The (Unrealized) Promise of School-to-Work Education: Assessing the Impact of the School-to-Work Opportunities Act of 1994 on Low-Income and Minority Students

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THE (UNREALIZED) PROMISE OF SCHOOL-TO-WORK EDUCATION: ASSESSING THE IMPACT OF THE SCHOOL-TO-WORK OPPORTUNITIES ACT OF 1994 ON LOW-INCOME AND MINORITY STUDENTS

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Abstract: The School-to-Work Opportunities Act of 1994 (STWOA) encouraged schools across the country to implement educational curricula that explicitly linked the worlds of school and work. Legislators hoped that integrating work-based learning with traditional classroom instruction would make education more relevant to all students. This Note examines whether STWOA succeeded in encouraging schools to integrate school-to-work programs into traditional classroom instruction. In particular, it explores school-to-work programs in Massachusetts to determine their effect on minority and low-income students. Although STWOA has largely failed to integrate work-based programs into the mainstream of educational curricula nationwide, this Note contends that STWOA helped to catalyze the implementation of school-to-work programs in key school districts such as Boston. After evaluating the benefits of work-based curricula to students in general and minority and low-income students in particular, this Note concludes that the federal government should reauthorize funding to school districts that have shown a commitment to school-to-work education.

INTRODUCTION

Data collected by the U.S. Census Bureau consistently demonstrate that, on average, the earnings of working Americans increase with their level of educational attainment. Moreover, the impact of educational attainment on the earning capacity of American workers has increased over time. For example, the difference in earnings between workers

2 Id. at 3.
with advanced degrees and high school graduates increased by over 40% from 1975 to 1999, with advanced degree holders currently earning an average of 2.6 times more than high school graduates.  

The numerical relationship between educational attainment and earnings is clear, but for too many Americans, particularly minorities and the poor, diminished expectations and fewer job opportunities have obscured the connection between education and future earnings. Census statistics indicate that race is a significant factor in the American education system. In terms of educational attainment, white Americans consistently achieve higher levels of education than blacks and people of Hispanic origin. In 2000, 88% of white Americans between the ages of 25 and 64 had graduated from high school; only 79% of blacks and 57% of Hispanics had done so. In terms of earnings, white Americans earned, on average, more than their similarly situated black and Hispanic counterparts at every level of educational attainment. Moreover, although more education generally leads to higher earnings, in 2000, only 26% of all Americans between the ages of 25 and 64 had completed a four-year college degree.

In a macroeconomic environment that places a premium on highly skilled workers, secondary school, for the vast majority of Americans, provides one of the last formal opportunities to acquire the skills needed for success in the workforce. More importantly, since so many Americans do not pursue higher education, secondary school represents the

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3 See id.
4 See William Julius Wilson, The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy 103 (1987) (reporting research suggesting that inner-city schools train minority youth so that they feel and appear capable of only performing low-paying jobs).
5 See id. at 102 (noting that the skills-mismatch between inner city minority students and the jobs available to them have resulted in high rates of unemployment and labor-force dropout).
6 See Day & Newburger, supra note 1, at 6–8. The census bureau does not disaggregate results by socioeconomic status. See id. at 9.
7 See id. at 7.
8 Id. at 6.
9 Id.
10 See id.
11 Day & Newburger, supra note 1, at 1–2.
12 See School-to-Work Opportunities Act, 20 U.S.C. § 6101 (2000) ("[T]he workplace in the United States is changing in response to heightened international competition and new technologies, and such forces, which are ultimately beneficial to the Nation, are shrinking the demand for and undermining the earning power of unskilled labor.").
last chance to demonstrate to all students the relationship between educational attainment and future earnings. In order to clarify the connection between school and work and in response to the perception that Americans too often entered the workforce without the basic skills they needed, Congress passed the School-to-Work Opportunities Act (STWOA) in 1994. STWOA, which was enacted with bipartisan support, created a national program that provided states with the "seed" money necessary to integrate workplace learning into the educational curriculum. The Act authorized federal outlays to participating states through 2001.

Now, ten years after its passage, this Note examines whether STWOA has succeeded in encouraging states to integrate school-to-work curricula into their systems of secondary education. In particular, this Note explores school-to-work programs in Massachusetts to determine how these programs have affected minority and low-income students. This Note contends that although STWOA encouraged schools to offer more work-related curricula, it has largely failed to integrate work-based learning into students' academic experience on the national level. In Boston, however, STWOA proved to be an effective catalyst for the city-wide implementation of school-to-work curricula. Boston's school-to-work curricula have improved the workplace and academic skills of participating students, particularly among low-income and minority students, offering a promising example of the potential for school-to-work education to benefit students and their surrounding communities. In order for other school districts to replicate Boston's school-to-work experience, the federal government should (1) ensure that school districts hire learning coordinators to integrate school-to-work curricula with community partners, (2) provide a stable source of funding to districts demonstrating a commitment to school-to-work education, and (3) promote accountability by requiring states to monitor the progress of school-to-work participants.

14 See id. at 35; Day & Newburger, supra note 1, at 1–3.
16 See § 6102.
17 See id.
18 See infra Part II.B.
19 See infra Part II, II.A.
20 See infra Part II.B.
21 See infra Part III.C.
22 See infra Part II.B.
23 See infra Part IV.
Part I provides a broad introduction to the federal, state, and local role in the public education system as well as background information regarding the School-to-Work Opportunities Act. Part II discusses in greater depth Massachusetts' implementation of the Act with respect to minority and low-income students. Part III explores the efficacy of school-to-career education curricula in Massachusetts specifically and across the country more generally. Part IV concludes with policy recommendations on ways to improve school-to-work programs to prepare low income and minority students either to obtain post-secondary school education or to enter the workforce.

I. THE SCHOOL-TO-WORK OPPORTUNITIES ACT IN CONTEXT

A. The Legal Framework: Local, State and Federal Roles in Administering Education Policy

STWOA combined the federal government's previously distinct approaches to education policy on one hand, and job-training policy on the other, in order to integrate more fully the lessons of the work environment into the classroom. STWOA empowered state and local governments to design and implement programs that satisfied the Act's broad goals of promoting career awareness and the development of workplace skills. Depending on whether one characterizes STWOA as primarily an education or a job training policy, the statute's high degree of state and local autonomy reflects either traditional federal deference to state and local concerns in the name of education or a noteworthy departure from a pattern of federal oversight of job training.

Historically, the federal government has played a subordinate role in matters of education, often supplementing and supporting state and local initiatives to improve schools. While the Constitution does not explicitly elucidate government's responsibility over education, constitutional boundaries have nonetheless defined the federal...

24 See infra Part I.
25 See infra Part II.
26 Seeinfra Part III.
27 See infra Part IV.
30 See Grubb, supra note 28, at 1-8.
role.32 The Supreme Court has generally interpreted the first clause of Article I, Section 8, which grants Congress the power to lay and collect taxes to provide for the general welfare,33 to include the congressional power to provide states with conditional funding for education.34 Pursuant to the Tenth Amendment, however, which reserves for the states all powers not delegated to the federal government, the Court has never recognized, nor has Congress ever claimed, the power to control educational curricula directly.35 Notably, the act creating the modern-day U.S. Department of Education expressly disavowed the notion of federal control over educational curricula, stating that “[n]o provision of a program administered by the Secretary ... shall be construed to authorize the Secretary ... to exercise any direction, supervision, or control over the curriculum, program of instruction, [or] administration ... of any educational institution, school, or school system.”36

Although the Constitution does not require states to offer a free system of public education for their residents,37 as a practical matter, all states do offer such a system.38 Decisions regarding the provision and availability of public education to all of a state’s residents, including the allocation of funds among various school districts within a state, are nevertheless subject to constitutional scrutiny under the Due Process and Equal Protection clauses of the Fourteenth Amendment.39 In addition to scrutiny on the federal constitutional level, issues regarding the provision of public education may also raise claims under state constitutions.40

In Massachusetts, for example, the Supreme Judicial Court ruled in McDuffy v. Secretary of the Executive Office of Education that the Com-

32 See U.S. Const. art. I, § 8; U.S. Const. amend. X.
33 U.S. Const. art. I, § 8, cl. 1; Riley, supra note 31, at 31.
34 See, e.g., United States v. Butler, 297 U.S. 1, 65 (1936) (upholding a broad reading of the general welfare clause of the Constitution); Riley, supra note 31, at 36.
35 See U.S. Const. amend. X; Riley, supra note 31, at 36.
38 See William E. Thro, Judicial Analysis During the Third Wave of School Finance Litigation: The Massachusetts Decision as a Model, 35 B.C. L. Rev. 597, 602 n.29 (1994) (stating that all states, with the lone exception of Mississippi, have constitutional provisions requiring that some sort of system of public education be maintained).
39 See U.S. Const. amend. XIV; see generally Plyler v. Doe, 457 U.S. 202 (1982) (striking down Texas law denying public education to the children of illegal immigrants on Fourteenth Amendment grounds); Rodriguez, 411 U.S. 1 (upholding constitutionality of Texas apportionment system that allocated greater funding to wealthier school districts).
40 See Thro, supra note 38, at 601–03.
monwealth has a duty under the state constitution to "provide an education [to] all its children, rich and poor, in every city and town . . . at the public school level." Moreover, the court concluded that "[t]his duty lies squarely on the executive . . . and legislative branches of this Commonwealth." According to the court, the Commonwealth failed to meet its obligation because the education afforded to sixteen public school children from sixteen cash-poor school districts was so inadequate that it did not satisfy minimum constitutional standards for the provision of public education. McDuffy, therefore, holds that Massachusetts will fulfill its duty to provide public education to all children only when every public school student has the opportunity to obtain an "adequate" education.

The adequate education standard, however, has raised a number of unresolved issues. Foremost among them is the extent to which the court will tolerate inter-district differences in the quality or adequacy of education in Massachusetts. On its face, the application of a pure "adequacy" standard suggests that inter-district differences in the qual-

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41 615 N.E.2d 516, 548 (Mass. 1993). In its relevant provision, the Massachusetts state constitution provides:

Wisdom, and knowledge, . . . being necessary for the preservation of [people's] rights and liberties; and as these depend on spreading the opportunities and advantages of education . . . it shall be the duty of legislatures and magistrates, . . . to cherish the interests of literature and the sciences, . . . especially the . . . public schools and the grammar schools in the towns.


42 McDuffy, 615 N.E.2d at 548. The court, however, affirmed the power of the executive and the legislature to delegate the implementation of some of the duty to state administrative agencies and to local authorities. Id.

43 See id. at 553–54. The undisputed facts of the case noted specific deficiencies in the plaintiffs' schools, such as: "large classes; reductions in staff; inadequate teaching of basic subjects . . . neglected libraries; inability to attract and retain high quality teachers; lack of teacher training; lack of curriculum development; lack of predictable funding; administrative reductions; and inadequate guidance counseling." Id. at 553. Rather than striking down the Massachusetts school financing scheme as unconstitutional, the court articulated broad, guiding principles for the legislature to consider in remedying constitutional infirmities. Id. at 554. The court stated that the ultimate goal of the system of public education in Massachusetts is to produce educated children. Id.

44 Id.


46 Cf. Avidan Y. Cover, Note, Is "Adequacy" a More "Political Question" Than "Equality"?: The Effect of Standards-Based Education on Judicial Standards for Education Finance, 11 CORNELL J.I.L. & PUB. POL'y 403, 405 (2002) (arguing that a concern for equality will inform the application of an adequacy standard but that the nature of its influence is complicated and unpredictable).
ity of education are constitutional so long as each district individually provides its students with a satisfactory baseline of educational opportunities. As the facts in McDuffy bear out, however, the decision over whether a school district provides its students with an "adequate" education necessarily involves substantive comparisons between wealthy and poor school districts. It remains to be seen whether the application of the adequacy standard will continue to affirm the constitutionality of disparities between wealthy and poor districts.

In terms of contributing actual dollars to schools, the federal government has traditionally played a limited role. The General Accounting Office reported that in fiscal year (FY) 1997, federal funding accounted for only 6.8% of total education funding, compared with 47.6% provided by states and 45.6% provided by local governments. In FY 1997, the federal government spent approximately $37 billion on elementary and secondary education. In that year, Congress authorized approximately $400 million under STWOA. From 1994 through 2001, Congress allocated a total of $2.3 billion to states under STWOA, which represented only 6.2% of the federal expenditures on public education in FY 1997 alone.

47 See id.
48 See McDuffy, 615 N.E.2d at 553 (comparing and contrasting public schools in poor and wealthy districts in order to determine the adequacy of education in poor districts).
49 See id.; Cover, supra note 46, at 405. The legislative response to the issues raised in the McDuffy case, which was actually passed several days prior to the court's decision, has yet to be scrutinized under the McDuffy standard. See Weisman & Simonoff, supra note 45, at 14. The Education Reform Act established the concept of "foundation" funding, so that all school districts would be entitled to a floor of state funds, with additional amounts available based on need. Mass. Gen. Laws Ann. ch. 69, § 1B (Lexis 2002); see Weisman & Simonoff, supra note 45, at 14. Moreover, the legislation required the Board of Education to devise statewide curriculum goals and standards. Ch. 69, § 1B.
50 See Grubb, supra note 28, at 4. Although aggregate federal education outlays represent only a small fraction of total spending on education, the federal government nonetheless plays a significant role in shaping national education policy. See Riley, supra note 31, at 54.
52 Id. at 8.
53 See Kazis & Pennington, supra note 13, at 2.
55 Kazis & Pennington, supra note 13, at 2; Wilson, supra note 54, at 2. This percentage was calculated by dividing $37 billion in federal funds authorized by Congress in 1997 by $2.3 billion authorized over the duration of STWOA. See Kazis & Pennington, supra note 13, at 2; Wilson, supra note 54, at 2.
While the federal government's influence over educational curricula has been somewhat circumscribed by constitutional constraints and the primary role of the states, federal influence over job-training programs has historically been more sweeping because of the close relationship between job-training programs and the commerce clause, Article I, § 8. Programs designed to teach adults practical, employment-related skills are likely to fall within "those activities [that have] a substantial relation to interstate commerce." 

From the 1960s and the passage of the Manpower Development and Training Act through the 1980s and 1990s and the passage of the Job Training Partnership Act (JTPA), the federal government has provided the majority of its job training programs using federal funds subject to federal administrative oversight. Federal job training initiatives often provide skills and training akin to those taught in vocational education programs. Job training initiatives, however, unlike education programs, which tend to reach children across socio-economic class, are usually narrowly targeted to individuals who are either unemployed or poor because federal job training programs have customarily sought to reduce poverty. Moreover, federal job training programs tend to be relatively brief, typically several weeks in duration, compared to education programs, which span many years. This difference can be explained, in part, by the relatively narrow scope of job training programs, which aim simply to prepare participants for work. Education programs, in contrast, encompass broad goals such as intellectual, moral, and political development, as well as furthering occupational ends.

56 See U.S. CONST. art. 1, § 8, cl. 3 (providing that Congress shall have the power to "regulate commerce ... among the several States"); Riley, supra note 31, at 34.
61 See GRUBB, supra note 28, at 3.
62 See id. at 2–3. Indeed, certain job programs, such as the Job Opportunities and Basic Skills Training (JOBS) program, passed as part of the Family Support Act of 1988, Pub. L. No. 100-485, 102 Stat. 2343 (1988), were administered in close association with the welfare system. GRUBB, supra note 28, at 4.
63 GRUBB, supra note 28, at 2.
64 See id. at 4.
65 Id.
As the political environment shifted away from the large, federal programs of the Johnson years, the emphasis of job programs changed from public sector employment to private sector job placement.\textsuperscript{66} Under the JTPA, for example, job training programs were run not by local governments but by local Private Industry Councils (PICs) comprised of representatives from the local private sector.\textsuperscript{67} These PICs exercised a great deal of discretion in determining which type of job placements would be most beneficial to local employers.\textsuperscript{68}

STWOA represents a melding of the federal educational and job training paradigms.\textsuperscript{69} Under STWOA, Congress called upon state and local governments to promote partnerships between schools and employers and to develop a curriculum to enhance the connection between participating employers and students.\textsuperscript{70} STWOA encourages states to use PICs, which have already forged ties with local employers in designing and implementing school-to-work curricula.\textsuperscript{71} Moreover, by providing exposure to the workplace through educational curricula, STWOA not only extended the duration of traditional job training programs,\textsuperscript{72} but also broadened the potential beneficiaries to include more affluent individuals.\textsuperscript{73} STWOA, therefore, necessitated the integration of existing state and federal channels for administering education and job training to the population.\textsuperscript{74}

B. Congressional Intent

Congress passed STWOA with bipartisan support in 1994 to help prepare young people for their careers and to enhance the productivity of the American workforce.\textsuperscript{75} STWOA's approach to work-based learning generally followed the "youth apprenticeship" model, which encourages school systems to develop school-to-work transition systems for


\textsuperscript{67} Id. at 189.

\textsuperscript{68} Id.

\textsuperscript{69} See \textsc{Grubb}, \textit{supra} note 28, at 110.


\textsuperscript{71} See § 6103(11)(B)(xiii) (identifying PICs among the local partnership entities that may be responsible for administering school-to-work programs).

\textsuperscript{72} See \textsc{Grubb}, \textit{supra} note 28, at 106–10.

\textsuperscript{73} See 20 U.S.C. at § 6102(a) (1)(C), (7)–(13).

\textsuperscript{74} See § 6102(a) (4)–(6), (8)–(10).

\textsuperscript{75} See §§ 6101(4)–(5), 6102(a)(2); \textsc{Office of Tech. Assessment, Learning to Work: Making the Transition From School-to-Work} 1 (1995).
career orientation, academic and occupational education, high school and postsecondary schooling, work-based learning, and skill credentialing. STWOA divided these elements into three major components: (1) school-based learning; (2) work-based learning; and (3) connecting activities. School-based learning consists of counseling interested students beginning no later than seventh grade on potential career paths. Work-based learning entails on-site job-training and workplace mentoring. Connecting activities involve encouraging employers to participate in school-to-work programs and matching students with the most appropriate work-based learning opportunities offered by employers.

Although Congress broadly outlined the type of programs STWOA was meant to encourage, Congress gave individual states the ultimate authority to design and implement the type of school-to-work curricula that best fit the unique needs of their students and local communities. Congress authorized a $300 million appropriation to the Department of Education for distribution to the states in FY 1995 as well as additional amounts as necessary for FY 1996 through 1999. The Act stipulated that a majority of federal dollars should be allocated directly to states that submitted approved plans of action for implementing school-to-work curricula.

In determining the amount to award individual states, STWOA gave priority to states whose applications displayed the highest level of collaboration between governmental actors and private sector employers. The statute also gave priority to applications that featured paid, high-quality, work-based learning experiences as an integral part of the school-to-work system. Moreover, the Act required states to provide

76 Office of Tech. Assessment, supra note 75, at 2, 3. The youth apprenticeship model is contrasted with the clinical training model, which is similar to the youth apprenticeship model in all respects except that it does not contain as much opportunity for career exploration. Id. at 3. Cooperative education is also similar to youth apprenticeship except that it does not readily permit students to transition from high school programs into post-secondary school alternatives. Id.


79 See § 6113.

80 See § 6114.

81 See §§ 6121–6125.

82 § 6235.

83 See §§ 6121–6125. The Act also contained provisions allowing for the direct federal subsidy of certain local partnerships and certain national programs designed to further the purposes of the Act. See § 6145.

84 § 6144(a).

85 Id.
opportunities for a diverse array of students, including students from low-income families, students with limited English proficiency, low-achieving students, school dropouts, and academically-talented students.\textsuperscript{86}

Congress envisioned the federal government as a quasi venture capitalist, distributing money necessary to encourage states to start up school-to-work programs and then leaving the continued operation of such programs up to states and localities.\textsuperscript{87} Once initiated, Congress intended state school-to-work programs to continue indefinitely, providing the long-term benefits of an increasingly skilled workforce, such as productivity gains and a more hospitable business climate.\textsuperscript{88}

In order to ensure compliance with its stated goals, STWOA contained provisions requiring states to provide progress reports when requested by the Secretary of Education.\textsuperscript{89} STWOA conditioned government grants upon a state's ability to demonstrate that it provided interested students the opportunity to connect with local employers.\textsuperscript{90} In addition, Congress required states to implement STWOA in accordance with the guidelines contained in the National Skills Standard Act of 1994 and the Goals 2000: Educate America Act (Goals 2000 Act), which encourage states and local school districts to recognize the connection between curriculum and instructional materials, assessment practices, and professional development.\textsuperscript{91}

At the time of its passage, STWOA appealed to political conservatives and liberals alike.\textsuperscript{92} First, by encouraging partnerships between schools and employers, it simultaneously furthered the interests of students seeking greater opportunities and businesses seeking compe-

\textsuperscript{86} § 6123(a)(6).
\textsuperscript{87} § 6102(4) (stating that Congress intended "to use Federal funds . . . as venture capital, to underwrite the initial costs of planning and establishing statewide School-to-Work Opportunities systems that will be maintained with other Federal, State, and local resources").
\textsuperscript{88} See Office of Tech. Assessment, supra note 75, at 1–3.
\textsuperscript{89} 20 U.S.C. § 6148.
\textsuperscript{90} See § 6144.
tent new hires. Second, because STWOA provided a substantial amount of federal funds to states in a way that gave them the flexibility to design their own school-to-work programs, it appealed both to advocates of local control and believers in the federal role in shaping educational trends. Moreover, by targeting all students instead of singling out particularly needy groups, STWOA short-circuited criticism from the Right that it amounted to inappropriate redistribution of wealth and from the Left that it would stigmatize participants and prematurely discourage them from continuing their education. In short, a cursory review of the statutory construction suggests that STWOA means any number of different things to any number of different interest groups. Despite its potentially broad-based appeal, however, STWOA never became a catalyst for systemic change in national education policy, as its architects had hoped.

C. STWOA's Legislative Backdrop

STWOA was frequently overshadowed by other federal education initiatives. For example, STWOA's emphasis on teaching students "real world" knowledge departed from the approach of the majority of federal education programs that promoted teaching static knowledge, or basic academic skills such as reading, writing, and arithmetic in the classroom. In addition, the Elementary and Secondary Education Act (ESEA), passed in 1965 and periodically reauthorized by Congress, provides the most substantial source of federal funding for public education. The ESEA is the prime legislative tool through which the federal government engages in "standards-based" reform, which seeks to raise student performance and maintain accountability for schools and teachers by measuring students' performance on objective examina-

93 See Office of Tech. Assessment, supra note 75, at 15.
94 See Kazis & Pennington, supra note 13, at 2, 13.
95 See id. at 25. The inclusion of all students within the scope of STWOA, however, opened the Act to criticism that it required every student to participate. Id.
96 See 20 U.S.C. § 6143 (leaving individual states considerable discretion in devising appropriate school-to-work programs).
99 See id. at 433.
101 See Spiggle, supra note 98, at 433.
102 See id. at 436–37.
tions.\textsuperscript{103} Because student acquisition of static knowledge, as a practical matter, is easier to test than acquisition of applied knowledge, programs that focus on enhancing applied skills, such as STWOA, do not readily lend themselves to the type of monitoring and testing required under the politically popular standards-based approach.\textsuperscript{104}

The text of STWOA indicates the prevalence of the standards-based approach by repeatedly referring to the Goals 2000 Act.\textsuperscript{105} As discussed above, Goals 2000 promoted the development of a measurable national system of skill standards and certifications in public education.\textsuperscript{106} Various provisions of STWOA, including the design of state school-to-work plans and the content of school-based learning components, were only to be implemented in accordance with the standards set out in the text of the Goals 2000 legislation.\textsuperscript{107} The tension between the standards-based model of education reforms and the experiential-learning model has created a legislative environment that is less hospitable for school-to-work programs implemented under STWOA.\textsuperscript{108}

II. IMPLEMENTATION OF STWOA

Perhaps, in part, because of the less hospitable climate that pervaded Congress and the states following STWOA's adoption, the statute has, for the most part, failed to bring about meaningful school-to-work education on a national scale.\textsuperscript{109} Too often, when schools across the county implemented school-to-work curricula, they did not devote sufficient resources to creating connecting activities that linked students with local employers.\textsuperscript{110} As a result, school-to-work curricula in these communities failed to become a significant part of students' academic experience.\textsuperscript{111}

The school-to-work experience in Massachusetts, and particularly in Boston, however, diverged from the less promising national trend.\textsuperscript{112} School-to-work education has flourished in Boston, even amidst in-

\textsuperscript{103} See id. at 437–38.
\textsuperscript{106} See § 5801 (4) C (200).
\textsuperscript{107} See §§ 6102, 6103, 6112, 6123, 6124 & 6143.
\textsuperscript{108} See Spiggle, \textit{supra} note 98, at 445.
\textsuperscript{109} See \textit{infra} Part II.A.
\textsuperscript{110} See \textit{infra} Part II.A.
\textsuperscript{111} See \textit{infra} Part II.A.
\textsuperscript{112} See \textit{infra} Part II.B.
creased calls for accountability among students, teachers, and schools. Consequently, the Boston Public Schools' experience with school-to-work education serves as a unique but promising indication of the potential for success of school-to-work education.

A. The National Experience

Although the passage of STWOA has increased the number of secondary schools nationwide that offer school-to-work related activities, few of these programs have afforded the type of coordination between schools and local businesses envisioned by STWOA. In its 2001 annual report, the National School-to-Work Office indicated that a vast majority of responding schools (81% in 1999) offered work-related curricula in the classroom setting, which frequently took the place of external work opportunities. These curricula, which are modeled on real, working-world problems, are relatively easy to implement because they require very little coordination outside of the classroom. Although the spirit of the school-to-work movement certainly informs work-related curricula, schools often use work-related curricula as an excuse not to match students with community employers, which provide first-hand work opportunities as part of the educational experience.

Compared with the percentage of schools that provide school-based, work-related curricula, far fewer schools provided students with

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113 See infra Part II.B.
114 See infra Part II.B.
115 See Mary G. Visser et al., School-to-Work in the 1990s: A Look at Programs and Practices in American High Schools 13 (1998) (stating that schools are less likely to implement connecting activities that demonstrate a serious commitment to school-to-work than they are to implement less comprehensive measures).
117 See E-mail from June Foster, Curriculum Developer, TERC, to Aaron Javian (Feb. 4, 2002) (on file with the author).
118 See Visser, supra note 115, at 6–9.
119 See id. at 41. A chemistry curriculum implemented by a high school in Brighton, however, provides an exception to the norm of limiting work-based curricula to the classroom setting. See Lili Allen, On the Cutting Edge of District Reform: A Case Study of Brighton High School, Brighton, Massachusetts, in Reinventing High School: Six Journeys of Change, An In-Depth Look at Six High Schools That Are Transforming the Way We Think About Secondary Schooling 35, 38 (Jobs for the Future et al. eds., 2000). The program, which allows students to work alongside (by way of the internet) researchers at Tuskegee University on behalf of NASA, is developing methods to enable humans to produce their own food in outer space. Id.
the option to engage in work-based learning.\textsuperscript{120} For example, 43\% of schools provided mentors and 15\% placed students in apprenticeship programs in surrounding communities.\textsuperscript{121} Moreover, the national percentage of students who actually participated in these programs was negligible.\textsuperscript{122} Just three percent of students nationally participated in mentoring programs and less than one tenth of one percent of students participated in apprenticeship programs.\textsuperscript{123}

Across the country, school districts showed different levels of interest in pursuing school-to-work education.\textsuperscript{124} Predictably, schools offering more school-to-work programs established stronger partnerships with local employers than schools engaging in fewer school-to-work initiatives.\textsuperscript{125} Schools that succeeded in forging community partnerships created paid positions for school-to-work program coordinators, encouraged teachers to engage in connecting activities with local businesses, allowed employers to help design work-related curricula, and took into account employer feedback in evaluating student performance.\textsuperscript{126}

One commentator's multivariate analysis of the effects of school characteristics on the level of school-to-work involvement reveals that several characteristics (such as school size and location) have affected the intensity of school-to-work offerings, as measured by the degree of student, school, and community involvement.\textsuperscript{127} Most significantly, the intensity of school-to-work offerings was highly correlated with the size of the school.\textsuperscript{128} Moreover, a school's location in the South and the

\textsuperscript{120} See \textcite{Visher} supra note 115, at v, 6, 9–10.

\textsuperscript{121} See \textcite{Medrich} supra note 116, at 17.

\textsuperscript{122} See id. at 18.

\textsuperscript{123} See id. Student participation estimates are conservative because many schools noted difficulty in estimating the number of students who took part in school-to-work related activities. See id. at 17.

\textsuperscript{124} See \textcite{Visher} supra note 115, at 17.

\textsuperscript{125} See id. at 14–15.


\textsuperscript{127} See \textcite{Visher} supra note 115, at 25. Characteristics examined included school size, school location (urban/rural), geographical region, student to teacher ratio, student to computer ratio, socioeconomic status of district in which school is located, and percentage of minority students. Id. at 54.

\textsuperscript{128} See id. at 25. Large and medium-sized schools (over 1000 and 500–1000 students, respectively) were more likely to provide school-to-work programs than small schools. See id. at 25, 54.
Midwest was significantly correlated with increased levels of school-to-work intensity. Holding all variables equal, vocational, technical, and career academy schools were more likely to provide intensive school-to-work education than other schools. Interestingly, a school’s location in an urban or rural environment did not significantly affect the intensity of its school-to-work offerings, nor did characteristics such as student-teacher ratio, student-computer ratio, or graduation rates.

The percentage of minority students, however, negatively affected the intensity of school-to-work offerings; in other words, minority students were less likely to be exposed to a broad array of school-to-work offerings. Although the relationship was not strong, one interpretation of this result is that poor schools, where minority students are more likely to be concentrated, have more difficulty affording school-to-work programs. Another interpretation is that schools with significant minority populations choose to focus on more traditional aspects of the curriculum.

Given the discretion left to state and local communities by STWOA to design and implement school-to-work related programs, there has been considerable variance in the type and intensity of school-to-work programs implemented across the country. An overview of the type of work-based programs implemented nationwide reveals a range in intensity of student involvement from job-shadowing, where students observe adults at work, to internships and apprenticeships, where students learn and apply skills in both the classroom and the workplace. School-based enterprises provide another work-based learning strategy that allows students to learn about a business by actually operating one.

In order for intensive, school-to-work offerings to be successful, work-based alternatives must match student preferences with existing

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129 Id.

130 Id.

131 Id. at 25–26.


133 Id. at 26 n.16.

134 Id. Unfortunately, the analysis conducted did not permit a precise test of the relationship between students’ socio-economic status and school-to-work offerings. Id.


136 See Elliot Medrich & Ann Dykman, Work-Based Learning, School-to-Work: Strategies to Expand Students’ Horizons, Fall 2000, at 1.

137 Id. at 2.
employer needs and community resources. Since the local economic environment is beyond the control of school personnel, administrators must be proactive in forging relationships with the community sufficient to sustain meaningful work-based education. Moreover, educators and administrators must be willing to come up with creative financing schemes that draw upon public and private money in order to continue school-to-work activities in the absence of targeted federal funds. Finally, educators and administrators must be able to craft a work-based educational curriculum that reinforces skills tested on standardized exams in order for school-to-work to remain a politically viable education reform. A detailed examination of the way schools in the Boston area have confronted some of these challenges in attempting to implement school-to-work programs will shed light on ways to improve the system.

B. The Massachusetts Experience

School-to-work education has had a long history in Massachusetts, far longer than the period during which federal grants have been available under STWOA. For example, the Boston Compact, an agreement between business leaders, higher education institutions, and Boston Public Schools to improve educational and employment prospects for Boston's students, laid the foundation for present day school-to-work education in 1982. Thus, when STWOA passed in 1994, the Boston Public School system was already well-positioned to avail itself of

139 See id. at 3.
140 See id. at 5.
142 See infra Parts II.B., III.
143 See Marc S. Miller & Aaron Yeater, Boston Private Industry Council: Creating, Implementing, and Sustaining the Vision 1, 3 (1999). School-to-work programs had their genesis in Boston in the early 1980s. Id. The Boston PIC initially served as the city's primary broker placing students in summer jobs. Id. The Boston PIC's authority broadened following the passage of the JTPA in 1981, and, soon thereafter, it expanded its reach to include school improvement initiatives. Id.
144 See id. at 3; Allen, supra note 119, at 37.
the partnerships it had forged with local businesses and institutions of higher learning.\textsuperscript{145}

Following the passage of STWOA, employers amended the Compact by promising to support the implementation of a structured, work-based learning curriculum.\textsuperscript{146} To that end, the Boston PIC, a partnership of business, government, labor, and community leaders charged with implementing the Compact,\textsuperscript{147} placed school-to-career coordinators at four high schools identified as having the most to benefit from work-based learning education.\textsuperscript{148} The Boston Public School system signaled its support for the school-to-career initiative by assuming the salaries of the school-to-career coordinators.\textsuperscript{149} In addition, the school district created a high-level leadership position, the School-to-Career Director, charged with overseeing the coordinators and advocating for implementation of school-to-career programs at other secondary schools.\textsuperscript{150}

The willingness of local employers and educational institutions to engage in school-to-work, coupled with Boston's urban setting, offered an attractive environment in which to implement school-to-work programs.\textsuperscript{151} Boston's health services industry provided a ready partner, as many of its major hospitals already integrated substantial teaching and training programs through affiliated medical schools.\textsuperscript{152}

\begin{itemize}
  \item \textsuperscript{146} Allen, supra note 119, at 37.
  \item \textsuperscript{147} See Miller & Yeater, supra note 143, at 2, 3. Under the original Boston Compact, employers promised to provide jobs for high school graduates in exchange for a promise from schools to improve student test scores, attendance and drop-out rates. See Allen, supra note 119, at 37.
  \item \textsuperscript{148} Allen, supra note 119, at 37. The four high schools that received school-to-career coordinators were Boston High School, Brighton High School, Dorchester High School, and East Boston High School. Glenda Partee, High School Reform and Systemic Districtwide Reform in Boston, Massachusetts: American Youth Policy Forum Field Trip—April 3, 1997, at n.2, at http://www.aypf.org/tripreports/1997/tr040397.htm (last visited April 7, 2003).
  \item \textsuperscript{149} Allen, supra note 119, at 37.
  \item \textsuperscript{150} Id.
  \item \textsuperscript{151} See Adria Steinberg, Reinventing High School: Six Journeys of Change, in Reinventing High School: Six Journeys of Change, An In-Depth Look at Six High Schools That Are Transforming the Way We Think About Secondary Schooling 7 (Jobs for the Future et al. eds., 2000).
  \item \textsuperscript{152} See Miller & Yeater, supra note 143, at 4.
\end{itemize}
The financial services industry also participated in educational initiatives, as did Boston’s many colleges and universities.\(^{153}\)

Boston Public Schools designated certain schools as pilot or flagship locations for work-based learning.\(^{154}\) This enabled the system to target funds into a small number of schools where administrators could learn the nuances of building successful school-to-career curricula.\(^{155}\) Brighton High School, one of the designated flagship schools, offers a glimpse of the potential for school-to-work programs in Massachusetts and beyond.\(^{156}\)

Brighton High School is one of nineteen comprehensive public high schools in Boston.\(^{157}\) Its 1,105 students reflect greater racial diversity than Boston as a whole.\(^{158}\) Brighton High School was one of the first secondary schools in Boston to provide school-to-work opportunities.\(^{159}\) In 1990, it collaborated with neighboring St. Elizabeth’s Hospital to provide medical industry internships for interested students.\(^{160}\) The internship, offered in tandem with two classes in the sciences, constituted the first “career pathways” program in the Boston Public School system.\(^{161}\)

Building on its existing partnerships with the local community, and following the school’s receipt of a school-to-career coordinator through


\(^{154}\) See Allen, supra note 119, at 38.

\(^{155}\) Id.

\(^{156}\) Id.


\(^{159}\) See Allen, supra note 119, at 37.

\(^{160}\) Id.

\(^{161}\) Id. “Career pathways” combine traditional academic curricula with an introduction to a particular industry. See Boston Public Sch., School-to-Career, About School-to-Career, Strong Partnerships: A Boston Tradition, at http://boston.k12.ma.us/stc/aboutstc.htm (last visited Feb. 2, 2004). They provide students with the opportunity to supplement school-based learning with industry-related field trips, community service projects, and internships. See id.
the Boston PIC, Brighton High School, in 1998, opted to provide career pathways to all of its students.162 Currently, the school offers four career pathways: law, government, and public service; school of health professions; media, arts, and communication; and business and technology.163 The program is designed to allow students to switch into different pathways each year so they may observe a broad range of careers before they graduate from high school.164

The health professions pathway is unique among those offered by Brighton High School in that the vast majority of students who matriculate remain in the program until graduation.165 Approximately 230 students are currently enrolled.166 In addition to core courses in english, history, math, and science, enrolled students are required to register for a competency course designed to strengthen the connection between academic instruction and work-based learning.167 In their sophomore year, students are expected to gain exposure to the health care industry by participating in field trips and job shadowing.168 In their junior year, students are selected to participate in twelve-week clinical assignments at local health care providers.169 Finally, by their senior year, students are matched with participating health care businesses for employment or internship opportunities.170 Participating businesses include Boston Medical Center, New England Medical Center, Genzyme, Wingate Rehabilitation Center, Spaulding Rehabilitation Center, and St. Elizabeth's Medical Center.171

The law, government, and education pathway caters to students with interests from teaching, through programs such as TeachBoston,172 to the legal profession, through a partnership with the Boston

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162 See Allen, supra note 119, at 36, 37.
164 See Allen, supra note 119, at 41.
165 BOSTON PUB. SCH., BRIGHTON HIGH SCHOOL-TO-CAREER PATHWAYS, HEALTH PROFESSIONS PATHWAY, [hereinafter HEALTH PATHWAY], at http://boston.k12.ma.us/stc/brighton.htm#health (last visited Jan. 9, 2004).
166 Id.
167 Id.
168 Id.
169 Id.
170 HEALTH PATHWAY, supra note 165.
171 Id.
law firm of Burns and Levinson. Brighton High School’s partnership with Burns and Levinson has been enormously successful in part because of the firm’s willingness to engage teachers in meaningful discussions about curricula and learning strategies. In addition to providing students with an opportunity to shadow lawyers and paralegals in their daily jobs, attorneys agreed, under the guidance of faculty, to train students to take part in state-wide mock trial competitions. Thus, approximately fifteen high-school seniors in the law and government career pathway now compete on Brighton High School’s mock trial team.

Brighton High School’s partnership with Burns and Levinson has been particularly fruitful not only because of the career-based learning opportunities the firm has provided, but also because of its attorneys’ willingness to help students prepare for the Massachusetts Comprehensive Assessment System (MCAS). This exam, which all public high school students in the Commonwealth must pass to graduate serves as one basis of accountability for students, schools, and school districts. Teachers often have difficulty teaching basic skills and exposing students to a variety of career settings; meeting standardized exam goals can itself become an all-consuming challenge, especially in inner city schools. The more time that teachers spend “teaching to the test,” the less time they have to combat student disengagement by working to make school more relevant to struggling students. Brighton High School’s partnership with Burns and Levinson helps to address this dilemma wholly within the context of school-to-work education by reinforcing students’ relationships with employers while facilitating their acquisition of testable skills.

173 See Allen, supra note 119, at 45; Burns & Levinson LLP, Pro Bono and Community Services, at http://www.b-l.com/ (last visited Feb. 2, 2004). TeachBoston is a city-wide program designed to inspire students to seek careers in education by providing them with school-based, after-school, and summer programs. See Boston Pub. Sch., Teach Boston, at http://boston.k12.ma.us/stc/teachboston.htm (last visited Jan. 20, 2004). In total, 279 students are enrolled in TeachBoston at the four high schools offering the program, Brighton High School, Boston High School, Dorchester High School and East Boston High School. Id.
174 See Allen, supra note 119, at 45.
175 See id.; Burns & Levinson LLP, supra note 173.
176 See Law Pathway, supra note 172.
177 See Allen, supra note 119, at 45; Burns & Levinson LLP; see also Mass. Dep’t of Educ., Massachusetts Comprehensive Assessment System Overview, at http://www.doe.mass.edu/mcas/overview_faq.html#faq1 (last visited Jan. 5, 2004).
178 See Allen, supra note 119, at 44.
179 See Kazis & Pennington, supra note 13, at 20.
180 See Allen, supra note 119, at 45.
Brighton High School’s other two career pathways expose students to media, arts, and communication, and business and technology. The media, arts and communication pathway provides students the opportunity to learn oral, written and visual communication skills through hands-on activities ranging from producing student performances to interning with local media outlets. The business and technology career pathway is divided into a business cluster, where students learn the skills they would need to create and run their own businesses, and a technology cluster, where students learn the technical skills to solve complex, real-world problems.

Several other Boston high schools offer additional career pathways programs. These include construction, transportation and design, environmental and agricultural sciences, hospitality, and tourism and recreation. In all, these seven pathways represent the overarching manner in which schools within the Boston School District have successfully begun to implement school-to-career education.

In order to measure objectively the success of school-to-work curricula, the Massachusetts Department of Education articulated nine learning competencies that may be implicated depending on the type

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182 See Media Pathway, supra note 181. For example, as part of a video production class, eleventh graders are assigned the task of applying their knowledge of arts, media, and communication to create a video that portrays the important components of a career pathway. Boston Pub. Sch., School-to-Career Pathway Video, at http://boston.k12.ma.us/stc/signature/pathwayvideo.htm (last visited Jan. 20, 2004).

183 See Business Pathway, supra note 181.


185 See generally Boston School-to-Career, supra note 184. The construction, transportation, and design pathway provides students at Dorchester High School with linkages to the construction trades and technology as well as mentoring relationships through Harvard’s Kennedy School of Government. See id. Through partnerships with the Urban Ecology Institute at Boston College, Sea Grant at the Massachusetts Institute of Technology, and Boston Harbor Islands National Park, the environmental and agricultural sciences pathway provides students at Odyssey High School with extensive after-school internship possibilities, job placement, and tutoring. See id.

186 See id. Students at East Boston High School in the hospitality, tourism, and recreation pathway compete in a citywide business plan competition, run the school store, and have access to community partners such as Boston Duck Tours and British Airways. See id.
of school-to-career assignment. Employers, teachers, and program staffers identified and developed these competencies through their experiences with students in order to shape school-to-work assignments. The competencies emphasize the acquisition of individual and team skills as well as personal and professional development in the following categories: (1) communication and literacy, (2) organizing and analyzing, (3) problem solving, (4) using technology, (5) completing entire activities, (6) acting professionally, (7) interacting with others, (8) understanding all aspects of the industry, and (9) taking responsibility for career and life choices. Schools and employers offering school-to-career programs also must complete "work based learning plans," which serve as a useful source of data to compare the effectiveness of disparate school-to-work programs.

III. THE EFFECTIVENESS OF STWOA AND SCHOOL-TO-WORK EDUCATION

The efficacy of STWOA can be evaluated on a number of grounds. For example, even though Congress included all public secondary schoolchildren within the scope of the statute, STWOA was, in an important sense, an indirect form of anti-poverty legislation. By using the public school system to encourage students to participate actively in the working world, STWOA at least implicitly embraced the sociological hypothesis that a mismatch between the skills of the jobless and the skills necessary for employment explains much of the occurrence of poverty. Despite this underlying motivation, it would be unfair to judge the success of an indirect program like STWOA on whether it has led to an appreciable decline in poverty because the

187 See Mass. Dep't of Educ., supra note 184, at 1.
189 See id.; Mass. Dep't of Educ., supra note 184, at 1.
190 See Mass. Dep't of Educ., supra note 184, at 1. The work-based learning plan includes a job description, a list of tasks to be completed by students, a checklist showing what competencies are relevant to each task, and an evaluation form that asks the supervisor to evaluate the student's work in each of the applicable competencies, set goals, and provide comments. Id.
191 See id. at 3.
192 See infra Conclusion.
194 See John Foster-Bey, Bridging Communities: Making the Link Between Regional Economies and Local Community Development, 8 Stan. L. & Pol'y Rev. 25, 39–40 (1997).
scope of the problem is so vast and the resources allocated to STWOA are, in comparison, so small. 195

An alternative and seemingly less ambitious perspective from which to evaluate the success of STWOA is to measure whether it has had an appreciable effect on the early labor-market experiences of young adults. 196 One reason that STWOA sought to create an integrated system of youth education, job training, and labor-market education was to reduce initial successions of "dead-end" jobs or periods of joblessness experienced by young adults at the onset of their working careers. 197 Measuring the effectiveness of STWOA in this respect, however, is more complicated than it first might seem because of the difficulty of identifying and controlling for other relevant variables such as changing economic conditions and additional government programs that influence early work experience. 198 Furthermore, there is considerable disagreement among industrial economists over whether promoting job stability in young adults is desirable given empirical evidence suggesting the benefits of early-career job shopping. 199

A third perspective from which to evaluate the efficacy of STWOA is to examine whether school-to-work education as envisioned by the Act is beneficial to students, employers, and teachers in the local com-

195 See supra notes 50-55 and accompanying text (noting that STWOA accounted for a very small percentage of total federal expenditures on education). In addition, social scientists cannot even agree that direct aid programs reduce poverty, never mind indirect programs such as STWOA. Compare John D. Kasard & Ting Kwok-fai, Joblessness and Poverty in America's Central Cities: Causes and Policy Prescriptions, in HOUSING POLICY DEBATE 387, 414 (Fannie Mae Found. ed., 1996) (tracing the increase in urban poverty to employment disincentives provided by government welfare programs), available at http://www.fannie mae-foundation.org/programs/hpd/pdf/hpd_0702_kasarda.pdf (last visited Jan. 20, 2004), with MICHAEL B. KATZ, THE UNDESERVING POOR: FROM THE WAR ON POVERTY TO THE WAR ON WELFARE 113 (1989) (noting that government transfer programs were responsible for lifting approximately half of the poor over the poverty line between 1965 and 1972).


198 See Gardecki & Neumark, supra note 196, at 301. Without randomly assigning students into school-to-work and non-school-to-work environments, it is impossible for statistical research models to render causal results and very difficult to untangle potential, unobserved confounding factors such as individual differences in motivation. See MAKING A DIFFERENCE, supra note 135, at 13–14.

199 See Gardecki & Neumark, supra note 196, at 300 (noting that there is ample evidence supporting the proposition that workers benefit from job shopping early in their careers). The process of job shopping allows young people to sample a variety of professions and enables them to make a career choice that is informed by their experience. See id.
munities that choose to provide it. This approach entails a rough accounting of whether the benefits derived from school-to-work education outweigh the implementation and opportunity costs incurred. Although the research on this point is sometimes mixed, and despite the strong opposition of school-to-work detractors, school-to-work education arguably affects students positively in general and low-income and minority students in particular.

Unfortunately, with the exception of regions such as Boston, which enjoyed significant support for school-to-work policies prior to the implementation of STWOA, the Act has not delivered on its promise of integrating work-based learning into the mainstream academic curriculum. Part of STWOA's failure to take hold in the curriculum of reform-minded school systems can be attributed to criticism raised by vocal opponents to the statute, who began questioning the premise of the law soon after it was passed. These critics have raised concerns that resonate with the fears and anxieties of many parents about their children. Certain criticisms, such as deriding STWOA as an improper intrusion by the federal government into state and local educational affairs, are ideological, while others, such as concern that STWOA would crowd out the teaching of basic skills, are rooted in philosophical differences over the purpose of education. As the Massachusetts experience and other structural features of STWOA demonstrate, however, school-to-work education can motivate students to learn while effectively preparing them for college and careers.

200 See Making a Difference, supra note 135, at 9.
201 See id. at 9 (concluding that available research on school-to-work education weighs in favor of its continued use). Some of the costs include expenses incurred by community partners in providing school-to-work education, expenses incurred by school districts to connect schools with community partners, and taking away student class time from more traditional educational pursuits. Id.
202 See infra Part IV.
203 See Susan Imel, School-to-Work, Myths & Realities, No. 4, 1999, at 2; Spiggle, supra note 98, at 429.
204 See Kazis & Pennington, supra note 13, at 23.
205 See id.
207 See Miller, supra note 104, at 7.
A. The Case Against STWOA

Foremost among critiques of STWOA is the assertion that school-to-work education is incompatible with standards-based educational reform initiatives. Since STWOA was enacted in 1994, the most powerful movement in education reform has been state-led efforts to raise academic achievement through higher standards and greater accountability. The passage of the No Child Left Behind Act of 2001, which re-authorized the ESEA, provides a recent example of ongoing federal support for standards-based reform. The Act increased accountability by requiring states to test students in grades three through eight to assess their proficiency in reading and math and created school report cards to allow ready comparisons across schools.

Opponents of school-to-work education argue that the type of skills learned in the workplace, such as time management and interpersonal skills, interfere with the teaching of basic reading and math skills that are stressed in proficiency exams. Unlike basic academic skills that may be defined and measured objectively, workplace competencies are often affective in nature and subjective in evaluation because students themselves take an active role in shaping what they learn. Moreover, there is no empirical support for the proposition that school-to-work education increases the academic achievement of students as measured by standardized test scores.

Critics argue that school-to-work education fails to improve academic achievement because its underlying reliance on applied learning theory is flawed. In contrast to traditional teaching methods that focus on transmitting an accepted body of knowledge to students, school-to-work education emphasizes process-learning over content-learning by relying on students to attain workplace competencies through their experience in different workplace environments. Opponents argue that contextual or applied learning is therefore likely to be highly variable and uncertain. Thus, even if school-to-work programs attempted

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208 See Kazis & Pennington, supra note 13, at 22–23; Spiggle, supra note 98, at 433–34.
209 Kazis & Pennington, supra note 13, at 25.
212 See Miller, supra note 104, at 5–6.
213 Id. at 5.
214 Id.
215 Id. at 7; Wilson, supra note 54, at 4.
216 See Miller, supra note 104, at 7.
217 See id.
to incorporate basic skills in addition to workplace competencies, the procedural emphasis on applied learning prevents the universal and secure transmission of substantive knowledge.\textsuperscript{218} 

School-to-work opponents further charge that school-to-work education stems from a misapprehension of workplace needs.\textsuperscript{219} They argue that the business community's dissatisfaction with recent high school graduates arises from their lack of basic skills and academic knowledge, not inadequate workplace skills.\textsuperscript{220} To the extent that students obtain workplace education in secondary school, they prematurely miss out on the benefits of liberal education, to the detriment of their future employers.\textsuperscript{221} In addition, preliminary research suggests that the adult labor market outcomes of school-to-work alumni are unrelated to their early labor market experiences, casting doubt over the lasting benefits of the school-to-work experience.\textsuperscript{222} Only a solid grounding in fundamental skills, say critics, will enable students to adapt to rapidly changing business environments in the long term.\textsuperscript{223} 

School-to-work opponents also fear that the proliferation of partnerships between schools and local businesses could allow businesses to capture public education for their private benefit.\textsuperscript{224} They argue that the local labor market should not dictate academic curricula because schoolchildren should be encouraged to become thinkers rather than

\textsuperscript{218} See id.
\textsuperscript{219} See id. at 6-7.
\textsuperscript{220} Id. at 6.
\textsuperscript{221} See Miller, supra note 104, at 6-7; Holland, supra note 206, at 1. Holland asserts:

School-to-Work drastically narrows the curriculum, making it less likely that schools will produce literate, well-rounded generalists who can cope with rapid change in civic life as well as the workforce. School-to-Work is about the servile arts, not the liberal arts. We should remember that the liberal arts derive from the Latin \textit{libera}, which means freedom. Vocational training can be liberating, too, but not compulsory training to meet state workforce quotas. That is a form of slavery.

Holland, supra note 206, at 1.

\textsuperscript{222} See Gardecki & Neumark, supra note 196, at 319. Using data from the National Longitudinal Survey of Youth for the years 1979-92, the authors examined wages, benefits, and full-time work as measures of adult labor market success to determine whether adults who had completed school-to-work education programs experienced greater labor market success after five years than adults who did not receive school-to-work education. See id. at 300-01.

\textsuperscript{223} See Miller, supra note 104, at 9.
\textsuperscript{224} See Imel, supra note 203, at 1; Miller, supra note 104, at 10.
workers. Moreover, to the extent that schools and local businesses select the industries suitable for school-to-work programs, the selection process will be hopelessly skewed to the short-term. This problem is exacerbated as school-to-work education is introduced into lower grades by teaching students industry-specific, workplace skills many years before they will graduate from high school.

Opponents argue that school-to-work programs implicitly discourage children from pursuing higher education and ultimately reduce their career choices by narrowing their options prematurely. These critics characterize school-to-work education as a means not only of steering students into a general career field, but, when possible, into a particular sponsoring company. In addition, they note that employers tend to view the quality of students in school-to-work programs as lower than the high school population more generally.

Finally, opponents attack the breadth of STWOA in particular, perceiving language that seeks to extend the availability of school-to-work education to all children as a mandatory requirement that infringes on parental choice. Moreover, to these critics, the extension of STWOA to all children overreaches the particular applicability of its more structured programs to non-college bound youths. Opponents

226 See Miller, supra note 104, at 9–10.
227 See id.
228 See generally Bozick & MacAllum, supra note 225.
229 Id.
231 See Kazis & Pennington, supra note 13, at 25; Holland, supra note 206, at 2–3. Holland writes:

[T]he School-to-Work Opportunities Act declares as a federal purpose “integrating academic and occupational learning,” and “integrating school-based and work-based learning.” It also calls for “all students” to participate in “high-quality, work-based experiences” (including apprenticeships) during the school day. ALL students, mind you.

Now, some students might prize the opportunity to serve as apprentices in local industries. But shouldn’t that be optional, not a condition of universal education? And shouldn’t such work be done after school, so that precious class time is spent on learning the basics of language, literature, science, mathematics, and our heritage as Americans?

Holland, supra note 206, at 2–3.
charge that STWOA represents an effort to vocationalize public schools. As such, they argue that public funds allocated to implementing STWOA would have been better spent on strengthening the existing vocational education system. Opponents, therefore, question not only the educational philosophy upon which school-to-work curricula are based, but also whether such curricula are even necessary at all.

B. The Case in Favor of STWOA

Regardless of the underlying reasons for the criticism, much of the concern over the efficacy of school-to-work education is misplaced. First, school-to-work education complements standards-based education reform by motivating students to learn. Second, school-to-work education prepares students to make informed choices about potential careers. Third, school-to-work education prepares students to attend college. In sum, school-to-work education is an effective alternative to traditional teaching methods.

In contrast to the claims of opponents, school-to-work education is not only consistent with standards-based reform, it also has the further potential to reach the at-risk populations that traditional teaching methods have had little success penetrating. School-to-work education advances the student-performance objectives sought by advocates of standards-based reform by helping motivate students who had no plans to attend post-secondary educational institutions. Studies indicate that school-to-work students, particularly those at a high risk of failing to graduate, are less likely to drop out of school than non-school-to-work students. Moreover, empirical evidence indicates that school-to-work students are more likely to attend school and graduate on time than their peers.

233 See Miller, supra note 104, at 11.
234 See Cohen & Besharov, supra note 232, at 18–19.
235 See Making a Difference, supra note 135, at 9.
236 See Kazis & Pennington, supra note 13, at 26.
237 See Making a Difference, supra note 135, at 11–12.
238 Id. at 21.
239 See id. at 19.
240 See Kazis & Pennington, supra note 13, at 19; Spiggle, supra note 98, at 441.
241 Making a Difference, supra note 135, at 19. One study found that at-risk high school students who participated in school-to-work education were 34% less likely to drop out than a group of randomly selected students that did not participate in school-to-work programs. Id.
242 Id. at 19–20. According to one study, California school-to-work students were just as likely to graduate on time from high school as students on a more traditional, academic track. Id.
Further, the work-based competencies transmitted through school-to-work education are meaningful, measurable, and, therefore, consistent with the accountability claims of standards-based reforms. For example, as discussed above, Massachusetts sought to measure the relative effectiveness of school-to-work placements by requiring participating employers to complete a work-based learning plan. The standardization of the work-based learning plan allows system administrators to track students' acquisition of skills, evaluate the quality of the school-to-work projects, and identify areas needing improvement. School-to-work education also promotes standards-based reform by furthering academic achievement. Although research has not shown a conclusive relationship between school-to-work education and students' performance on standardized tests, studies have shown that school-to-work students maintain GPAs at least as high and often higher than non-school-to-work students. Furthermore, empirical analysis indicates that school-to-work students take challenging courses that prepare them for content-based examinations.

In addition to complementing standards-based reform, school-to-work education gives students a new-found perspective on careers and prepares them for successful entry into the job market. Research demonstrates that students who participate in school-to-work education are able to define their career interests and goals for the future. Moreover, students' school-to-work jobs tend to be of a higher quality than the jobs they otherwise would have secured. Graduates of school-to-work programs have better labor market outcomes than other high school graduates, as measured by post-graduation employment rates and wages.

243 See Mass. Dep't of Educ., supra note 184, at 5-6.
244 See id. at 1, 5-6.
245 See id. at 5-6.
246 See Making a Difference, supra note 135, at 17.
247 See id. A study conducted in California comparing student grades before and after joining a school-to-work program found that students' grades rose the longer the students remained in school-to-work programs. Id.
248 See id. at 18. Data in New York State revealed that students with intensive participation in school-to-work activities took more rigorous courses, including science and math, than students who did not participate. Id.
249 See Making a Difference, supra note 135, at 23.
250 Id.
251 See id. (citing research indicating school-sponsored jobs are more diverse and enriching than jobs obtained outside of school).
252 Id. at 27-28. Graduates of school-to-work programs in Maryland reported working more hours per week and earning a higher wage than non-participants. Id. at 28.
Partnerships between local businesses and schools enable schools to teach skills that will be relevant in the current and future workplace.\textsuperscript{253} In addition, since as many as 42\% of young people will not enroll in any form of post-secondary education, developing stronger ties with business is essential to creating programs that help all students, not just those who will eventually graduate from college.\textsuperscript{254} Furthermore, developing close relationships with businesses gives students ample opportunity to forge meaningful mentor relationships with positive adult role models.\textsuperscript{255}

Pairing students with adult mentors in careers they find interesting provides them with a greater understanding of the skills and knowledge necessary for success in the field and enables them to plan their education accordingly.\textsuperscript{256} Youth apprenticeship programs represent more formalized mentoring relationships designed to lead students into a related post-secondary program, an entry-level job, or a registered apprenticeship.\textsuperscript{257} It comes as no surprise to STWOA proponents that school-to-work students report feeling that their teachers and peers make up a supportive "second family."\textsuperscript{258}

Rather than narrowing career opportunities and reducing the likelihood that students will complete post-secondary education as STWOA opponents contend, school-to-work education broadens career options and encourages post-secondary education.\textsuperscript{259} Research indicates that school-to-work helps young people prepare for the working world by exposing them to many different career development activities.\textsuperscript{260} A recent study found no significant difference in post-secondary school aspirations between school-to-work participants and graduates of conventional programs.\textsuperscript{261}

In addition to exposing students to career choices, school-to-work education also prepares students for college.\textsuperscript{262} The process of exploring career possibilities in a supervised setting outside of the classroom

\textsuperscript{253} Imel, \textit{supra} note 203, at 1.
\textsuperscript{254} Id.
\textsuperscript{255} \textsc{Robert I. Lerman, Helping Disconnected Youth by Improving Linkages Between High Schools and Careers} 15 ("[S]chool-employer programs can reduce the negative influence of peers by exposing young people to constructive adult peer groups."), available at \url{http://www.urban.org/urlprint.cfm?ID=6149} (last visited Jan. 20, 2004).
\textsuperscript{256} See \textit{id}.
\textsuperscript{257} Id.
\textsuperscript{258} See \textit{Making a Difference}, \textit{supra} note 135, at 29–30.
\textsuperscript{259} Id. at 6.
\textsuperscript{260} Id. at 24.
\textsuperscript{261} See Bozick & MacAllum, \textit{supra} note 225, at 1, 7.
\textsuperscript{262} See Imel, \textit{supra} note 203, at 1.
helps college-bound students clarify their personal reasons for attending college.\textsuperscript{263} Moreover, the reliance of school-to-work education on experiential learning is a powerful way for any student to develop knowledge and skills.\textsuperscript{264} The skills acquired by students through school-to-work curricula, such as workplace competencies regarding communicating with others and taking responsibility for life choices, are particularly useful in college, where students will increasingly be asked to shape their educational endeavors.\textsuperscript{265} The best business, medicine, and law schools use the same techniques when they offer students internships and opportunities to learn outside of the classroom.\textsuperscript{266} Whether offered to students attending Harvard Law School or Brighton High School, work-based curricula reinforce academic learning while providing psychological and developmental benefits not typically associated with learning in the classroom.\textsuperscript{267}

Finally, contrary to the fears of school-to-work opponents; there is a considerable difference between making school-to-work available to all students and mandating that all students participate in work-based learning.\textsuperscript{268} School-to-work education should be available to all students because of the potential for contextual learning opportunities to benefit non-college bound and college-bound students alike.\textsuperscript{269} Moreover, the participation of both college-bound and non college-bound students in school-to-work education counteracts the negative stigma frequently associated with vocational education.\textsuperscript{270}

\begin{itemize}
\item \textsuperscript{263} Id.
\item \textsuperscript{264} See Kazis & Pennington, \textit{supra} note 13, at 25.
\item \textsuperscript{265} See id. at 42.
\item \textsuperscript{266} Id. at 25.
\item \textsuperscript{267} See Imel, \textit{supra} note 203, at 1.
\item \textsuperscript{268} See Kazis & Pennington, \textit{supra} note 13, at 25.
\item \textsuperscript{269} See id.
\item \textsuperscript{270} See Thomas Bailey & Donna Merritt, Nat'l Ctr. for Research in Vocational Educ., \textit{School-to-Work for the College-Bound} 9 (1997), \textit{available at http://ncrve.berkeley.edu/AllInOne/MDS-799.html} (last visited Feb. 11, 2004). Anecdotal evidence supports the proposition that directing school-to-work programs to all students helps such programs to avoid the negative stigma typically attached to vocational education. For example, a business teacher at East Peoria Community High School in East Peoria, Illinois, where school-to-work education programs have been offered to students for many years, noted that students and parents in the community no longer regard work-based education as something solely for non-college bound students. See John O'Connell, \textit{Life Lessons—School-to-War Programs Give Students Valuable Insights into the Working World – and Themselves}, Peoria J. Star, Jan. 30, 2004, at C12.
\end{itemize}
C. The Effectiveness of School-to-Work Education in Massachusetts

In Massachusetts, although preliminary research indicated that school-to-work programs generated positive results for students and communities, school-to-work education has nonetheless been overshadowed by the Commonwealth's increasing preoccupation with standards-based reform. The MCAS, and not workplace competencies, dominates educational discourse in Massachusetts.

Although STWOA has not led to sweeping change, there have been a number of positive developments in school-to-work education in Massachusetts. For example, the state legislature enacted the Massachusetts School-to-Work Connecting Activities Act in 1997 as a line item in the budget to supplement federal school-to-work dollars with state funds. By the end of 1999, federal and state money had funded enough school-to-career coordinators to connect over 10,000 students with over 3,900 employers as part of the Massachusetts Work-Based Learning Plan.

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271 See MASS. DEP'T OF EDUC., supra note 184, at 1–6. By examining data gathered pursuant to the Commonwealth's Work-Based Learning Plan, the Department of Education found that school-to-work activities promoted skill gains by participating students across all of the workplace competencies. Id. The data show that school-to-work activities that generated the highest skill gain among students occurred in workplace settings where supervisors and participating companies displayed a strong commitment to school-to-work programs. Id. at 4.

272 See FOCUS, supra note 141, at 1, 7–8 (emphasizing the importance of high standards and accountability in developing more effective schools and teachers).

273 See id. at 1. The requirement that high school students must pass the MCAS to graduate and the fact that students' MCAS results are being used to assess the performance of particular schools has sparked significant controversy in Massachusetts. See Anand Vaishnav, Students Face MCAS Second Round as Groups Debate Test Exams Given in Next 2 Weeks, BOSTON GLOBE, May 14, 2001, at B12. Similar issues have also dominated the national education discourse in the wake of the passage of the No Child Left Behind Act and its requirement that states impose similar, objective requirements in order to receive federal funding. See Anand Vaishnav, 30% Don't Graduate on Time, Study Finds High School Students Unprepared for College, Poised for Low Income, BOSTON GLOBE, Sept. 17, 2003, at A2.


276 Id. at 6.
The work-based learning plan has been particularly effective in Boston, where school-to-work connecting activities progressed from a pilot program initiated in 1991 at Brighton High School to a full-blown reform effort that is now the centerpiece of district-wide high school reorganizing. The number of schools providing career pathways has increased from four in the mid-1990s to fourteen today. More importantly, data collected in 1999 indicate that Boston's school-to-career students were more likely than non-school-to-career students to score higher on reading achievement tests, to graduate, to be in postsecondary education one year after high school, and to get a college degree. In addition, African-American students who graduated from ProTech, Boston's career pathway that emphasizes technical skills, obtained greater relative benefit than other non-career pathway graduates. For example, 79% of African Americans who graduated from ProTech between 1993 and 1995 attended college and 74% earned a degree or certificate, compared with just 53% and 65% of non-ProTech, African-American graduates. Non-school-to-career graduates were half as likely as school-to-career graduates to be working or in school one year after graduating from high school.

Although Massachusetts as a whole has not pursued the strategy of integrating school-to-work education into all of its reform efforts, Boston’s public schools have taken important steps in that direction. On the state level, Massachusetts has targeted specific school-to-work practices that are popular and valuable but vulnerable without continued state funding. The work-based learning plan is instrumental to the Commonwealth’s effort to oversee and adjust the multitude of workplace learning programs offered across school districts. Without it, the Board of Education would have difficulty evaluating which programs to expand and which to cut in the fu-

277 Liebowitz, supra note 274, at 6.
279 See Liebowitz, supra note 274, at 7.
280 Id.
281 Id. at 8.
282 Id. at 9.
283 See Miller & Fleegler, supra note 275, at 6–8.
284 See Liebowitz, supra note 274, at 6.
285 See Miller & Fleegler, supra note 275, at 7.
286 See Mass. Dep't of Educ., supra note 184, at 5 ("The Work-Based Learning Plan is a valuable evaluation tool because it provides a non-obtrusive method of gathering data.").
ture. Indeed, the emphasis on measuring the success of students in school-to-work programs has greatly contributed to the overall success of school-to-work education in the Commonwealth.

IV. POLICY RECOMMENDATIONS REGARDING LOW-INCOME AND MINORITY STUDENTS

Boston's experience offers a promising indication of the potential for school-to-work education programs to motivate hard-to-reach students and to enhance school-community connections. It is also a powerful example of the systemic, curricular change that results from a strong commitment to school-to-work principles. It is no small accomplishment that the Boston Public School system was able to undertake a system-wide shift to school-to-work education during a time of increasingly strict state-wide standards-based requirements in the form of mandatory testing. STWOA played an important role in this transition. To its credit, STWOA was instrumental in providing the funds that Boston needed in order to create and staff positions necessary to implement the school-to-work curriculum across the city.

STWOA, however, was able to catalyze the expansion of school-to-career education in Boston because Boston Public Schools, unlike many other school districts, had already forged relationships with local employers. Perhaps unsurprisingly, for the vast majority of communities in which school-to-work was largely unknown or misunderstood, the passage of STWOA did not lead to a paradigmatic shift in educational curriculum.

Nonetheless, STWOA has raised awareness of school-to-work education in school districts around the country. While the effectiveness

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287 See id. at 5–6. The first comprehensive analysis of student skill gain in work-based learning revealed that internships providing longer than average job descriptions, that focus on 3–6 workplace competencies, and that take five or more student interns are likely to result in increased skill gain for participants. Id. at 4.
288 See Liebowitz, supra note 275, at 7–10.
289 See Allen, supra note 119, at 36.
290 See id. at 49–50.
291 See Nat'l. Inst. for Urban Sch. Improvement, supra note 153, at 18.
292 See Allen, supra note 119, at 37–39.
293 See Kazis and Pennington, supra note 13, at 3, 4.
294 See Medrich, supra note 116, at iii–iv. 81% of secondary schools in reporting partnerships offered school-based activities that used work-related curricula. Id. at 14. As of June 1998, over 1200 local partnerships had received STWOA grants. Id. at iii. Those partnerships affected more than 50,000 schools enrolling over 26 million students and involved nearly 244,000 private, public, and non-profit employers. Id.
of some school-to-work offerings is unclear,295 at a minimum, they provide a foundation upon which to build more sophisticated school-to-work curricula in the future.296 In order to achieve work-based educational reform in more school districts across the county, and to continue to increase the accessibility of school-to-work education for minority and low-income students, the federal government should pursue several additional policies with respect to school-to-work.297

First, the federal government should encourage school districts to hire work-based learning coordinators by allocating federal dollars to districts that demonstrate a commitment to school-to-work education, like Boston.298 Work-based learning coordinators act as intermediaries, bridging a critical gap between employers, teachers, and students.299 Teachers, who are burdened with considerable daily classroom demands, are ill-equipped to implement work-based learning without external support.300 Similarly, employers, without guidance from schools, are not well suited to creating work experiences that benefit students seeking work-based competencies and a greater appreciation of the working world.301 Staffers devoted solely to implementing school-to-work curricula would be better able to manage the day-to-day work of building, maintaining, and growing successful school-to-work partnerships.302

Furthermore, the school-to-work intermediaries would represent a class of employees in the school system that could consistently monitor the progress of children in school-to-work education.303 As it currently stands, teachers do not have a significant stake in students’ completion of school-to-work programs because they are ultimately more concerned with performance on content-based exams taken in the classroom.304 Similarly, employers tend not to have a great stake in students’ completion of school-to-work externships in their offices because past practice indicates that a majority of participating students will not work

295 Hughes et al., Work-Based Learning and Academic Skills 36–37 (Inst. on Educ. & the Econ., Working Paper No. 15, 1999) [hereinafter Work-Based Learning].
296 See Kazis & Pennington, supra note 13, at 33.
297 See id. at 32–38.
298 See id. at 37–38.
299 See id.
300 See Allen, supra note 119, at 49.
301 See id. at 45.
302 See Kazis and Pennington, supra note 13, at 37.
303 See id. at 33.
304 See id. at 20; Allen, supra note 119, at 49.
at those positions in the future.\textsuperscript{305} Thus, the creation of school-to-work coordinators would introduce actors who are devoted to establishing partnerships and improving the quality of work-based learning.\textsuperscript{306}

Expanding existing jobs programs currently funded through the Department of Labor may provide a further means to bridge the gap between students, schools, and employers.\textsuperscript{307} Youth Opportunity Boston, for example, has been able to draw upon existing public and private partnerships in order to provide services very similar to school-to-work education.\textsuperscript{308} Explicitly connecting Department of Labor programs such as Youth Opportunity with local high schools would establish a strong intermediary network of staff to facilitate school-to-work programs.\textsuperscript{309} Since Department of Labor job programs are means-tested and are currently only available to "at risk" youths who qualify for federal assistance, they would be readily available to low-income and minority youths in the school system.\textsuperscript{310}

Second, the federal government should update its pattern of fund disbursement in order to provide greater support to states embarking on school-to-work initiatives. Rather than providing one-time federal grants,\textsuperscript{311} the Department of Education should provide a steady supply of funds to school districts as long as they remain committed to implementing work-based curriculum.\textsuperscript{312} By allocating funds annually, rather than adhering to strict sunset provisions, the federal government could signal to states that it intends to provide long-term support for school-to-work initiatives.\textsuperscript{313}

\textsuperscript{306} See Kazis and Pennington, supra note 13, at 37.
\textsuperscript{307} See id. at 33.
\textsuperscript{309} See Kazis and Pennington, supra note 13, at 33.
\textsuperscript{310} See Boston Redevelopment Auth., supra note 308. A disadvantage of this approach, however, is that, unlike STWOA, which extended the availability of school-to-work education to all students, relying on the Department of Labor to provide intermediary support might reinforce the impression that school-to-work represents second class education for non-college-bound students. See Cappelli et al., supra note 230, at 114.
\textsuperscript{312} See Kazis & Pennington, supra note 13, at 8.
\textsuperscript{313} Kroll, supra note 97, at ix–x.
In addition, rather than allocating funds to programs for elementary through high school, a federal funding should be targeted solely to high schools. Focusing school-to-work education in high schools would avoid some of the problems associated with the passage of STWOA. For example, limiting federal dollars to high school programs will help to prevent spreading already insufficient resources too thin across grade levels.

Moreover, the federal government should target funds to urban school districts. Because of population density, the close proximity of potential employers, and the availability of public transportation, urban centers present the most realistic environment within which meaningful school-to-work education partnerships may take root. Urban school districts also contain a high percentage of low-income and minority students. Thus, by encouraging urban school districts to pursue school-to-work strategies, such a funding scheme would free up other funds to create programs that benefit low-income and minority students most of all.

A third recommendation, which will increase the accessibility of school-to-work education to minority and low-income students, is to provide incentives directly to employers, particularly small businesses, willing to take part in school-to-work activities. Under STWOA, states received nearly all of the federal, school-to-work implementation grants. There was very little incentive, however, for employers to participate in school-to-work education because of the cost of collaborating with school officials and of training students. Only in exceptional cases were employers able to recoup the cost of participating in work-

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314 See 20 U.S.C. § 6112 (encouraging states to promote career awareness at the earliest possible age, but no later than seventh grade).
315 See Kazis and Pennington, supra note 13, at 35.
316 See Work-Based Learning, supra note 295, at 35-37 (noting the difficulty of successfully implementing work-based learning curriculum).
317 See Kazis and Pennington, supra note 13, at 35.
318 See id.
320 See Visser, supra note 115, at 26 n.16.
321 See Liebowitz, supra note 274, at 7–10.
322 See Miller & Fleegler, supra note 275, at 5.
based education. Moreover, large employers were more likely to see a return on their investment in school-to-work education because their size supported a greater number of apprenticeships and their budgets already included funds for sophisticated training programs. Smaller businesses, however, were less likely maintain training budgets or to hire student trainees. Offering participating small businesses a percentage of matching funds for the costs they incur in participating in school-to-work programs would enrich the number and diversity of potential community partners.

Finally, the federal government should subsidize studies to record and evaluate the success of students participating in work-based education. In addition to tracking the outcome of school-to-work participants, studies should assess the impact of school-to-work education on content-based exam performance. Only through continued documentary evidence of the success of school-to-career programs in helping all students amass substantive and testable knowledge will school-to-career remain a viable educational alternative in an atmosphere increasingly dominated by standards based reform.

By recognizing the important role of school-to-work learning coordinators, providing a stable source of funding for school-to-work initiatives, and measuring the success of school-to-work curricula, the federal government can encourage school-to-work programs to take root in more communities nationwide.

CONCLUSION

Despite the failure of STWOA to engender systemic change, school-to-work education remains a promising, if often overlooked, avenue for future educational reform in the United States. Research concluding that school-to-career education motivates students to take an interest in school and work, encourages them to pursue and acquire postsecondary education, and provides them with workplace competencies suggests that career pathway programs are worth the risk.

325 See id. at 219.
326 See Cappelli et al., supra note 230, at 114–15, 118.
327 See id.
328 See Miller & Fleegler, supra note 275, at 5.
329 See Kazis and Pennington, supra note 13, at 38.
330 Id.
331 See id.
332 See Spiggle, supra note 98, at 445.
333 See Liebowitz, supra note 274, at 7–10.
Boston’s educational system provides an instructive example of the potential for school-to-work programs under STWOA. Boston’s urban setting, its diverse population of students, and its proximity to a multitude of large employers, many of whom have maintained a relationship with the Boston Public Schools over the past twenty years, make it a suitable location for a sustainable and systemic approach to school-to-work education, and an ideal prototype for programs nationwide. The continued reorganization of the Boston Public School District into career pathways, although risky given the premium placed on MCAS results, will greatly benefit all urban students, poor and minority in particular, because it will provide a real world context for academic learning and the development of high performance skills.

To a large degree, Boston is in the position to implement the type of systemic education reform that STWOA sought to encourage because of its twenty-year head start in forging school and business partnerships. To be effective on a systemic level, school-to-career education requires community knowledge, strong public and private partnerships, and a system of monitoring to promote accountability. With continued community collaboration and increased governmental support, school-to-work education may yet find a place in the mainstream of American education. Until then, school-to-work education efforts should be focused in the low-income and minority communities where programs have the greatest potential to make education more relevant.

334 See Miller & Yeater, supra note 143, at 1–5.
335 See Liebowitz, supra note 274, at 6–7. Expanding school-to-work curricula is risky because, notwithstanding one study conducted in Boston, there has been almost no evidence linking school-to-career education with increased scores on standardized, content-based exams such as the MCAS. See Making a Difference, supra note 135, at 19; Miller, supra note 104, at 7. If it became apparent that school-to-career education simply could not transmit universal, substantive knowledge of the type required by the MCAS, then the Boston School District would be in a very difficult position. See Miller, supra note 104, at 7 (questioning whether contextual learning can ever supplant traditional teaching methods).
336 See Miller & Yeater, supra note 143, at 11–14.
337 See id. at 2; Charner, supra note 126, at 2–6.
338 See Kazis and Pennington, supra note 13, at 38.
339 See id. at 19.