U03A1 History and Legislation of Technology Education

Robert J. (Bob) Leahy, Jr.

University of Wisconsin - Stout

Abstract

This paper contains research on the history of the career and technical discipline area of technology education and integrates career and technical education legislation that has impacted this program area.

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Overview of Technology Education

Technology education, formerly known as industrial arts education, is the career and technical education (CTE) program that focuses on the study of technology as a means of developing technological literacy (Scott & Sarkees-Wircenski, 2008). To further understand this definition of technology education, we need to define the terms technology and technological literacy. "Technology is the modification of the natural environment to satisfy perceived human wants and needs" and "Technological literacy is the ability to use, manage, assess, and understand technology" (ITEA, 2000, p. 9).

According to Scott & Sarkees-Wircenski (2008, p. 78) "A major thrust of technology education is to assist students in developing technological literacy and an understanding of what technology is, how it is created, how it shapes society, and how society gives form to technology".

According to the Carl D. Perkins Vocational and Applied Technology Education Act Amendments of 1990 (PL 101-392):

> The term 'technology education' means an applied discipline designed to promote technological literacy which provides knowledge and understanding of the impacts of technology including its organizations, techniques, tools and skills to solve practical problems and extend human capabilities in areas such as construction, manufacturing, communication, transportation, power and energy.

Technology education starts at the middle and junior high school level. These programs engage and challenge a child's thinking using real-life and imaginary situations (active learning). This enables students to explore and develop a broader view of technology. At the secondary

level, the students are involved in problem-based learning activities that utilize math, science, and technological principles (Scott & Sarkees-Wircenski, 2008). Technology education at the postsecondary level is diverse. Students have an opportunity to choose from a wide variety of field-specific technology programs at the community college and technical college level. At four-year college and university levels, students can choose major courses of study in areas such as engineering, computer science, and health sciences.

Federal Legislative History and Technology Education

The federal government's involvement with technology education can be traced back to the Morrill Act of 1862. This was also known as the Land Grant College Act. This act had a primary purpose to promote the liberal and practical education of the industrial classes in pursuits and professions of living (Scott & Sarkees-Wircenski, 2008). The "mechanical arts" as mentioned in this act are part of the technology of the time.

During the American industrial revolution, a complex set of economic, technological, and social changes occurred over a long period of time. With this, advances in attitudes and practices lead to many different terms being used to describe education supporting the revolution. Manual training, manual arts, industrial arts, and vocational education would eventually lead to a sub-set known as technology education. With this said, federal legislation often used the term most prevalent at the time.

Major vocational legislation from 1917 to 1982, that technology education had roots in, includes the Smith-Hughes Act of 1917, George-Elizey Act of 1934, George-Deen Act of 1936, George-Barden Act of 1946, George-Barden Amendments of 1956, National Defense Education Act of 1958, Manpower Development Training Act of 1962, Vocational Education Act of 1963, Vocational Education Amendments of 1968, Comprehensive Employment Training Act of 1973,

Vocational Education Amendments of 1976, and the Job Training Partnership Act of 1982. These acts and amendment replaced previous legislation, put emphasis on different areas of vocational education, allocated funds or additional funds and even afforded opportunities to different members of the population such as veterans or the disabled.

Major vocational legislation from 1984 to present that have the major impact on career and technical education in general, and technology education specifically, are the various Carl D. Perkins acts. The Carl D. Perkins Vocational Education Act of 1984 had the interrelated economic and social goals. The social goal was to provide equal opportunities for adults in vocational education (Scott & Sarkees-Wircenski, 2008). The emphasis of the funding changed from expansion of programs to program improvements and addressing at-risk populations.

The Carl D. Perkins Vocational and Applied Technology Education Act of 1990 included an addition to the name to show an emphasis on the skills necessary for an advanced technological society. It included a combination of academic and vocational education, enhanced communication between the areas of education engaged in workforce preparation, and closer connections between school and work.

The Carl D. Perkins Vocational and Technology Education Act of 1998 included another name change (dropping "Applied"), new accountability and treatment of funding for special populations, and making Tech Prep, a program that included a minimum of two years secondary education followed up with a minimum of two years post-secondary education, a separate program with its own funding.

The Carl D. Perkins Career and Technical Education Improvement Act of 2006 is the most recent version and replaced the previous Perkins Act of 1998. Once again, a name change was included to reflect the identity of what was formally known by a number of different names

including vocational education. This act included accountability and program improvements, emphasis on the connections between secondary and post-secondary education, and stronger focus on business and industry.

Conclusion

Current technology is ever expanding and new technology is being introduced to the world that did not exist a few short years ago. Future legislation for CTE disciplines for program areas such as technology education will be needed to address these changes and additions.

References

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