

### **Career-Technical Education and Signaling**

Career-technical education (CTE), also known as vocational education, is widespread in the U.S. at the secondary and postsecondary levels. According to the U.S. Department of Education, most high school students take at least one CTE course, and one-third of college students are involved in CTE programs. As many as 40 million adults take part in postsecondary occupational training.

Many community colleges offer vocational degree programs. Studies have shown that those who earn an associate degree (A.A.) from a community college earn more than similar individuals who have only a high school diploma (Kane and Rouse 1999). Grubb (1995) found that vocational degree holders experienced greater benefits in terms of wages from community college attendance than did academic A.A. degree holders.

The wage benefits of earning a vocational A.A. may be due to human capital accumulation and to the signaling value of such a degree. Bedard (2001) showed that labor markets that contain universities have higher high school dropout rates. This is because easy university access allows high-ability high school graduates to distinguish themselves from low-ability graduates by attending college. Because high-ability students will distinguish themselves in this way, low-ability students have less incentive to obtain a high school degree. In labor markets without universities, low-ability students will obtain high school degrees in order to take advantage of high-ability students who are constrained from entering university. Bedard's (2001) findings support the educational sorting or signaling hypothesis rather than a human capital model.

Bedard (2001) considers ability to be one dimensional. That is, high-ability individuals go to college if they have access to one, and low-ability individuals do not. Willis and Rosen (1979) suggest that, on the contrary, ability is multi-dimensional. They find positive selection into both groups—high school and college graduates. Similarly, there may be positive selection into four-year universities and into community colleges, particularly when considering community college students who graduate with a vocational degree.

If ability is multi-dimensional and if earning a vocational degree is a signal, several hypotheses emerge. In a labor market with access to both a vocational degree-granting institution and a four-year university, there will be positive selection into both types of postsecondary institutions. In jobs which require skills equivalent to those obtained by a vocational degree holder, employers will offer higher wages than in a labor market with no access to a four-year university. For terminological simplicity, call such jobs “technical,” and jobs requiring a bachelor’s degree “professional.” Wages will be lower in markets with only one choice, a vocational degree-granting institution, because professionals with little aptitude for technical jobs will pool with the technically proficient, reducing the estimated marginal product, and therefore the wages, of vocational degree holders. In markets with both types of institutions, the technically proficient will obtain vocational degrees, signaling their ability in these fields. Those fit for “professional” jobs will attend a four-year university. Thus, wages of “technical” jobs in these markets will be higher than in markets with only a vocational degree-granting institution.

In this paper, I will fully develop the theory behind the signaling value of obtaining a vocational degree and test the hypotheses arising from the theory using data from the National Longitudinal Survey of Youth (NLSY).

## References

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