

Research Brief

Career and Tech Prep

Question: What is the effectiveness of career and tech prep programs on achievement?

Summary of Findings: As was the case when career education programs were begun during the end of the 19th century, business still want students trained to be successful in the world of work. Initially career type programs were established to provide a venue for students who were most likely not college bound, yet would leave high school with viable skills to meet the demands of a specific trade. Throughout its history, this population of students has been referred to as "at risk" and more recently, as the "neglected majority." Historically, these programs included a high number of specific skills type classes, with less emphasis on formal academics, which were believed to be needed only by those who would be going on to college.

Due to the advent of the No Child Left Behind Act and its emphasis on high stakes testing, funding for specialty programs, such as Vocational Education, have been drastically reduced or eliminated. There has been an on-going debate about the purpose of vocational education. Is it to prepare students for a specific job or to prepare them for the world of work with a strong background in academics? Currently, students in a majority of these programs are required to take high level academic courses, often more demanding than those who are in the more traditional academic programs. "Most learning occurs either alone or in social groups...the tension...creates the modern dilemma of how we prepare students for future learning in all situations" (A new, old vision of learning, working, and living: Voc Ed in the 21st century).

Major Conclusions

Synthesis of the NAVE, 2004 (National Assessment of Vocational Education) and School-to-Work, 2001 reports:

1. 12th grade scores on NAEP (National Assessment of Education Progress), of students who were enrolled in Vocational Education Programs, went up 8 scaled points in reading and 11 in math. It was hypothesized that this might be due to higher graduation requirements. However, there is a lack of conclusive evidence that these students do better or worse on other standardized tests.
2. CTE (Career Technology Education) courses are more aligned with the CORE curriculum and programs than they had been in the past. For example, in Virginia, these students are required to take 4 years of English, a state specific social studies/history course, 3 math courses with at least 2 of them in Algebra I or above, and 3 science courses.

3. 26% of students in CTE take trigonometry, pre-calculus and other higher level math courses, compared to 42% of non-CTE students.
4. More students are enrolled in health care, communications, and information technology courses than are in traditional "shop" classes.
5. Students in these programs appear more likely to stay in school and attend it regularly because there is a practical application of knowledge to the real world and they have more of an awareness about why school is important.
6. Compared to non-School-to-Work students, their grades are comparable possibly because they are motivated and are gaining the requisite skills to plan future goals and directions.

Recommendations

The High Schools That Work program suggested the following key practices:

1. Establish high expectations and require students meet them.
2. Integrate high levels of math, science, language arts, and problem solving throughout the required courses. Expect and provide ample opportunities for the CORE academic and vocational education teachers to work together.
3. Provide a strong academic program.
4. Develop a relationship between academics and the real world of work.
5. Actively engage students in all aspects of the instructional program.
6. Use student data to inform curricular decisions and programs.

Online Resources:

- Advocates work to save vocational ed programs
A brief description is given about some of the reasons why lower numbers of students are enrolled in Voc Tech courses due to the demands of high stakes testing.
http://www.usatoday.com/news/education/2004-04-30-vocational-ed_x.htm
- A New, Old Vision of Learning, Working, and Living: Vocational Education in the 21st Century. Volume 26, Issue 3, 2001.
An examination of the role that family, school, and community play in student development and their importance in Voc Ed is described.
<http://scholar.lib.vt.edu/ejournals/JVER/>
- A Question of Balance: CTE, Academic Courses, High School Persistence, and Student Achievement. Volume 26, Issue 3, 2001.
This article supports the concept that a balance between CAD and academic programs can successfully support students who are at risk of dropping out of school.
<http://scholar.lib.vt.edu/ejournals/JVER/> (see link above)
- High Schools That Work: VA

A description of the key practices and conditions for accelerating student achievement are provided.

<http://www.pen.k12.va.us/VDOE/Instruction/CTE/hstw/HSTW.html>

- Mix of Academics , Technical Skills Heralds a 'New Day' for Voc. Ed.
An overview of some of the programmatic highlights from Sussex Technical School in Delaware is presented.
<http://www.edweek.org/ew/articles/2000/09/27/04voced.h20.html?print=1>
- School-to-Work: Making a Difference in Education
This is a full report of the findings about the effectiveness of this program. It was published in 2001.
<http://www.tc.columbia.edu/iee/PAPERS/Stw.pdf>
- School-to-Work Seen as Route To More Than Just a Job
An overview of the School-to-Work program from a national perspective is presented in this article.
<http://www.edweek.org/ew/articles/2001/04/11/30work.h20.html?print=1>
- Southern Regional Education Board. School Improvement Initiatives
School initiative programs to support different aspects of school improvement are provided in this article.
<http://www.sreb.org/programs/hstw/specialnetworks/snindex.asp>
- Tech Prep's Role in Education Reform: Perceptions from State Tech Prep Directors. Volume 20, Number 1, Fall 2003.
This article provides an historical overview of the history of Tech Prep programs and examines the perceptions of Tech Prep directors on Tech Prep programs.
<http://scholar.lib.vt.edu/ejournals/JCTE/>
- Vocational and Technical Education
An overview of the 2004 NAVE report is provided.
<http://edworkforce.house.gov/issues/108th/education/voced/summary.htm>
- Voc. Ed. Pinched by State Budgets
This article describes concerns about the lack of funding for Voc Ed programs as a result of No Child Left Behind.
<http://www.edweek.org/ew/articles/2003/10/29/09voced.h23.html>

Schools

- Contra Costa County Office of Education - ROP
A list of expectations for the county's program along with a brief description of each is given on this site. Home Page.

<http://www.cccoe.k12.ca.us/stsvcs/rop/about.html#hwat>

- High Schools That Work: 2003-2004 VA Sites
This is a list of high schools in Virginia that provide some type of vocational education program.
<http://www.pen.k12.va.us/VDOE/Instruction/CTE/hstw/hstwsites.html>
- Hodgson Vocational Technical High School
Home page
<http://www.k12.de.us/hodgson/>
- Howard High School of Technology
Home page. This school has a long history of being a vocational school that serves the African American students in Wilmington, Delaware.
<http://www.k12.de.us/howard/Home%20Page.htm>
- Sussex Tech High School
Home page
<http://www.sussexvt.k12.de.us/web/info.php?sturl=aaa.html>

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