery systems for this new instruction.

Increased emphasis on the college prep curriculum in most secondary schools has led to a decrease or elimination of secondary vocational courses in Iowa. Funds will be needed to rebuild these programs to serve the needs of ALL students and not just those who pursue a BA degree.

Articulation of secondary/post-secondary programs will require a joint effort to attract secondary students to continue their education by enrolling in post-secondary programs. Both institutions will have to support each other. If secondary programs are not improved then the number of secondary students moving directly to the post secondary programs will never equal their college prep counterparts.

Special Representatives

Membership

Kelvin Kramer  
Clear Lake High School  
Clear Lake, Iowa 50428

Convention

Bill James  
University of Northern Iowa  
Cedar Falls, Iowa 50601

ITEA Representative

Wallace M. Yohn  
Boone High School  
Boone, Iowa 50036

IYA Representative

Michael Aubrey  
Waverly-Shall Rock High School  
Waverly, Iowa 50677

Newsletter Editor

Nathan Northey  
AEA 7  
Cedar Falls, Iowa 50613

Program Management Committee

Bill Reams  
Washington High School  
Vinton, Iowa 52349

Recognition Chairman

Ringer Smith  
Iowa State University  
Ames, Iowa 50011

State Consultant

Harold Berryhill  
Department of Education  
Des Moines Iowa 50319





Western Iowa Tech Community College

Sloux City, Iowa

(712) 274-6400

1-800-352-4649 Iowa Toll Free

(712) 274-6238 Fax Number

Date: January 22, 1991

Time: \_\_\_\_\_

To: Morgan Lewis

fax # 1-614-292-1260

From: Brenda Porter fax # 1-712-274-6238

Western Iowa Tech Community College

Total Number of Pages (including this page): \_\_\_\_\_

Fax Operator: 3

Morgan

It was a pleasure meeting and talking with you in Fort Dodge at the January 15th Public Hearing. Attached are some comments for your consideration.

If you need further clarification on any of the suggestions, issues or concerns, please don't hesitate to contact me at:

Phone: 712-274-6247

*Brenda Porter*

### **SUGGESTIONS TO STRENGTHEN VOCATIONAL EDUCATION IN SECONDARY AND POST SECONDARY EDUCATION**

1. Provide incentives to both secondary and postsecondary schools for collaborative efforts in Vocational Education.
2. Change the certification requirements of instructors at the secondary level who teach vocational education so that faculty certified to teach vocational education at the postsecondary level can provide training opportunities to secondary students.
3. Strengthen the articulation agreements statewide between community colleges and Regents institutions in acceptance of vocational education courses toward baccalaureate degree programs.
4. Strengthen competency based vocational curriculum in both secondary and postsecondary education to maintain quality student outcomes, consistency and skill transferability to higher education.
5. Identify and fund a staff position at the State level whose sole responsibility is to articulate and coordinate vocational programs and services between secondary and postsecondary education.
6. Implement a weighted state funding formula to address all secondary students vocational training needs through transition programs between secondary and postsecondary education .

Currently there is a provision for secondary schools to continue a handicapped student through the age of 21 in order to meet his/her academic/vocational needs. State funding is weighted and continues until graduation or until the student reaches age 21. Transition programs between secondary and postsecondary in the state of Iowa, have been successfully initiated to meet the vocational training needs of these students at the postsecondary level. These efforts include: a student may receive credit toward secondary graduation, dual credit in some cases both the secondary and postsecondary level, or continue taking credits from the secondary to postsecondary level. These efforts have allowed secondary handicapped students to take those courses in which they have the ability to achieve and to continue according to their ability and desire. Students in these programs have been employable at some level at the completion of their curriculum.

## Issues and Concerns Regarding Vocational Education

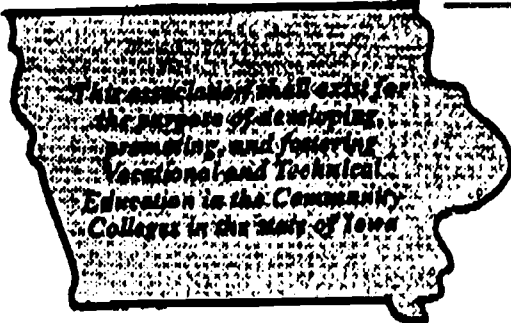
The following issues are offered for consideration as you evaluate the State of Iowa vocational education programming in regard to Senate File 449 and the reauthorization of Carl Perkins:

- 1) A greater need exists to prepare students for vocational training after they have been out of high school one or more years. Eighty-nine percent (89%) of our students have been out of high school one or more years. The average age of the community college student in our area (XII) is 26.9 years.
- 2) Carl Perkins funds are the only funds targeted for special needs populations. Continued and increased support for these populations are necessary to assure their success in vocational education programs.

Students receiving supportive services provided by current Carl Perkins monies have a higher retention rate (17% greater) than those students who do not receive support services.

- 3) Americans with Disabilities Act, public law 101-336 and Section 504 of the Rehabilitation Act of 1973 mandates that students with disabilities be provided not only physical access but also support services necessary to succeed in post-secondary education; however, funding for these services does not accompany these mandates. Carl Perkins legislation also indicates that similar support services (sec. 118 CRITERIA FOR SERVICES AND ACTIVITIES FOR INDIVIDUALS WHO ARE MEMBERS OF SPECIAL POPULATIONS (a) ASSURANCES OF EQUAL ACCESS FOR MEMBERS OF SPECIAL POPULATIONS) will be provided assessment, supplemental services/instruction, modification of classrooms, equipment, curriculum etc., even though the funding is no longer earmarked as such. Although these are all federal mandates, no state funding exists for community colleges to address these needs.
- 4) Vocational Education is critical at both the secondary and postsecondary level but needs to be a coordinated effort to maximize resources and reduce duplication. Secondary students need to be academically prepared to enter postsecondary programs. Basic courses which can transfer for postsecondary credit would be most beneficial for the students. Labs equipped with up-to-date expensive equipment is not practical for all entities. In addition, student demand to support such elaborate labs would not be possible in the rural small school districts. Cooperative efforts between secondary and postsecondary education for these student experiences would be the most economical.

# Iowa Community Colleges Vocational-Technical Dean's Association



- Northeast Iowa  
Community College - Area I  
Cama
- North Iowa Area  
Community College - Area II  
Mason City
- Iowa Lakes  
Community College - Area III  
Estherville
- Northwest Iowa  
Technical College - Area IV  
Sheldon
- Iowa Central  
Community College - Area V  
Fort Dodge
- Iowa Valley  
Community College District - Area VI  
Marshalltown
- Hawkeye Institute  
of Technology - Area VII  
Waterloo
- Eastern Iowa  
Community College District - Area IX  
Davenport
- Kirkwood Community College - Area X  
Cedar Rapids
- Des Moines Area  
Community College - Area XI  
Ankeny
- Western Iowa Tech  
Community College - Area XII  
Sioux City
- Iowa Western  
Community College - Area XIII  
Council Bluffs
- Southwestern Community College - Area XIV  
Creston
- Indian Hill  
Community College - Area XV  
Ottumwa
- Southeastern Community College - Area XVI  
West Burlington

## INPUT FOR THIRD PARTY ASSESSMENT OF VOCATIONAL EDUCATION IN IOWA TELENET January 18, 1991

Vocational technical education in Iowa is undergoing change and the resulting stress. Some view recent legislation Senate File 449 as a negative to the future of vocational-technical education while others view these changes as an avenue for strengthening the concept and role of vocational-technical education. Various opinions have been expressed within the State as to the emphasis for Senate File 449 from additional state control to a great incentive for action. The Iowa Community Colleges Vocational Technical Dean's Association views the thrusts in Senate File 449 of competency based education, planning, assessment, articulation and required offerings as a stabilizing force for the future. The future in the State and Nation depends upon a highly skilled, knowledgeable, adaptable workforce that vocational technical education can assist in developing. Too long the nation has idolized the four year degree as the only way for success. This has not, is not, nor will it be in the future accurate. We must as a society embrace this change as the framers of Senate File 449 and in a like fashion the Carl D. Perkins Vocational/Applied Technology Education Act are attempting to strengthen vocational education for the State and Country. We have paid lip service to continuity in education from secondary to post-secondary but that has been the extent of our involvement. Structures and requirements from both Senate File 449 and the Perkins Reauthorization are creating avenues for enhanced cooperation and transitioning of students. Isolationism will not and has not worked for nations and there is no future for isolationism in our educational system.

The Iowa Community Colleges Vocational Technical Dean's Association embrace and support increased sharing, planning, articulation, competency-based curriculum, funding/expenditure flexibility and population targeting.

Thank you.

Submitted to record on behalf of the Iowa Community Colleges' Vocational Technical Dean's Association on January 18, 1991 by Glen Pedersen, President.

Post-It™ brand fax transmittal memo 76.1		# of pages > 2
To Dr. Morgan Lewis	From M. C. Morrison	
Co.	Co. NIACC	
Dept.	Phone # 515-421-4210	
Fax # 614-292-1260	Fax # 515-421-1711	



## North Iowa Area Community College

Academic Affairs

500 College Drive  
Mason City, Iowa 50401  
(515) 423-1264

January 22, 1991

Dr. Morgan Lewis  
1900 Kenry Road  
Columbus, Ohio 43210

### RE: Input for Iowa Vocational Education Plan

Dear Dr. Lewis:

Please consider the following as you help develop the State Vocational Plan for Vocational Education:

#### 1. Role of High Schools, Community Colleges, and Area Education Agencies

The State of Iowa should develop a process to formalize the roles of high schools, community colleges, and Area Education Associations for the delivery of excellent vocational/technical programs. Specifically, the vision needs to delineate the role of each educational entity in

- ◆ Exploratory Education
- ◆ Career Preparation
- ◆ Tech-Prep

#### 2. Incentives for Partnerships

Incentives should be provided to Community Colleges, AEAs, and High Schools for forming partnerships to deliver exemplary vocational/technical education.

#### 3. Regulation

The Department of Education should not over-regulate vocational/technical delivery systems. We are already overburdened with regulations. Hold us accountable for outcomes, but don't over-regulate us.

#### 4. Career-Options Programs

*It is our understanding that we will not be able to utilize Perkins funds for Career Option programs. We believe this is extremely short-sighted as these programs attempt to integrate academics with vocational/technical education. Our Career Option programs match the direction of "Tech-Prep," so it appears that the Department of Education is not in step with the Tech-Prep initiative.*

#### 5. Marketing to All Groups

*We must market vocational/technical education to all academic populations if we are to succeed in creating a competitive workforce for the year 2000 and beyond. It appears that we disproportionately market vocational/technical education to the lower one-third.*


#### 6. Principles of Technology

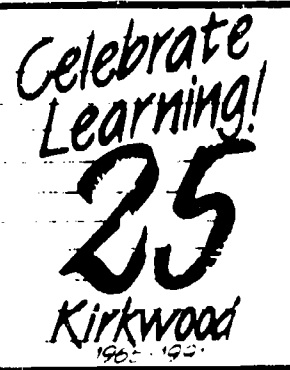
*The course titled "Principles of Technology," developed by the Center for Occupational Research and Development, is an excellent course for high school students. Iowa, however, will only count the course for graduation if it is taught by a certified science teacher. The Department of Education needs to develop and implement a much more progressive and forward-looking policy in counting this course for graduation when it is taught by faculty outside the traditional science ranks.*

#### 7. Funding for Pre-Vocational Students

*Iowa needs to adequately fund educational services for pre-vocational students in Community Colleges who take remedial courses prior to enrollment in their program. We see a need to deliver remedial courses (math, communications, etc.) in the summer to prepare students more adequately for their programs. We are enrolling a number of "older-than-average" students who require refresher courses which bolster their self-confidence and self-esteem. Current regulations do not fund these critically needed services because these students are not technically "enrolled" in a vocational program. Interpretation of the laws and regulations in this way is very counterproductive for our efforts to make people successful in their chosen career. There has to be a way for common sense to prevail in this critically important area.*

*Sincerely,*

  
Michael C. Morrison  
Vice President for Academic Affairs



Comments for the  
Third Party Assessment of Vocational Education in Iowa  
made on January 17, 1991  
by Terry Moran, Vice President, Instruction

In 1966 Iowa's community colleges were established. As the colleges developed, state educational policy, under the direction of State Superintendent Paul Johnson and continued under State Superintendent William Benton, laid the bulk of the responsibility of vocational education on the newly established community colleges. Iowa's approach was significantly different from the approach adopted in the majority of the states. A broad spectrum of quality vocational-technical programs were established that were designed to move the high school graduate into technical and skilled occupations. In support of this effort, the majority (72%) of the state's Perkins allocation was directed toward the community colleges. These dollars enabled the community colleges to strengthen their vocational programs and design and support special programs to serve the disadvantaged and handicapped students. Today, these allocations provide essential support for the maintenance of these quality programs and for the ability to provide special support to students in need.

Recent legislation (HF449) which calls for all community college vocational-technical programs to be redesigned into competency based programs and to be articulated with the K-12 sector will place additional financial pressures on the community colleges. The establishment of 2+2 Tech-Prep



programs will likewise pressure college resources. Confronted with the demands of HF449, the community colleges will not be able to adjust to a reduction in Perkins dollars without substantial harm to existing programs and services. Under a static environment the loss could be severe, but during this time of enlarged expectations of the community colleges' role in vocational education, a loss of Perkins dollars will certainly be crippling. It will widen the gap between our ability to deliver vocational education and the state's expectations.