
STW in the 1990s: School–Employer Partnerships and Student Outcomes

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Before the school-to-work (STW) movement began improving communication between schools and employers in the past decade, high-school achievement counted little in hiring decisions, because recent graduates could not signal skills and discipline to employers. Most requests for high school transcripts went unanswered, and employers hired workers with demonstrated job skills, freezing most graduates out of the primary labor market. Relegated to the secondary, unskilled market, graduates with strong basic skills saw a long delay before good job performance improved their income. Consequently, high-school students saw little relation between studying and labor-market rewards. Since they observed recent graduates with good grades holding jobs similar to those held by weak scholars, students not bound for college had little motivation to excel. Responding to this problem, the STW movement recommended that businesses reward high-school achievement in hiring and promotion practices and encouraged school–employer connections, including sponsorship of many STW activities.

This article investigates efforts to communicate student achievement to employers and discusses the effects of school–employer connections on the labor-market success of recent high-school graduates. Participation in collaborative STW activities from 1995 to 1997 is examined. It is proposed that better signaling of student achievement improves job quality for high-school graduates and strengthens learning incentives. Analysis of longitudinal data on the labor-market success of secondary students supports that proposal.

STW Participation

Data from the 1997 National Longitudinal Survey of Youth (NLSY) suggest that STW participation is higher than expected. Among 9th and 10th graders, 43% reported participation, commonly in career majors

(19%) and worksite visits or school-hour work (12%), but more rarely in internships or apprenticeships (5%).

Demographically, participants did not differ substantially from nonparticipants. More differences appeared for specific programs and student attributes. For instance, students in school-based enterprises showed above-average family incomes, while those in career majors, cooperative education, and tech-prep showed below-average incomes. African Americans were more likely than others to be involved in internships and apprenticeships but not in school-based enterprises. Handicapped 9th and 10th graders were more likely to be involved in STW, especially in worksite visits. STW participants were more likely to live in unsafe, nonsuburban neighborhoods and to attend vocational and magnet high schools. They were less likely to attend private schools. School size related to participation in specific programs but not to overall involvement.

Policymakers feared that STW participation would reduce academic rigor, so programs were designed to support academic achievement, with apparent success, since participants surveyed took more honors math and science courses as well as more advanced computer courses. Some also feared that STW would become a dumping ground for weaker, non-college-bound students with poor scholastic attitudes. However, participants indicated good attitudes, and their grades, attendance, and likelihood of taking college-entrance exams resembled nonparticipants'. However, they disproportionately reported negative peer influences, with a minority confessing to negative out-of-school behavior evidently unmotivated by social environment.

Participants were also more likely to have worked for pay for longer periods—45% longer hours—and at a greater number of jobs. Hours were

particularly high for students involved in intensive programs like apprenticeships. It seems likely that students who want paid work while in school seek STW involvement. Participants showed higher job satisfaction, but wages for jobs held since age 14 were similar for all but those in internships or apprenticeships, who averaged 20% higher wages. Most students held sales or service jobs obtained through social contacts; no occupational differences appeared between participants and others, except that worksite-visit participation correlated with more employment in skilled, white-collar occupations.

Improving Labor-Market Success for Graduates

In 1988, Bishop proposed that reliable information might encourage employers to reward high secondary-school achievers. Some consequences of increasing employment-related information to employers were predicted: (a) more employment after graduation, with better pay, training, and job security; (b) better jobs distributed more fairly by merit; and (c) greater student effort resulting from perceived rewards. Bishop also advocated policies for improving graduates' credentials, including vocational training, competency certifications, statewide examinations, increased awards for school accomplishments, grading systems accounting for effort and improvement, job-search courses, and employer mentors. Policies for improving school–employer connections were also recommended, including rewarding teachers for placing students; developing long-term teacher–employer relationships; formulating effective, equitable information-release policies; and developing standardized job-search portfolios for students.

Bishop stressed that schools providing job referral services could help students establish contacts and

match student and employer needs. Disadvantaged students, often lacking middle-class families' work contacts, would particularly benefit. The best results would come from informal contacts between employers and vocational teachers, not from official, placement-office contacts. High schools developing and vouching for students' skills would combat the employers' stereotype of the unskilled, undisciplined graduate. In particular, higher standards, measured by minimum competency exams (MCEs) and school-business collaborations (SBCs), could provide assurances to employers.

These two mechanisms could improve job opportunities of recent graduates. Improving students' achievement through MCEs could raise work productivity, which could lead to wage gains. The exams could also increase employer confidence by signaling that all graduates meet hiring standards. SBCs could reinforce MCEs by convincing businesses that schools prepare graduates for work. Moreover, both mechanisms could provide employers with more information for assessing applicants. Academic achievement, which implies effort and reliability, could signal relative character strength among students, as could teacher referrals.

Such opportunities for students at schools requiring MCEs for graduation suggest the three following hypotheses, which were tested while controlling for family background and college attendance:

- Average GPA students will perform better in the labor market when they attend high schools engaged in SBCs.
- Rewards for academic achievement will be greater at schools with SBCs, so that high-GPA graduates will benefit more in the labor market.
- Students at high schools requiring MCEs will obtain higher wages and earnings after graduation than other schools' students.

Some previous research has supported these hypotheses. Obtaining

jobs through high-school contacts correlated with higher test scores and with greater earnings nine years after graduation. MCE requirements were associated with higher wages and earnings five years after graduation, especially for the students in the lowest three quarters of academic performance.

Effects of MCEs and SBCs on Labor-Market Success

In this study, the hypotheses were tested, using data on public-school students from the National Education Longitudinal Study (NELS) of 1988, which followed a national sample of eighth graders from 1988 to 1994. Information on local MCEs and SBCs came from 1990 and 1992 surveys of high-school principals. A school-collaboration index was constructed from questions about school job postings, employer requests for student recommendations, employer partnerships, and business incentives (such as business-sponsored college scholarships) for high-achieving students. School-quality indicators were derived from the principals' questionnaires and NELS data. Early labor-market student outcomes included 1993 and 1994 earnings, wages, unemployment, and occupational level (service, retail, or labor). Analyses were well controlled for a range of academic and demographic variables, including state unemployment figures, although omitted-variable bias remained. Such analyses are susceptible to control-group contamination when STW participants and nonparticipants in the same school are compared, so comparing schools with and without STW programs seemed a better approach, though neither approach eliminates STW-selection bias.

Multiple-regression analyses showed significant correlations supporting the three hypotheses. SBCs significantly reduced unemployment and increased employment, wages, and annual earnings in the first two years after high school, substantiat-

ing the first hypothesis. Mixed support exists for the second prediction. SBCs improved unemployment, wages, and job quality for high-GPA students, but they increased months employed and annual earnings more for low-GPA students than for high. It seems that for low-GPA students, the effect of SBCs on annual earnings resulted from increased labor-force participation. Analysis also supports the third hypothesis: State MCEs raised annual earnings of average and A students by 9% and 14% respectively. MCEs significantly increased employment (but not earnings) of students with C - grades. The impact of local (scored) MCEs differed, positively increasing employment, wages, and earnings of A students, decreasing them for C - students, and having no effect on average students.

School-to-Work Policy Implications

The 1994 School-to-Work Opportunities Act stimulated STW activities, but most students are not attending high schools involved in act programs. Thus much STW activity reported in the 1997 NLSY was not act-funded, suggesting that the imminent end of Act funding may not decrease STW activity significantly. However funded, employer collaborations have tended to improve perceptions of schools' graduates and lead to improved labor-market outcomes.

Further, STW programs harm no students, benefiting all in some way. SBCs—unlike MCEs, which may hurt weaker students academically—give labor-market benefits without harm. Like earlier research, this study shows that SBCs, lacking negative impact on test scores, dropout rates, or college attendance rates, may be the most helpful aspect of the STW movement. Building such connections takes time and commitment, but five years of earnings benefits for a student cohort far surpass the likely annual costs of building a collaborative network for those students.

