

THE VALUE ADDED BY CAREER TECHNICAL STUDENT ORGANIZATIONS (CTSOS) TO FEMALE AND MINORITY STUDENTS' HIGH SCHOOL EXPERIENCE

Recent research sought to determine whether significant differences in academic motivation, academic engagement, career self-efficacy, civic responsibility, and college aspirations exist for female and minority students (compared with their male and White peers) who participated in a CTSO. The study used spring 2005 data, and included 5,677 students (with and without CTSO participation) drawn from career and technical education (CTE) and general education classrooms across 10 states.

Differences Between Gender and Minority Students

The study found that, across the entire sample, females reported significantly higher levels of academic motivation, academic engagement, career self-efficacy, civic responsibility, and college aspirations than male students. Students of color reported significantly higher levels of academic motivation and college aspirations than White students.

Differences in CTSO Influence, Compared With General Education and CTE

The study also found that students who participated in a CTSO had higher levels of academic motivation and academic engagement, compared with students in a general education curriculum. Students in CTSOs also had higher levels of academic motivation, career self-efficacy, and civic responsibility than students in a CTE curriculum only (no CTSO).

Differences in Outcomes by Gender, Minority Status, and Curriculum Type

The influence of participating in a CTSO depended on the gender and minority status of the student.

Girls in a CTSO. Girls who participated in a CTSO reported higher levels of academic motivation, compared with students in a general education curriculum only (no CTSO). Girls in a CTSO also had a higher level of civic engagement, compared with boys in either a CTSO or general education curriculum (no CTSO), but these girls were not higher in civic engagement, compared with girls in a CTE curriculum only (no CTSO).

Boys in a CTSO. Boys in a CTSO reported greater academic engagement than boys in a general education curriculum (no CTSO), but not compared with boys in a CTE curriculum (no CTSO). Boys in a CTSO also reported greater civic engagement than boys in a CTE curriculum (no CTSO). Boys in a CTSO did not have higher academic engagement or civic engagement than girls in either curriculum alone (no CTSO).

Minority Status. Students of color in a CTE curriculum alone (no CTSO) reported higher academic engagement than their White counterparts, but were not significantly different on the other outcomes.

Summary

Because this particular analysis did not control for students' prior levels of academic motivation, academic engagement, career self-efficacy, civic responsibility, or college aspirations, some of the differences found here may be due to self-selection into each curriculum. With this caveat in mind, this study suggests that CTSO, as well as CTE, participation may provide benefits above those gained through a general education curriculum alone. Furthermore, this study suggests that girls might benefit more than boys from participation in a CTE curriculum, with or without CTSO participation. Finally, the study offers evidence that students of color in a CTE curriculum have higher levels of academic engagement than their White counterparts, although the advantage is small. It is important to remember that the CTE curriculum, whether it is alone or in conjunction with CTSO participation, may offer different benefits for different students.

The findings also indicate several directions for future research. First, replication of the study's findings with more diverse youth is needed. Students of color composed one-fourth of the total sample used in this study, but there were not enough to separate into different race/ethnic groups for analysis of differences within and between groups. Second, gender differences need to be explored more fully. Why aren't boys gaining the same benefits as girls from participation in CTE and CTSOs? Third, the findings suggest that CTSOs may be adept at creating, retaining, or increasing students' academic engagement and motivation; however, research is needed into how. The larger study of CTSOs by the National Research Center for Career and Technical Education (NRCCTE) promises to offer more insight into this process. Finally, future research should further explore the demographic profiles of those students who participate in CTSOs and/or choose the CTE curriculum, what benefits they receive, and how these benefits effect students' future pathways.

This study used data from a larger, longitudinal, quasi-experimental study conducted by the NRCCTE during 2005, entitled *The Value Added by CTSOs to Students' High School Experience*, by Alfeld, C., Stone, J. R. , III, Aragon, S., Hansen, D. M., Zirkle, C., and Connors, J.

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