Sociology of Education: An A-to-Z Guide

Technology Education

Contributors: Cassidy Puckett
Edited by: James Ainsworth
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Technology education is a form of education organized around the development of students' technological competence. Technology education has been traditionally thought of as providing students direct advantages in the labor market (i.e., providing technical training for particular career paths). Although terminology has changed over time and across national and international contexts, technology education is also generally viewed as part of vocational education and, in the past, industrial arts education. Technology education is different from technology in education or the use of "educational technologies" in the classroom in which technology is viewed as a tool to teach traditional subject areas such as reading and mathematics. However, as described below, this distinction between technology education and technology in education may become less clear as technical tracks move closer to academic tracks and vice versa.

Technology education is relevant to sociology of education because it is at the center of debates about the purpose of and means through which schooling achieves academic and labor market outcomes. In the past, technology education was separated as "vocational-technical" and distinct from "college preparation" and separated working-class from middle-and upper-class students. More recently, there has been some integration of vocational-technical curriculum and college preparation tracks, but this has not been a uniform movement. Reflecting this variability, technology education may be organized into a segregated track or program or entirely integrated into college preparation curriculum, depending on the goals of the individual school, school district, and/or state board of education. Thus, technology education remains a contested concept and ripe for further sociological investigation.

Contemporary Technology Education in the United States

In the early part of the 20th century technology education in the United States was relegated solely to vocational programs but shifted at the end of the century. Early on, the passage of the Smith-Hughes National Vocational Education Act of 1917 solidified efforts to emulate German industrial education, which emphasized separation of technical education from college preparation. The separation was formalized in segregated funding streams and the organization of curriculum into the "50-25-25 rule." or 50 percent of vocational student time in shop, 25 percent in shop-related subjects, and 25 percent in academic courses. Additionally, some states established separate vocational boards of education. This continued through the 1970s, amplified by the passage of the Vocational Education Act (VEA) in 1963, which increased funding and eventually doubled vocational education programs.

But in the late 20th century a series of laws known as the Perkins Acts signaled a shift in technology education. The first provided assistance to states to modernize vocation-technical programs and to increase access in order to address the problems described in *A Nation at Risk* (1983), despite the report's focus on nonvocational education. The second passed in 1990 and began the integration of vocational-technical and academic education. The third, in 1998, included a mandate for measurable outcomes for students and uniformity of standards, curriculum, and accountability. In response, in 2000 the International Technology Education Association (ITEA) crafted standards for "technology literacy," or the ability to "use technology to identify problems and opportunities to solve problems or meet human needs; identify, select, and use appropriate technological processes; and evaluate finished solutions."

While the passage of the Perkins Acts and ITEA framework signaled a shift in technology education, there was a parallel push for the academic track to integrate technology into its curriculum. This involved a push from overlapping academic, nonprofit, governmental, and private partnerships such as the International Society for Technology in Education (ISTE) and the Partnership for 21st Century Skills (P21), among others. These groups published different sets of standards, complicating integration efforts. The ISTE published standards for students in 1998, for teachers in 2000, and for administrators in 2001 (called National Educational Technology Standards, or NETS), and a few years later the P21 published a broad set of "21st-Century Skills," or new skills made necessary by the introduction of digital technology into everyday life.

To further complicate matters, the move toward technology integration occurred within a larger context of a

No Child Left Behind (NCLB) focus on reading and mathematics achievement. In this way, technology education remained then and continues to remain secondary to national educational goals. Yet, some states, school districts, and individual schools have prioritized technology education. For example, with a program started in 2001, the state of Maine now provides laptops to all of its middle school students, but this is not the typical case. Instead, at the national, state, and local level there continues to be a lack of uniform curriculum and consistent pressure to focus on reading and mathematics, creating wide variability in public school students' technological preparation.

Often, technology education outside of the vocational track is left up to families, external technology education organizations, and/or individual teachers. In some schools, technology is integrated throughout the school day but more typically its use is relegated to teachers' identification of selectively appropriate times or not used at all. In a 2009 survey, the National Center for Educational Statistics reported that 40 percent of teachers reported that they and/or their students use computers often during instructional time and 29 percent use computers sometimes during instructional time, but 29 percent of teachers reported that they and students never or rarely use computers during instructional time. Overall, technology education continues to be widely debated as to its place in public education.

- technology education
- college preparation
- vocational education
- technology
- industrial education
- college curricula
- technical education

Cassidy Puckett*Northwestern University*
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See Also

- Career and technical education
- Technology in the Classroom
- Television and Education.

Further Readings

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