



SkillsUSA: An Overview

Kaynor Technical High School

The Problem

The National Federation of Independent Business recently cited the NUMBER ONE problem of its members:

“The shortage of skilled, trained workers.”

‘Deplorable’ skills worry manufacturers

By HOWARD HERRNSTADT
Staff Writer

MONTVILLE TWP. — Manufacturing faces severe shortages of skilled personnel, now and in the future.

That was the conclusion of presenters at the National Conference on Manufacturing Technology Education that took place Aug. 25 at Rustic Hills Country Club.

Paul Koonitz, president of Denford Inc. in Medina, a manufacturer of computerized machine education systems, opened the conference by explaining the motivation for it. The idea arose July 2, after a recent Precision Machining Competition to design computer programs to control the machining of parts.

The results of the competition were “deplorable,” Koonitz said.

The blue-ribbon winner received a score only slightly higher than 50 percent. Many participants could do little or nothing in the hour and 20 minutes allotted to fulfill the competition task, designing two metal parts on a computer, using industry software, he said.

The computerized designs enable a computer-controlled lathe or milling machine to manufacture the part.

The annual event is sponsored by SkillsUSA-VICA, a national organization of students in vocational programs in high schools and junior colleges.

The “decline in manufacturing’s entry-level work force” could be seen in these results, Koonitz said.

“Very few companies today offer machinist or tool-making apprenticeships,” he noted. Technical schools do a good job, but do not fill the gap between the entry job slots and available personnel, he added.

An educator, writer and publisher of technical books, Steve Kruz, president of Kelnar Associates, Ontario, Canada, added, “Each one of us has to share the

Career Opportunities in Tooling & Machining

DID YOU KNOW...

- Entry level toolmakers can average \$27,000 a year during a four-year training program.
- Experienced precision metalworkers’ earnings range from \$40,000 to \$60,000 annually.
- The U.S. Government projects 2 job openings for every new certified precision metalworker through 2005.

Precision machining provides a practical basis for an engineering or business degree.

The gloomy rooms and greasy machines of the past are replaced with computers and high technology.

Many toolmakers eventually own their own shops.

NOTE...

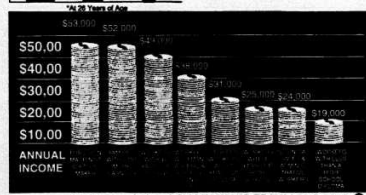
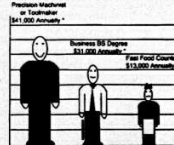
The average incomes in all categories...

• Vary approx. +/- 35% based on location and skill level

• Include base pay plus overtime

SOURCES...

- U.S. Bureau of Labor Statistics
- U.S. Census Bureau
- National Science Foundation/SRS
- NTMA, TMA, AMBA, PMA



Used by permission of CHARMILLES TECHNOLOGIES Staff graphic

“There has never been a better time to have a skilled trade than there is today. It’s a seller’s market.”

— Eric Gearhart

SkillsUSA-VICA Senior Development Officer

You’re playing with student

and successful graduates of engineering colleges, Oakley said.

“We have a need for more engineers and fewer are coming out,” of two- and four-year colleges, he said.

The program is introducing “a middle and high school pre-engineering curriculum designed to attract and prepare students to enter engineering or engineering technology careers,” he said.

It is now in 105 schools, mostly in suburban districts with a few in rural and inner-city districts.

There are five distinct courses, each lasting a full academic year,

Oakley noted. The program includes training for teachers prior to and during the academic

year and orientation for guidance counselors as well, to assist them in guiding course participants into industrial education and careers, Oakley said.

Educators interested in Project Lead the Way can learn about it on the web at www.PLTW.org, he said.

Women interested in technology careers can visit the site at www.autodesk.com/dyf, Oakley said. The site, designed and maintained by students, has numerous links to web pages that have such information, he said.

Another organization, The

Society of Manufacturing Engineers, is taking a range of actions to address the shortage of technical personnel.

The society, headquartered in Dearborn, Mich., began in 1986 to “identify those knowledge gaps” resulting from inadequate engineering curricula, said Mark Stratton, manager of manufacturing engineering education for the group.

In 1998 and ‘99 the society made a total of 16 grants to colleges ranging from \$50 to \$300,000. “The grants focus on industry-driven competency gaps,” Stratton said.

These gaps include areas of professional competency such as written and oral communication and teamwork, as well as technical skills such as quality control and product design, he said.

The society also has long-range goals that include “lifelong learning and career development” for its members and delivering “the message to K-12 teachers, students, parents and guidance counselors that manufacturing is important and that it presents challenging, rewarding and desirable careers,” Stratton explained.

He said the society has developed a web site at www.manufacturingiscool.com. It takes the visitor through manufacturing facilities and introduces technical and managerial careers in manufacturing.

The society also seeks to involve its membership in K-12 education projects, Stratton said.

Manufacturing jobs and vocational education have traditionally been thought of as “dirty, dumb and dangerous,” Eric Gearhart, senior development officer of SkillsUSA-VICA said. But

its image should be changed to one that depicts industry as “clean, safe and high-tech,” he said.

“There has never been a better time to have a skilled trade than there is today. It’s a seller’s market.”

The Problem

The skills employers are desperate for are not only technical skills, but also **EMPLOYABILITY** skills (teamwork, communications, leadership, goal-setting, etc.).

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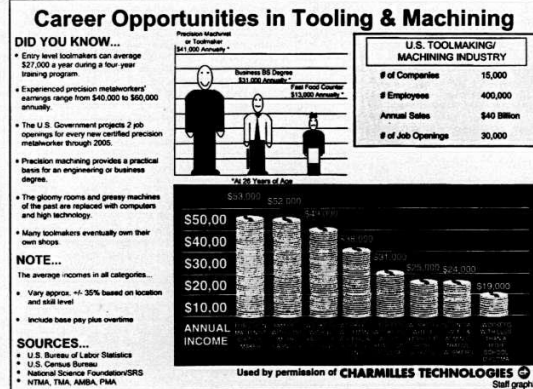
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"Very few companies today offer machinist or tool-making apprenticeships," he noted. Technical schools do a good job, but do not fill the gap between the empty job slots and available personnel, he added.

An educator, writer and publisher of technical books, Steve Krut, president of Kelnar Associates, Ontario, Canada, added, "Each one of us has to share the



blame of what has happened to technical education in this country.

You're playing with student by not providing relevant, up-to-date technical training.

The conference presented some potential solutions to the problem of inadequate industrial technology training.

Project Lead the Way, a program created by the Autodesk Foundation in Greenbrae, Calif., north of San Francisco, was described by Joe Oakley.

The Charitable Venture Foundation of Albany, N.Y., which funds the program, has made a 10-year commitment of a minimum of \$2 million a year in order to increase the number of applicants

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The Solution:



Founded in 1965 as “The Vocational Industrial Clubs of America” (VICA) - became “SkillsUSA-VICA” in 1999 and simply “**SkillsUSA**” in 2004.



- **National non-profit organization for high school and college students enrolled in trade, technical, industrial and health occupations programs**
- **More than a quarter-million members in all 50 states and three U.S. territories (Guam, Virgin Islands, Puerto Rico)**
- **More than 16,200 chapters in high schools, trade & technical centers and 2-year colleges**



SkillsUSA brings together educators, administrators, corporate America, labor organizations, trade associations and government in a coordinated effort to address America's need for a globally competitive skilled workforce.



The SkillsUSA Mission:

**To empower our student members to
become world-class workers and
responsible American citizens.**

**Our core values:
Integrity, Responsibility, Citizenship,
Service and Respect**



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**Our mission is accomplished through our
Program of Work...**

Program of Work

- Professional Development
- Community Service
- Social Activities
- Ways and Means
- Public Relations
- Employment (school-to-work programs)
- SkillsUSA Championships



-Award-winning curriculum:
the Professional Development
Program (PDP)

--84 employability skills
taught, including
communications skills, ethics,
conflict resolution, time
management, goal-setting, and
more... Now available in an
interactive format, PDP Online

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--Instills lifetime commitment to community service

--Promotes goodwill and understanding among all segments of a community

--Teaches the importance of teamwork

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- SkillsUSA Championships



--Increase cooperation in the school and community

--Improve self-esteem by providing healthy outlets

--Students feel like they're part of a team, like they belong

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- SkillsUSA Championships



--Chapter fund-raising activities to support the chapter's yearly projects

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- **Public Relations**
- Employment (school-to-work programs)
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--Help change public misconceptions and stereotypes of technical education students and programs

--Make the public aware of the value of strong technical education programs in our school systems

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- Ways and Means
- Public Relations
- Employment (school-to-work programs)
- SkillsUSA Championships



--Students offered job shadowing, mentoring, apprenticeship opportunities

--Increased student awareness of career options, quality job practices and attitudes

--Increased opportunities for employer contact and eventual employment

Program of Work

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 - Employment (school-to-work programs)
- SkillsUSA Championships

--The premiere showcase of career and technical education.

--The greatest commitment of corporate volunteerism on a single day anywhere in America.





- Competitions occur on the local, district, state, national and even international levels.
- Competitions conducted in occupational (“hard”) skills AND leadership (employability, or “soft”) skills.
- Business and Industry set the contest standards through technical committee involvement.





- **National SkillsUSA Championships in 2021 was to be held in Atlanta, Ga. but now it will be held virtually.**
- **5,000 state winners compete in over ninety-one occupational and leadership contests 787,482**
- **The result of a direct interaction between industry and education; More than 1,700 technical experts from labor and industry design and judge the contests**

Business & Industry Partnerships

We need each other!



Students



B & I



Instructors

Business & Industry Partnerships

- More than 1,100 corporations, labor unions and trade associations support SkillsUSA at the national level.
- Thousands more support local SkillsUSA chapters and state associations.
- Partnerships take many forms: from cash financial support, volunteered company expertise, equipment and supplies donations, etc.



Business & Industry Partnerships

- Partnerships offer business and labor a vehicle for **DIRECTLY** influencing the quality of vocational-technical education
- Partners have the opportunity to reach a valued marketplace of students and teachers
- New marketing opportunities
- New recruitment opportunities, from the most prized pool of skilled workers in the nation



For More Information:

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**Thank you for
your support!**



SkillsUSA

www.skillsusa.org