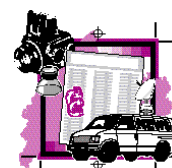


Career & Technical Education



2000

Des Moines, Iowa
50319-0146

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Making the Pieces Fit

Introduction

The arrival of the 21st century provides a special opportunity to review the past and plan for the future. Under Governor Thomas Vilsack's leadership, citizens of Iowa contributed ideas for the Iowa 2010 Plan –

The New Face of Iowa. Its focus is on establishing:

- a world-class education for Iowans of all ages,
- better jobs and wages for a growing population, and
- a quality environment in which to live, work and play.

During the May 2nd construction industry summit Governor Vilsack identified three strategies to assist in retaining Iowa students for the Iowa workforce. The strategies included providing opportunities, for students to become leaders, to "learn by doing," and to meet the needs of the community and the world. All three of these strategies are the foundation and important components of career and technical education.

In his **Leave No Child Behind** education plan, President George W. Bush and his administration lend additional support to the idea that, across the nation, it is essential that every child be given the educational opportunities to succeed. Legislation introduced by both parties in Congress supports this concept.

In its strategic plan, the Iowa State Board of Education defines the education system goal as follows: ***"To improve the level of learning, achievement and performance of all students so they will become successful members of their community and the workforce."*** Career and technical education is specifically addressing several board strategies to meet workforce preparation needs. The Board's **Building Inclusive Schools and Communities** position paper provides another example of the need and desire to serve all students and to assure opportunity for them to succeed.

In January 2000, the State Board of Education adopted the **Five-Year Strategic Plan for Iowa's System of Community Colleges.** Developed for the Community College Council, with the assistance of a stakeholders working group, it helps define the role of the community colleges in responding to both local and statewide needs for educational services to Iowans and for economic development. A key to the strategic plan is successful delivery of quality career and technical education programs. Common to all of these plans is awareness of both the impact of change in the world and the essential need to respond to change with change. Iowa's system of vocational education is continuing to make major contributions in response to continuous change in technology and to the needs of employers. The Iowa vocational technology fund for community colleges has assisted in strengthening the system.

A review of data and anecdotal evidence at the state level shows that many of Iowa's schools and community colleges have been expanding their offerings in response to the demands of a changing workplace, and they are preparing students for both productive work and for additional education. While 78.7% of Iowa high school graduates choose to enroll in postsecondary education, as reported in the **2000 Condition of Education** report, 74.18% of those who completed a career and technical education program also chose to continue in postsecondary education.

This report is designed to present a new picture of how Iowa is delivering career and technical education. With the implementation of clusters for federal reporting this report provides information on several clusters of programs, including relevant data, program highlights, and information about student organizations.

Making the Pieces Fit

As change has occurred, the language about career and technical education has also changed. The "Making the Pieces Fit" diagram (see page 3) provides a picture of the relationship between Career Pathways, Iowa's vocational education service areas, the reporting clusters required by the U.S. Department of Education, and the Targeted Industries identified for economic growth in Iowa. Over 255,633 secondary students and 41,554 postsecondary students were enrolled in career and technical education in 1999-2000. (Sources: BEDS, MIS, and Consolidated Annual Report Accountability Status Database)

Vision Statement

Numerous recent studies have documented that the future of Iowa families and communities is increasingly dependent upon the skill levels of the individuals within them. It's the vision of the career and technical education community that by linking high school programs with post-secondary programs, in non-duplicative sequential courses of studies, that the skill levels (both academic and technical) of the individuals enrolled in the programs and the communities in which they live will be enhanced.

Targeted Industries

Iowa ranks 42nd in the country in research and development investment in industry. According to a Stanford University study, during the past two years, the State of Iowa utilized researchers to analyze the economy in Iowa and assist in identifying the industry clusters best suited to be a target for growth in the Iowa economy. A critical factor in their identification was providing quality jobs and wages for Iowa workers. The clusters identified are:

- **Information Solutions**, including software development, insurance and financial services, and telecommunications services
- **Advanced Manufacturing**, focusing on the development of manufacturing systems and procedures that utilize the latest technology and highly skilled workforce
- **Life Sciences**, applying a range of technological disciplines to develop food, pharmaceutical, microbial and chemical products and processes, and medical devices to improve human and animal health, nutrition, the environment and quality of life

Career and Technical Student Co-Curricular Organizations (CTSO)

It is clear to anyone who has attended a student leadership conference in one of the career and technical areas, that FFA, PAS, DECA, HOSA, TSA, SkillsUSA-VICA, FCCLA, BPA, FBLA, PBL and Delta Epsilon Chi provide real-life learning and leadership experiences that complement career and technical education programs. The purpose of these secondary and postsecondary organizations is to develop leadership and technical skills through motivation, participation, and recognition activities that are integrated into a specific curriculum. Members strengthen their leadership through interaction with professionals in the particular occupational field and by association with other students at the local, state, and national levels. Highlights of student leadership organization activities are provided, throughout this report, within each cluster.

Students are provided opportunities to develop individual career-focused interest into special projects and also be able to participate in local, regional, state and national competitions.

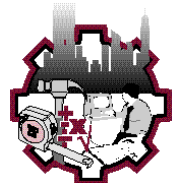
Public speaking, parliamentary procedure, interview, sales presentations, communication activities are examples of events, along with individual and team events designed to display technical skills. Culinary

arts, radio and television, graphic arts, automotive, masonry, practical nursing, computer programming, agricultural sales and marketing, fashion merchandising, CPR, nursing, electrical, automotive body repair, metalworking, welding, manufacturing design, global positioning interpretation, and aviation repair are a sampling of competitive events conducted each year. Many of these events are sponsored and designed by business and industry partners.

Entrepreneurial experiences are encouraged and leadership roles are stressed to assist students in gaining confidence and building their management and organizational skills. Iowa CTSO conferences are planned, coordinated, and managed by student officer teams. Over 7,200 students participated in 13 state leadership conferences in 2000.

Iowa Career Pathways & Clusters

PATHWAYS



2000

Pathway: **Agriscience & Natural Resources**

Iowa Cluster: **Agriculture and Natural Resources**

Description: Planning and managing agriculture, food, fiber, and natural resources systems. Production of agricultural commodities including food, fiber, wood products, horticultural crops, and other plant and animal products. Financing, processing, and marketing and distribution of agricultural products; farm production and supply and service industries; horticulture and landscaping services, and the use and conservation of land and water resources; development and maintenance of recreational resources. Mining and extraction operations and related environmental management services.

Occupational areas include agricultural research, agricultural sales, agricultural marketing, agricultural engineering, agronomist, crop consultant, conservationist, natural resources conservationist, forestry, soil scientist, biotechnology technician, e-commerce manager, livestock producer, crop producer, horticulturalist, florist, nursery and landscape manager, golf course management, GPS technician, veterinarian and plant pathologist.



Agriculture & Natural Resources Program Enrollments

	Male	Female	Total
Secondary	12,200	4,494	16,694
Postsecondary	1,216	490	1,706

Secondary Program Highlights

- Central Campus of the Des Moines Public Schools and Des Moines Area Community College partner in an internship program in Aquaculture and Environmental Science. Activities include lab technology and management of aqua crops, study of marine and fresh water animals and plants, FFA participation, and exploration of environmental science and agriscience careers.

Supervised Agricultural Experience Programs

The three components of a model secondary agricultural education program are classroom instruction, SAE, and FFA. SAE (supervised agricultural experience) is the career experience component. SAE (Supervised Agricultural Experience) programs:

- are organized by the teacher and student
- are supervised by the high school agricultural education instructor
- are conducted outside of the daily classroom/laboratory program
- involve skills pertinent to the agriculture economy, and may include activities which could lead to owning an agribusiness enterprise, being employed in an agribusiness, developing life skills and/or conducting agri-science experiments and demonstrations

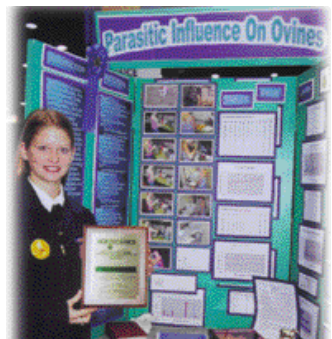
National FFA Agriscience Fair Winner

"Parasitic Influence on Ovine" a quantitative study of parasites in sheep.

Gretchen Wilson, Stuart

Mine Safety Program

Most people do not realize that the state of Iowa has over 2,700 miners who mine sand, gravel, and limestone. In the past year, over 1000 miners received inexpensive, high-quality training via the ICN through a grant from the U.S. Department of Labor and the collaborative work of Iowa Valley Continuing Education, Iowa Department of Education, and Iowa Community Colleges.



Secondary SAE Program Statistics (Career Experiences)

- 949 students owned and operated an agribusiness in 1999-2000
- 3,869 students were employed in agri-business in 1999-2000
- In the decade between 1990 and 2000, 27,116 students were employed in agri-business.
- In the decade between 1990 and 2000, students in the career and experience program generated \$103,172,780 net income.

Private Donations Help Fund Infrastructure Improvements

Equine Events Center:

Private donors have helped Kirkwood plan work on the \$2 million second phase of this project. The total cost of the new Equine Events Center, when completed, will be \$4 million.

Postsecondary Program Highlights

- Dairy Technology Program at Calmar opened their new 150 cow state-of-the-art production and teaching facility.
- National Science Foundation grant will fund new National Agriculture Technology Center at Kirkwood Community College.

Agriculture Education Student Leadership Organizations

FFA (Agricultural Education Students - Grades 9-16)

- 11,600 members in 234 Iowa FFA chapters
- 72nd Iowa FFA Leadership Conference – 3,800 in attendance
- Sponsored Leadership, Career Development and Agricultural Knowledge and Skills Career Development state competition events
- Two national proficiency winners in 2000
- Two national winners in National FFA Agriscience Fair
- Iowa FFA member named National Star Farmer finalist
- Five FFA Career Development teams received “Gold” ratings at Nationals
- Fifty-one American FFA Degree recipients

The **National FFA Convention**, held in Louisville, Kentucky, is the world's largest youth leadership conference.

PAS (Postsecondary Agriculture Students)

- Hosted the National PAS Conference in 2000. Hosted 755 members from 19 states
- Iowa PAS members received 31 first and second place National awards
- Prepared Farm Progress Show display and demonstration
- Developed special recruiting displays at Iowa State Fair
- Held Fall and Spring State Conferences

\$15,543,140 of net income was generated by secondary students through their career experience programs in 1999-2000.

Success Stories

BERRY BUNCHES COOP, Rockwell, Iowa

Six Rockwell FFA members utilized a \$1000 Agri-Entrepreneurship Grant from the Iowa Agricultural Development Authority to start a strawberry production cooperative. They planted 3000 plants in 1999 and another 3000 plants in 2000.

“We learned what it takes to run a business in a community,” said Rachel Mesner.

SWEET SUCCESS!

CHRIS OLLINGER AND TRACY REESE, LAURENS, IOWA

In partnership, they produced and marketed over 24,000 ears of sweet corn from 3.6 acres. They hired 15 local FFA members and paid them \$10 per hour to pick sweet corn.



Professional Development

- Twenty-one key agriculture interests sponsored a winter Leadership Conference and seminars at 21 Iowa Communications Network (ICN) sites
- Agricultural Education Professional Development (AEPD) program was delivered via ICN and workshops
- Over 100 instructors participated in 2000
- AEPD graduate and continuing education credits are coordinated through the Department of Agricultural Education and Studies at Iowa State University

AEPD Programming Examples:

- Horticulture -- greenhouse, turf grass management, and hydroponics
- Entrepreneurship - Ag Educator Financial Management package and Business Components
- Agricultural Mechanics -- welding and small gas engines
- Technology in the Classroom -- skill development in Internet, digital camera, scanning, web page development, etc.
- Animal Science -- meat and muscle quality

Certifications

The following agencies certify students completing Agriscience and Natural Resources Programs:

- Advanced Technology Environmental Education Center
- Iowa DL Chemical Applicator
- National Registry of Environmental Professionals

Success Stories



Roy BECKER, Jr.

VAN HORNE, IOWA

NATIONAL FINALIST - STAR IN AGRIBUSINESS - 2000

LOUISVILLE, KENTUCKY

- While in high school, my tomato, cabbage and other vegetable crops earned me a profit of **\$48,875**.
- Since beginning my career experience program, I have earned **\$66,865** from my truck farm operation.
- Total earnings from my career experience programs, while in high school, were **\$62,087**.
- My education has helped me obtain seven different certifications such as: Commercial Driver's License (CDL), OSHA-approved Competent Person Training (CPT), Grade I DNR-Certified Water Treatment Operator, Laser Plane LG2000 training.



Purdue University Study

A recent study conducted by Purdue University compared FFA members with the "typical high school student"

Results of the study showed the following:

"FFA members are more likely to pursue postsecondary education: 86% vs. 84%."

"FFA members are more enthusiastic about their studies, with 83% stating that their agriculture courses are exciting."

"FFA members are more actively engaged in school and community activities and participate in twice as many extracurricular activities (in addition to FFA) during the school year than the percentage of typical students."

"They are also better prepared to enter a career and have more sharply-defined career objectives than are typical students. They are more likely to be employed while in school, and they earn three times the income of other students, an amount totaling over \$4 billion annually."

Adding Value with TENDERLEAN MEATS

SHAWN AND DREW SPONHEIM, ST. ANSGAR, IOWA

Shawn and Drew developed a goal to add value to their pork production by developing a marketing plan to process and market their own line of retail pork.



In the fall of 2000, they received state label approval for their name, TenderLean Meats.

In the winter of 2000, they worked with a graphic artist to develop a logo and print labels to market their own retail brand of family-raised pork.



Pathway: **Business/Information Systems/Marketing**

Cluster: **Business and Administration/Finance**

Description: Planning, managing, and providing administrative support, information technology and processing, accounting, banking, finance, insurance, human resource management services and related management support services.

Occupational areas include accounting, administrative support, human resource management, banking, and financial planning and management, international trade management, actuarial science, insurance and risk management, and marketing operations.



Business and Administration/Finance Program Enrollments

	Male	Female	Total
Secondary	15,892	16,520	32,412
Postsecondary	960	4,571	5,531

Secondary Program Highlights

- On May 4, a student graduated from the North Iowa Area Community College Legal Secretary program, three weeks before she was to receive her Mason City High School diploma. She successfully completed articulated course work at Mason City High School in keyboarding, computer applications, and accounting to get a jump start on college.
- Several Iowa City West students have had internships with local businesses who pay tuition for them to attend college provided that they continue working for the businesses during their college years. One of these students has a full-time marketing position at a bank, and has his full tuition to Kirkwood Community College paid by that bank.
- Students at North Kossuth High School volunteered to work with businesses in Swea City to create web pages for the businesses. The students also created electronic portfolios for use in job searches as well as college applications.

Postsecondary Program Highlights

- The follow-up survey for 1998-99 graduates at Marshalltown Community College shows a 100% placement rate for graduates in the Administrative Assistant program.
- Eastern Iowa Community College District's Teller Certification program graduates earn average starting wages of \$15,000-20,000 per year.
- Students at Iowa Lakes Community College partnered with Kossuth County in a service learning project and developed web pages for 11 communities. These were the first web pages that were developed for each of these communities. Students worked with city clerks to design the pages.

Certifications

The following certifications or accrediting agencies are available for Iowa's secondary schools or community colleges:

- Accreditation Council for Accountancy and Taxation
- American Institute of Professional Bookkeepers
- Certified Administrative Professional (CAP)
- Office Proficiency Assessment and Certification (OPAC)
- Iowa Accounting Practitioner
- MOUS (Microsoft Office User Specialist)
- Certified Professional Secretary (CPS)
- International Association of Administrative Professionals

Business Education Student Organizations

Business Professionals of America (BPA) - Secondary and Postsecondary

BPA is the national student organization for students preparing for careers in business. The mission of BPA is to contribute to the preparation of a world-class work force through the advancement of leadership, citizenship, academic, and technological skills.

- Has shown a 6% increase in membership during current year
- 667 secondary members and 364 postsecondary members
- 30 secondary chapters and 22 postsecondary chapters

Business Professionals of America (BPA) - Secondary and Postsecondary

- State leadership conference hosted over 600 secondary students and 250 postsecondary students
- Sponsored over 41 competitive events at Leadership Conference
- Secondary students received 17 awards in 13 of 36 competitive events at national leadership conference
- Postsecondary students received 66 awards in 36 of 42 competitive events at national leadership conference
- One Iowa postsecondary student was elected to a national office and two secondary students were elected to national offices
- One postsecondary student and three secondary students have been nominated for 2001 national offices

Future Business Leaders of America (FBLA) - Secondary

FBLA provides opportunities for secondary students (grades 7-12) in business and office education to develop career and technical supportive competencies and to promote civic and personal responsibilities.

- 523 members and 23 chapters.
- The State Leadership Conference was held at the Five Seasons Hotel in Cedar Rapids on April 5-7, 2001. The students participated in 30 competitive events. Judges representing business and industry contributed their time and efforts to the success of the conference. Winners in each event will have the opportunity to compete at the National Leadership Conference to be held in Orlando, Florida.
- The goal of the summer advisor workshop is to assist advisors in incorporating FBLA as an integral part of the career and technical instructional programs. A representative from the national office of FBLA-PBL will present on the technicalities of the competitive events and coordinate future expectations.

Phi Beta Lambda (PBL) - Postsecondary

PBL is the collegiate division of the national association of FBLA. The mission of PBL is to bring business and education together in a positive working relationship through innovative leadership and career development programs. Through this interaction, student members learn how to become more marketable, and they gain contacts in the business world that will help them accomplish their career objectives.

- Wartburg College was voted chapter of the year
- 14% increase in membership
- Students competed in 36 competitive events sponsored by business partners
- National President nominee

Professional Development Activities

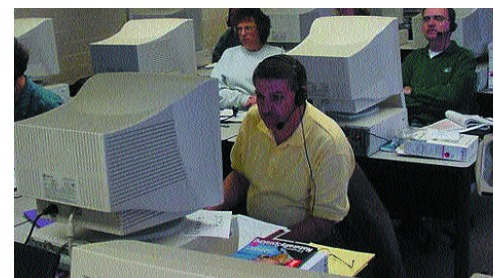
- "Voice Recognition" training
- MOUS certification training in Word and Powerpoint was provided to business educators. Over 40 people obtained MOUS certifications.

BPA SERVICE PROJECT

Students supported Special Olympics as their service project by collecting pop tabs to donate money and helping with Special Olympics events across the state

ACADEMIC ALL STATE

A Harlan Community School BPA member received academic all state recognition.



Professional Development Activities continued

One of the educators commented about the MOUS certification training by saying,

"What a wonderful opportunity! If we are to prepare our students for success while in and following high school, this is what competencies we should be teaching them. Eventually becoming MOUS certified to teach is where we should be!"

Provided "Voice Recognition" training for 16 instructors who will in turn train other business educators in their area. Voice Recognition increases productivity, improves worker safety and encourages globalization.

One educator stated: "I see many uses for this software with Business Communications, Business Procedures, Machine Transcription, Practicum and eventually other writing classes."

Cluster: Information Technology

Description: Designing, developing, managing and operating communication and information technology networks and related hardware and software including both telecommunications and computing services.

Occupational areas include areas such as computer engineering technician, computer installation, maintenance and repair, and software development.



Information Technology Program Enrollments

	Male	Female	Total
Secondary	989	633	1,622
Postsecondary	3,113	2,241	5,354

Secondary/Postsecondary Program Highlights

- CISCO Systems, Inc., is a private company that partners with educational institutions to provide training for people seeking employment in the computer industry. The emphasis is on networking solutions that facilitate access and transfer of information across multiple and varied computer devices and networks. The training approach is applied learning.
- Many of the area 2 programs developed are tech prep programs, developed by North Iowa Area Community College as hub programs. These hubs draw students from many high schools. Program completers earn starting salaries of \$35,000.
- Eighteen students at Red Oak High School are enrolled in the Microsoft and A+ Certification Program in a tech prep program with Southwestern Community College. Participants take the A+ Certification test at the end of the program and earn six community college credits. Red Oak school identified the A+ Certification course as a top weighted course for determining academic honors.

- Students at North Kossuth High School volunteered to work with businesses in Swea City to create web pages for area businesses. The students also created electronic portfolios for use in job searches as well as college applications.
- Students at Mason City High School and Garner-Hayfield High School who are enrolled in the Information Systems Technology program spend each morning at the Information Systems Technology hubs learning about networks, programming, and operating systems. They program in C++, calculate probability for statistical projects, and learn various protocols that aid computers in interactive communication.

Iowa CISCO Academy Sites

Secondary

Anita High School
 Cascade High School
 Cedar Falls High School
 Clear Lake Community Schools
 Clinton Community High School
 Columbus High School
 Earlham High School
 East Greene High School
 Garner High School
 Hudson High School

Community Colleges

Clinton Community College
 Des Moines Area Community College
 Hawkeye Community College
 Iowa Central Community College
 Iowa Lakes Community College
 Iowa Western Community College
 Kirkwood Community College
 North Iowa Area Community College
 Northeast Iowa Community College
 Scott Community College
 Western Iowa Tech Community College

Postsecondary Program Highlights

- Iowa Western Community College joined the IBM S/390 University Program – a partnership providing computer projects in a real world environment. seventy-six students graduated, earning average salaries of \$35,000 annually upon graduation.
- A student enrolled in E-Commerce at North Iowa Area Community College developed a web site for the local Mason City band festival. This site includes the band festival history, schedule of events, and entertainment information. The web site is masoncityia.com/bandfest/index.htm

Certifications

The following certifications are awarded in Information Technology Solutions programs:

- A+certification
- Certified Network Administration
- Microsoft System Certified Engineer
- Microsoft Certified Professional
- Microsoft Networking+ certification (Comp TIA)

Business Education Student Organizations

Business Professionals of America (BPA) – Secondary and Postsecondary

This student organization also supports Information Technology (see Business and Administration/Finance cluster).

Cluster: Marketing

Description: Planning, managing and performing wholesaling and services and related marketing and distribution support services including merchandise/product management and promotion.

Occupational areas include sales and marketing operation, fashion merchandising, financial services marketing, food marketing, international marketing, tourism and travel.



Marketing Program Enrollments

	Male	Female	Total
Secondary	2,542	2,316	4,858
Postsecondary	439	810	1,249

Secondary Program Highlights

Decorah High School has identified a course of study, "Essential Skills". This year-long course, required for ninth grade students, includes economics, law, global understanding, personal finance, entrepreneurship, and marketing. Each unit introduces key concepts in context-based, hands-on problem-solving activities using Microsoft Office 2000 computer applications. .

DECA and Delta Epsilon Chi

DECA and Delta Epsilon Chi assist more than 1500 Iowa secondary and postsecondary students to develop a better understanding of marketing, merchandising, management, and entrepreneurship.

- Sponsored State Leadership Development Conference (280 community college attendees and 425 secondary attendees)
- Sponsored State Career Development Conference with 38 competitive events
- Received first place postsecondary National Award in State Newsletter
- One hundred percent of students participated in a civic consciousness project. Students raised \$24,000 for camperships for children for "Heart Connection".

Pathway: **Engineering/Industrial/Technological Services**

Cluster: **Construction Trades**

Description: Designing, planning, managing, building, and maintaining physical structures, and the larger built environment including roadways and bridges, and industrial, commercial and residential facilities and buildings.

Occupations include architectural and civil engineering technicians; heating, air conditioning and refrigeration mechanics, transportation engineering, electronics installer and repairer, cabinet maker.



Construction Trades Program Enrollments

	Male	Female	Total
Secondary	3,456	297	3,753
Postsecondary	1,316	76	1,392

Secondary Program Highlights

- Partnerships: Through partnerships with Southeastern Community College and Southwestern Community College, students at Winfield-Mt. Union, Central Lee, and Red Oak High Schools may enroll in year-long carpentry classes which fulfill first-level requirements of the carpentry apprenticeship program recognized by the National Center for Construction Education and Research. Support for the partnership comes from the Southeast Iowa Builders Association and the Red Oak Industrial Foundation.
- Students in the construction program at Jefferson-Scranton High School are building their fifth home in the past five years – resulting in \$600,000 in taxable real estate added to the community. Students can receive first year apprenticeship credit with the Associated Builders and Contractors and dual credit from Iowa Central Community College. Students also constructed a new garage for a retired couple seriously injured in an accident this year.



Postsecondary Program Highlights

- The Masonry Construction program at Kirkwood Community College is a joint effort of local masonry contractors and suppliers, the bricklayers union, KCC, and the Masonry Institute of Iowa. The partnership required contractors and union bricklayers to cooperate and compromise in the design of the program. Average salary upon completion is \$26,208 annually.
- Eastern Iowa Community College District provided a "Women in Construction" training program for low income women. Each student earned a Commercial Drivers License. Average wages upon graduation were \$16,640 – \$27,040.



Industrial Technology Student Organizations

Technology Student Association TSA

This organization is dedicated exclusively to the needs of technology students beginning in grade seven. TSA strengthens the instructional program of technology education through incorporation of interdisciplinary, hands-on-approach to learning.

- Three new competitive events include :
 - 3 D Modeling
 - Film Technology
 - Scientific and Technical Visualization
- 16 Chapters 668 members
- Held Fall Leadership Conference and TSA Spring Conference
- Sponsored 14 middle school and sixteen high school state competitive events
- Eight Iowa students were finalists and received awards at National Conference, including the Gold Achievement Award
- Three Iowa Chapters received National Chapter Excellence Awards

SkillsUSA-VICA (Vocational Industrial Clubs of America)

See description and organization information in the manufacturing cluster

Certification Agencies

- Accreditation Board of Engineering and Technology (ABET) for architectural drafting
- Industrial Technology Accreditation Committee (IAC) – for architectural drafting

Leadership opportunities

- Students are provided opportunities to participate in the fall leadership conference, Mid-America Leadership Conference, Legislative workshops, and Iowa SkillsUSA-VICA state leadership and skills conference.

Recognition

- Iowa national award winners in competitive events in Residential Wiring, Automated Manufacturing Technology, Collision Repair Technology, Industrial Motor Control, Motorcycle Service Technology, Precision Machining Technology, Robotics and Automation Technology, Sheet Metal and Technical Drafting
- State event held at Iowa Lakes Community College with business and industry partners—winners are posted on the Iowa Lakes Community College website.



The Honorable Thomas Vilsack congratulates Dustin Costello, Jefferson-Scranton High School, National SkillsUSA-VICA winner in "Residential Wiring"

SkillsUSA-VICA Competitive Events at Iowa Lakes Community College



Cluster: **Manufacturing**

Description: Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, welding, precision machining and manufacturing/process engineering.

Occupational areas include robotics, industrial manufacturing technician; industrial electronics installer and repairer; precision production work; plastics technicians; electromechanical technician, welder, machinist, etc.



Manufacturing Program enrollments

	Male	Female	Total
Secondary	9,667	1,199	10,866
Postsecondary	2,754	598	3,352

Secondary Program Highlights

- Through the Tool and Die Technology hub site, NIACC partners with nine area high schools to offer college-level instruction to secondary students.
- The Academy of Engineering Technology cosponsored by Cedar Rapids Jefferson High School and Kirkwood Community College provides students opportunities to earn college credit in seven high-tech associate degree programs. The program also articulates with UNI's Technology Management program. Anticipated earnings for degree graduates range from \$28,000 to \$100,000.

Postsecondary Program Highlights

- The Industrial Electrician program at Northeast Iowa Community College provides an AAS degree, articulation with apprenticeship programs and labor organizations, starting wages of \$10.32 an hour, and 95-97% job placement for graduates.
- Graduates of the Tool and Die Technology program at NIACC receive average wages of \$25,917 upon graduation. The program also articulates with the General Industry and Technology baccalaureate program at UNI.
- Western Iowa Tech Community College graduates in Industrial Technology earn average wages of \$29,120.

Certification Agencies

- Board of Certified Safety Professionals
- International Mobile Air Conditioning Association
- National Association of Industry Technology
- National Institute for Metal Working Skills
- Society of Manufacturing Engineers
- World Safety Organization
- AWS (American Welding Society)



Industrial Technology Student Organizations

SkillsUSA VICA Vocational Industrial Clubs of America

An organization preparing students to enter the labor market with superior technical skills, character, citizenship, work ethic and leadership provided through activities and classroom experiences that positively affect their school, community, and country,

- 13 National Finalists in 2000
- 31 training areas
- 83 national qualifiers in 2000
- 33% growth in membership

Cluster: **Transportation**

Description: Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water and related professional and technical support services.



Transportation Program enrollments

	Male	Female	Total
Secondary	2,981	222	3,203
Postsecondary	1,778	64	1,842

Postsecondary Program Highlights

- Students in the tractor-trailer driving program at Western Iowa Technical Community College learn about all aspects of being an over the road driver. A 100% program completions rate was achieved with average starting wages of \$30,000 a year.
- Sixty-four graduates of the Iowa Central Community College semi truck driving program averaged \$32,000 starting wages.

Industrial Technology Student Organizations

SkillsUSA-VICA

Provides competitive events specifically designed for students enrolled in automotive, motorcycle repair, and aviation.

David Nelson, 39, Aurelia, Iowa student enrolled in Motorcycle Service Technology at Iowa Lakes Community College in Emmetsburg took gold medal honors at the SkillsUSA-VICA competition in Kansas City.

The Technology Student Association features specific competitive events to encourage students to pursue technology in transportation related careers.

The Ford Company ASSET contest held each spring provides incentives for high school teams to further their education in the automotive field.

Certifications

The following certification opportunities are provided in community colleges:

- National Automotive Technicians Education Foundation
- Inter-Industry Council for Automotive Repair
- National Institute for Automotive Service Excellence
- International Mobile Air Conditioning Association
- Federal Aviation Administration

Pathway: **Family and Human Services**

Cluster: **Family & Consumer Sciences & Human Services**

CAREER
CLUSTER

Description: Planning, managing, and providing human services including social and related community services.

Occupational areas include social work/counseling; clinical psychology; child-care related; home service workers and managers; food service; executive housekeepers; parks, recreation and leisure services; hotel/motel management. Dietitians and dietary managers are also career ladder opportunities.



Family and Consumer Sciences Program Enrollments

	Male	Female	Total
Secondary	14,483	24,661	39,144
Postsecondary	271	1,704	1,975

Secondary Program Highlights

PARTICIPATION IN A HOME CONSTRUCTION PROJECT

- Career and technical education students at South Hamilton High School have developed a home construction project using a former portable classroom. Family and consumer sciences students assisted in the construction project in designing floor plans and completing the decorating. Construction program students rebuilt the house, with wiring assistance from the maintenance staff. Agriculture program students were responsible for landscaping; and the business and marketing classes designed the portfolio to market the house. Over 75% of the high school students were involved in this project.
- Students in comprehensive programs often introduce early childhood activities into the program of study through operation of a short-term day care or preschool project.

Certifications

- National Association for the Education of Young Children
- Dietary Manager Association

Student Leadership Organization

FCCLA (Family, Career & Community Leaders of America)

- State Leadership conference annually has a capacity of 575 participants
- Sponsored six areas of competitive events in Students Taking Action for Recognition (STAR) Events
- Fourteen Gold STAR and three Silver STAR and two Bronze STAR winners at national level in 1999-2000
- National recognition for Power of One, Families Taking Action for Traffic Safety, Families First and Community Service Awards
- National Vice-President of Public Relations
- Individual top National winner for Career Connections

Stop the Violence

The Gilbert Chapter of FCCLA Gilbert High School sponsored a program entitled "Stop the Violence". This is a peer-to-peer program that teaches students how to recognize the warning signs of potential violence, to befriend both potential perpetrators and victims, and to take the necessary steps to further reduce the potential for youth violence in their schools and communities.

Cluster: **Hospitality and Tourism**

Description: Planning, managing and providing lodging, food, recreation, convention and tourism, and related planning and support services such as travel-related services.



Hospitality and Tourism Program Enrollments

	Male	Female	Total
Secondary	151	323	474
Postsecondary	205	199	404

- Students from 22 high schools in eastern Iowa may access the Culinary Arts Youth Apprenticeship program developed with Scott Community College. The program is sponsored by the American Culinary Federation Educational Institute and local ACF chapters. Students receive 2000 hours of on-the-job training under the supervision of an Executive Chef or Registered Dietician and can earn nine community college credits.

Postsecondary Program Highlights

- The culinary arts program at Des Moines Area Community College in Ankeny has established an exchange with France so that students can learn from the French chefs skills of the trade. Annually, DMACC identifies a country to highlight for college activities. The culinary arts students study the cuisine of that country and sponsor a dinner for community members.
- The hospitality program at Iowa Lakes Community College places over 90% of its graduates annually in positions ranging in salary from \$8.50 an hour to \$25,000 a year. Several certifications are received.



Certification Agencies

- American Culinary Federation
- American Hotel/Motel Association

Statewide Articulation Agreement

A statewide articulation agreement was developed in nutrition. This agreement recognizes student competencies achieved in high school which are comparable to postsecondary nutrition competencies.

Pathway: Health Sciences

Cluster: Health Occupations

CAREER
PATHWAY

Description: Planning, managing, and providing diagnostic, therapeutic, and information and environmental services in health care.

Occupations include registered and licensed practical nursing, dental technician, emergency care, nursing home administration, medical records technology, medical lab technology and emergency medical technology/paramedic.



Health Occupations Program Enrollments

	Male	Female	Total
Secondary	271	960	1,231
Postsecondary	1,195	8,163	9,358

Secondary Highlights

- Students from five area high schools in Council Bluffs participate in the Health Occupations education program at the Tucker Center for Career and Technical Education. In addition to classroom training, students job-shadow professionals at all levels of health careers at Southwest Iowa Medical Center; participate in service learning projects in the community; and gain leadership skills through participation in Health Occupations Student Association (HOSA). Mentors evaluate the students on workplace readiness skills, including motivation, communication, and professionalism. The majority of students pursue postsecondary education.

Postsecondary Highlights

- Students graduating as Associate Degree Nurses from North Iowa Area Community College earn average wages of \$32,300 upon graduation.
- Eastern Iowa Community College District graduates in Radiography earn an average of \$31,700 upon graduation.
- Dental hygienists graduating from the Des Moines Area Community College program earn an average of \$42,000 upon graduation.

Placement Data on Selected Programs

Health Specific Program	Number of Graduates	Number Employed in Health	Average Reported Salary
Associate Degree Nursing	395	289	\$14.16
Dental Assisting	77	55	\$9.21
Dental Hygiene	37	31	\$26.50
Health Information Technology	23	20	\$9.86
Medical Assistant	75	53	\$8.62
Medical Lab Technician	19	13	\$13.43
Optometric Assistant	4	4	\$10.25
Physical Therapy Assistant	49	40	\$12.83
Practical Nursing	475	245	\$10.92
Radiological Technology	30	27	\$11.78
Respiratory Therapy	7	5	No Report
Surgical Technology	4	3	No Report

Placement

The table, on the right, provides a summary of the Placement Reports for Health Occupation Programs from nine of the fifteen Iowa community colleges.

- Four hundred seventy five students from the nine community colleges completed the practical nursing program. Of this group 350, or 74% report that they are continuing their education.

- This table provides information about the number of graduates, the number reporting employment in health, and the average hourly salary, as reported by 9 of 15 community colleges.

Certification Agencies

- American Board of Registration of Electroencephalographic (EEG) and Evoked Potential (EP) Technicians
- American Dental Association
- American Health Information Management Association
- Approved Board of Nursing Home Examiners
- Commission on Accreditation of Allied Health Education Programs
- Iowa Board of Nursing
- National League for Nursing
- National Accrediting Agency for Clinical Laboratory Sciences
- Iowa Department of Public Health, Bureau of EMS
- American Occupational Therapy
- Liaison Council on Certification, Surgical Technologist



Student Leadership Organization

HOSA (Health Occupations Student Association)

- Fall and Spring Leadership Conferences, 433 participated. (Attendance is limited by space.)
- Competitive skills events at spring leadership conference conducted by Des Moines Community College
- Three National first place winners in competitive events (Knowledge Test – Pathophysiology; Speaking Skills; Medical Mathematics)
- One national outstanding HOSA Chapter (Gold Award)

Iowa Center for Career & Occupational Resources



2000

The Iowa Center for Career and Occupational Resources (ICCOR)

Since January 2000, the Iowa Center for Career and Occupational Resources (ICCOR) has been housed in the Bureau of Career and Technical Education. Funded in part with a federal grant under Section 118 of the Carl D. Perkins Vocational and Technical Education Act of 1998, its purposes are:

- to provide support (especially in areas of career information delivery and use) for career guidance and decision-making
- to make information and planning resources regarding career preparation available to students, parents, teachers, administrators and counselors
- to equip teachers, administrators and counselors with knowledge and skills to assist students and parents with career exploration and planning
- to improve coordination and sharing of career information and data among state and local agencies, including the Department of Education and Iowa Workforce Development
- to obtain feedback on products from customers, such as students and parents, to better meet their career information requirements.

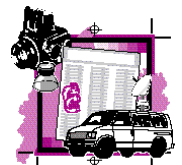
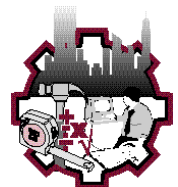
Responding to the requirements of the federal law and the needs identified by its various Iowa customers, ICCOR has undertaken several initiatives. These include:

- update and release of **Iowa Choices 2001** including student portfolios, conducting 51 workshops (470 participants) for counselors, teachers and students
- implementation of **eChoices**, an internet-based version of Iowa Choices, and an internet-based career magazine CX Online
- implementation of **The Real Game Series**, career exploration curriculum for grade 3 through adult
- re-design of the ICCOR web site to include links to more resources and communications tool
- numerous workshop presentations, classroom lectures, and use of displays to assist teachers, counselors and administrators in accessing and using career information, using The Real Game Series;
- collaboration with staff at DE and IWD on career information issues
- evaluation of all activities and products of ICCOR through annual surveys of customers and individual program evaluation forms

Iowa Choices products are utilized in 84.8% of the school districts in Iowa, in 26 community college locations, 37 workforce development centers, 12 alternative high schools, 5 youth correctional facilities and 4 private colleges. They are also accessible via the Internet in 32 high schools, 3 alternative schools and 4 community colleges.

The annual Iowa Choices Customer Use Survey reflects that 97.1% of those surveyed believed that Iowa Choices and its components met the needs of their programs and students regarding career information.

National Crosswalk Service Center



2000

National Crosswalk Service Center

Profile The National Crosswalk Service Center (NCSC) develops, markets and hosts a one-stop infrastructure of taxonomies and crosswalks for customers. The center's comprehensive solution translates into mission-critical business benefits such as improved staff efficiency, facilitation of faster and better decision-making for customers, as well as common crosswalk structures for nationwide information customers and partners.

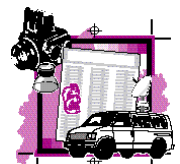
Service Offerings

NCSC is the only service of its kind in the Nation. NSCS provides:

- Technical support on database and management for ALMIS (American Labor market Information Systems) consortium;
- Training in NCSC database and services at 3 LMI Institutes for state and federal Department of Labor staff. (LMI=Labor Market Information);
- Transitioning data management and application of Licensed Occupations to Employment and Training Administration;
- Internet services provided include:
 - Better accessibility and tools for finding data/information
 - Multimedia product development
 - Internet surveys
- The crosswalk supports the Career Resource Network through providing access to databases and technical support for development and dissemination of crosswalks

ACCOUNTABILITY

Performance Report



2000

Accountability

The Perkins III legislation requires accountability reporting on all students enrolled and completing all vocational education programs. A program is defined as a sequence of courses meeting the standard set by the state. Accountability reporting is also required on students completing the tech prep program at the completion of the secondary level of the program and at the completion of the postsecondary level. Reporting on all students will provide longitudinal data for local school district school improvement planning and contribute to local community college program evaluation information.

States have been required to identify performance measures for the following four major core indicators. Those indicators include:

- Student attainment of challenging state established academic and vocational and technical skill proficiencies
- Student attainment of a secondary school diploma or its recognized equivalent, a proficiency credential in conjunction with a secondary school diploma, or a postsecondary degree or credential
- Placement in, retention in, and completion of, postsecondary education or advanced training, placement in military service, or placement or retention in employment.
- Student participation in, and completion of, vocational and technical education programs that lead to nontraditional training and employment.

The levels of performance established are expressed in a percentage or numerical form and the legislation required the state to continually make progress toward improving the performance of vocational and technical education students.

The following levels were negotiated with the U.S. Department of Education for each secondary and postsecondary core indicator.

Secondary Core Indicators 1999-2000

		<u>Final Agreed-Upon Baseline Level</u>	<u>Measurement Level Attained</u>
1S1	Academic Attainment	63.11 %	63.12 %
1S2	Competency Attainment	68.99 %	69.00 %
2S1	Diploma Attainment	99.55 %	99.55 %
3S1	Placement	98.54 %	98.54 %
4S1	Non-traditional Participation	19.72 %	19.73 %

Postsecondary Core Indicators 1999-2000

		<u>Final Agreed-Upon Baseline Level</u>	<u>Measurement Level Attained</u>
1P1	Program Completers receiving Degree, Diploma or Certificate Attainment	98.54 %	98.54 %
1P2	Competency Attainment	95.25 %	95.25 %
2P1	Degree, Diploma or Certificate Attainment	98.54 %	98.54 %
3P1	Completers	95.99 %	95.99 %
4P1	Non-Traditional Participation	18.32 %	18.32 %
4P2	Non-Traditional Completers	13.39 %	13.39 %

Accomplishments

All negotiated levels of performance were attained.

Secondary

Core Indicator 1 - academic and occupational skill attainment

- 63% of 11th grade students who have been or are enrolled in two or more vocational units achieved proficiency or higher on the ITED math and reading assessments
- 69% of vocational completers attained 90 or higher percent of the occupational competencies determined to be critical for employment.

Core Indicator 2 - attainment of a diploma

- 99% of secondary students who were enrolled in two or more vocational units in one vocational program attained a secondary diploma or its recognized equivalent.

Core indicator 3 - placement

- 98.5% of secondary vocational program completers completing high school intend to be placed in continuing education, employment, or military after graduation/completion.
- 74.18% of secondary vocational program completers enter postsecondary education.

Core indicator 4-participation

- 19% of under-represented gender secondary students participated in vocational programs leading to employment in occupations nontraditional for their gender.

Postsecondary

Core Indicator 1 - academic and occupational attainment

- 98.5% of program completers received a degree, diploma or certificate
- 95.25% of vocational program completers attained 90 or higher percent of the occupational competencies determined to be critical for employment.

Core Indicator 2 - degree, diploma, or certificate attainment

- 98.5% of postsecondary program completers received a degree, diploma, or certificate

Core Indicator 3 - program retention

- 95% Of postsecondary vocational program students intending to improve their job skill qualifications completed courses enrolled within a program.
- 91% of postsecondary vocational program completers were placed in employment within one year of graduation/completion.

Core Indicator 4- nontraditional

- 18.32% of under-represented gender postsecondary students participated in vocational programs leading to employment in occupations nontraditional for their gender.
- 13.64% of under-represented gender postsecondary students completed vocational programs leading to employment in occupations nontraditional for their gender.

Enrollment

Total enrollments

The following tables report total enrollments in secondary vocational education courses and postsecondary programs.

Enrollment in Secondary Career and Technical Education Courses

<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>
208,321	210,344	209,563	255,633

Source: Iowa Department of Education/Basic Educational Data System (BEDS)
Consolidated Annual Report Accountability Status Database

Enrollment in Postsecondary Career and Technical Education Programs

<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>
31,544	36,842	35,504	41,454

SOURCE: Iowa Community College MIS System

The following chart compares Iowa program enrollment with national enrollments.

<u>Secondary Vocational Majors by Program</u>	<u>U.S.</u>	<u>Iowa</u>
Health Occupations	22%	26%
Business & Office	29%	15%
Engineering, Science Technologies	12%	12%
Agriculture	1%	5%
Computer, Data Processing	5%	15%
Family and Consumer Sciences	4%	1%
Marketing & Distribution	1%	3%
Protective Services	6%	11%
Trades and Industry	6%	11%
Other	13%	1%

Source: Consolidated Annual Report Accountability Status Database
U.S. Department of Education Statistical Snapshot

**NEW STATE BOARD APPROVED CAREER-TECHNICAL EDUCATION
SECONDARY PROGRAMS
1999 – 2000**

Accounting Technician

Armstrong-Ringsted

**Architectural Engineering
Technology**

West Bend-Mallard

Business Education

Boone

**Business Networking
Systems**

Alden

BGM

East Marshall

Hubbard-Radcliffe

Iowa Falls

Marshalltown

Carpentry

South Page

Cedar Rapids

Linn-Mar

Ottumwa

Waverly-Shell Rock

Computer Aided Design

Estherville

Construction

Central Lee

**Construction and
Architectural**

North Kossuth

Construction Trades

Knoxville

New London

WACO

Boone

**Dental Laboratory
Technician**

Marion

Electricity/Electronics

Centerville

**Electrical and Electronics
Engineering**

Marion

Engineering Tech

North Kossuth

**Family and Consumer
Sciences**

East Central

Walnut

Clarinda

Shenandoah

**Food Production
Management and Services**

Pleasant Valley

General Business

Glidden-Ralston

General Health Occupations

Bettendorf

Calamus-Wheatland

Camanche

Central

Maquoketa

North Scott

Prairie Valley

**Health and Medical
Programs, other**

Linn-Mar

**Machine Tool Operation
Technology**

Independence

Manufacturing

Emmetsburg

**Mechanical Design and
Production**

Muscatine

Central Clinton

Production Agriculture

Grundy Center

**Radio and TV Broadcasting
Technology**

Battle Creek-Ida Grove

**Residential Construction
Trades**

Algona

Secretarial

Algona

Emmetsburg

Armstrong-Ringsted

East Central

New Tech Prep Programs

Tech Prep program development and implementation is funded through Title X of the Carl Perkins Act. Tech prep is a program of study that:

- Combines a minimum of 2 years of secondary education with a minimum of 2 years of postsecondary education in a nonduplicative, sequential course of study
- Integrates academic with vocational and technical instruction and utilizes work-based and worksite learning where appropriate and available
- Provides technical preparation in a career field such as engineering technology, applied science, a mechanical, industrial, or practical art or trade, agriculture, health occupations, business, or applied economics
- Builds student competence in mathematics, science, reading, writing, communications, economics, and workplace skills through applied, contextual academics, and integrated instruction in a coherent sequence of courses
- Is administered per a written agreement between the cooperating educational entities that defines the curriculum, operational policies, and credit provisions
- Leads to an associate degree or certificate in a specific career field and leads to placement in high-skill, high-wage employment or to further education. 1999-2000 state board approved programs include the following:

Business Systems Networking

Alden
BGM
East Marshall
Green Mountain-Garwin
Hubbard-Radcliffe
Iowa Falls
Marshalltown
Clarinda
Shenandoah

Carpentry

South Page
Cedar Rapids
Linn-Mar

Health and Medical Programs

Linn-Mar

Electrical and Electronics Engineering

Marion
Waverly-Shell Rock

Secretarial

Carroll

Mechanical Design and Production

Muscatine
Wilton
Central Clinton

Machine Tool Operation Technology

Independence

Distribution Gap

The following chart shows the percent of gender enrollment in career and technical education program areas.

Gender Enrollment		1999-2000			
Program Area	Secondary		Postsecondary		
	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	
Agriculture	27%	73%	29%	71%	
Industrial-Trade Industry	11%	89%	25%	75%	
Information Technology	40%	60%	42%	58%	
Marketing	48%	52%	65%	35%	
Business	51%	49%	83%	17%	
Health Occupations	78%	22%	87%	13%	
Family & Consumer Sciences	63%	37%	64%	36%	

The distribution gap continues to compare with national trends with agriculture and trade and industry reporting male majority enrollment in the secondary programs. Secondary agriculture and natural resources is dominated by a 73 percent male enrollment and the combined male enrollment in construction trades, manufacturing, and transportation clusters totals over 90 percent.

Enrollment in business and related courses continues to be at an almost equal distribution. Family and consumer sciences female enrollment is 63 percent of the total. Seventy seven percent of the health sciences enrollment is female.

Community college enrollments parallel the secondary enrollment for male students. Seventy-one percent of agriculture and natural sciences students are male. Eighty-nine percent of the combined construction trades, manufacturing, and transportation is male.

However, female enrollment in the information technology programs is forty one percent of the total. Females are enrolled in seventy-nine percent of business, financial and marketing programs, differing from the secondary school enrollment composition. Females also dominate in health sciences programs at eighty seven percent.

New State Board Approved Programs Nontraditional Enrollment Data Analysis

The following nontraditional enrollment student follow up data information is based on enrollment figures for career and technical programs that received State Board approval in FY 1998. As noted, data were analyzed for 1998, 1999, and 2000.

Twenty secondary and sixteen postsecondary programs were identified as nontraditional for females. Those programs included the following:

- auto collision repair
- manufacturing technology
- construction trades
- architectural engineering technology
- mason and tile setters
- mechanical drafting
- heating, air conditioning, refrigeration mechanic
- auto mechanics
- quality control technology
- carpentry
- small engine repair
- occupational safety and health technology
- mechanical design and production

Five secondary and six postsecondary programs were identified as nontraditional for males. These programs included the following:

- general office clerk
- respiratory therapy
- dental hygiene
- health information transcription
- health information technology
- health and medical administrative services
- family and consumer sciences
- secretarial

Secondary Enrollments

	FY 1998	FY 1999	FY 2000
Female Enrollment in Nontraditional Programs	10 %	10 %	18 %
Male Enrollment in Nontraditional Programs	33 %	34 %	44 %

Examination of the data for secondary level programs reflected high percentages of male students and female students enrolled in secretarial programs. Personnel at local districts reported that the secretarial programs include all computer applications courses (Word, Excel, webmaster, programming, etc.) and keyboarding. Keyboarding is also a prerequisite for advanced computer courses. The student count is a duplicative count identifying all students enrolled in each course of the programs. Secretarial science programs have changed content to be reflective of changing roles and responsibilities.

The following tables identifies the percent of nontraditional enrollments in postsecondary programs:

Postsecondary Enrollments

	FY 1998	FY 1999	FY 2000
Female Enrollment in Nontraditional Programs	7 %	11 %	11 %
Male Enrollment in Nontraditional Programs	15 %	1 %	3 %

The data for postsecondary programs reflects a larger percentage of males in nontraditional programs in 1998 than in 1998 or 1999. This is the result of the three new programs operating in this category in that year. Two of the programs included respiration therapy which traditionally enrolls a higher percentage of males. There continues to be an increase in the percentage of both male and female students participating in nontraditional career and technical programs.

Distribution of Federal Funds

The following charts identify the expenditures for secondary districts and consortia and community colleges utilizing Carl D. Perkins Funds.

Secondary District and Consortium Expenditures					Postsecondary District and Consortium Expenditures				
	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>		<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>
Administration	3.5%	2.8%	3.5%	3.5%	Administration	3.2%	3.8%	3.8%	3.5%
Curriculum	16.8%	16.6%	17.7%	41.4%	Curriculum	5.2%	0.6%	2.6%	38.0%
Equipment	54.1%	49.7%	54.8%	34.1%	Equipment	6.5%	9.8%	8.3%	21.8%
In-service	8.0%	5.9%	5.3%	6.3%	In-service	0.8%	1.1%	1.2%	5.5%
Guidance	4.3%	3.9%	4.2%	4.9%	Guidance	21.6%	23.3%	25.6%	12.8%
Remedial Courses	0.1%	0.1%	0.1%	0.0%	Remedial Courses	12.0%	14.7%	18.2%	0.0%
Tech Prep Programs	2.5%	1.7%	1.8%	2.4%	Tech Prep Programs	3.9%	0.8%	0.7%	2.7%
Special Populations	10.4%	9.0%	8.1%	4.6%	Special Populations	46.3%	40.9%	38.4%	10.0%
Apprenticeship	0.3%	0.3%	0.2%	0.7%	Apprenticeship	0.5%	0.4%	0.2%	1.3%
Other	0.0%	10.0%	4.3%	2.2%	Other	0.0%	1.6%	1.0%	4.5%
<u>Total Funds FY00 \$5,715,640</u>					<u>Total Funds FY00 \$4,489,197</u>				

- Analysis of the data shows that upgrading curriculum and equipment purchases continue to be the major area of expenditure for secondary districts and consortia. Community colleges changed emphasis from special populations and remedial courses to equipment and curriculum expenditures. This is reflective of the Perkins III changes concerning concentration on programs serving special populations.

Funded Equity Activities

Under Perkins III, states are required to utilize leadership funds to promote nontraditional occupations. Iowa strategies include:

- an annual equity conference
- dissemination of information and materials through the Iowa Equity Resource Center at Indian Hills Community College
- presentation of workshops on gender equity