

## Chapter 1

THOMAS BAILEY

---

### *Introduction*

In the past decade diagnoses of deficiencies in the U.S. education system have led to a reform strategy generally referred to as school-to-work transition. Although the strategy includes many components, work-based education is a crucial element. Work-based education involves exposing students to real work in real workplaces, but it entails much more than simply providing them with work experience. After all, many teenagers hold jobs while in school, and many reformers believe that these jobs have little educational value. School-to-work strategies call for a planned and structured work experience that has productive educational value and is carefully coordinated with the learning taking place in the classroom.

This book, based on a 1994 conference, addresses the feasibility of work-based education as a large-scale reform of U.S. education, whether the strategy can work for large numbers of students, what political and financial costs are associated with it, how schools might need to change to be able to implement it successfully, what state and federal policies could help promote it, and if it proves difficult to implement, what alternative strategies might achieve similar results. Because the centerpiece of work-based education is to place students in meaningful jobs, recruiting employers is crucial. Thus, the discussions concentrate on approaches and barriers to securing the active participation of employers.

#### WHAT IS WRONG WITH THE SCHOOLS?

The 1983 publication of *A Nation at Risk* can conveniently demarcate the beginning of the current period of school reform.<sup>1</sup> Reformers had been at work for decades, but in the early 1980s they became increasingly preoccupied with the effects of inadequate education of U.S. workers on the nation's economy, a development that coincided with increasingly com-

petitive economic challenges from Japan, Germany, and other European countries. Schools were failing to prepare the nation's workforce. The reformers first called for a return to a traditional education system that many thought had helped lay the foundation of the postwar U.S. economic boom. The main result was widespread adoption of stricter academic requirements for high school graduation. But these failed to solve the problems.

Reformers next looked at the education systems of America's competitors. They found that in Germany and Japan in particular, the workplace played a crucial role in the education system. Books such as Stephen Hamilton's *Apprenticeship for Adulthood* and frequent study tours for educators, business people, and academics spread information about workplace-based systems.<sup>2</sup> The consensus, as Paul Osterman notes in his chapter of this book, was that U.S. schools were not teaching the skills needed for work and that the transition from school to a stable career-oriented job was a haphazard and disorganized process. After graduating from high school, young people seemed to spend several years moving among low-paying jobs that neither required nor taught many skills. Too much time elapsed before young high school graduates got a chance to use whatever advanced skills they might have learned in school.

Part of the problem seems to be that the secondary school system is too oriented toward preparing students for college; the majority who will never receive a baccalaureate degree are neglected.<sup>3</sup> At least in college-oriented schools, guidance counselors know what college admissions committees want, they know the procedures and deadlines for applications, and they understand the strengths and weaknesses of different postsecondary schools. College admissions committees have a good understanding of the meaning of a record from a particular high school, and they have SATs and other means of evaluating candidates. Although this system works much better in some schools than in others, there is no system remotely comparable to connect high school graduates to local employers. Employers rarely consider the high school records of applicants and, with some exceptions, school staff have little knowledge of potential employers and little contact with them. High school graduates not headed to college are left to drift on their own, exposed primarily to unskilled low-paid jobs and relying on friends, neighbors, or relatives for information about career opportunities. And high school students' awareness that they will end

up initially in the same types of jobs (often the same job) that they have had before graduation stifles incentives to work hard in school.

Thus young people know little about work, have no clear idea about what they must do to enter a particular career or occupation, and do not know what might be expected of them at work. They have only the vaguest notions about what skills they need to learn and have no particular incentive to learn those skills—they do not understand how the skills and knowledge they learn in school can benefit them. Meanwhile, schools fail to teach the appropriate attitudes and workplace behavior, and do little to help students achieve the maturity and responsibility they must assume as adult workers. Isolated with their peers both in school and in their “youth” jobs, young people have little contact with adults other than teachers, and the typical student-teacher relationship bears little similarity to effective relationships on the job.

These criticisms of schools have recently been reinforced by increasingly influential research concluding that traditional schooling (academic as well as vocational) prevents the full development of each student’s cognitive abilities. Teaching that emphasizes abstract concepts and the transmission of information from student to teacher engages only a few students. Proponents of so-called contextual learning argue that individuals learn skills more effectively if what they learn has a close relationship with their everyday activities. Others suggest that the learning environment needs to reproduce “the technological, social, time, and motivational characteristics of the real work situations in which what is being learned will be used.”<sup>4</sup>

Rapidly changing skill requirements also demand educational innovation. Reformers argue that workers at all levels need to be problem solvers. They need to have a deeper understanding of their jobs, be able to function confidently in uncertain and ambiguous situations in which there may be no specific right answer, and be able to work closely with other workers. Traditional schooling, they declare, fails to develop these abilities or characteristics. Students learn skills they need to perform well in schools, but those skills may not serve them well outside school—the learning is not transferred to the community or workplace.<sup>5</sup>

- Thus schools are not doing their job because they
- provide no incentive for students to work hard;
  - do little to help students find good jobs;

- do not teach the attitudes and maturity needed on the job;
- isolate young people from adults who could act as models and mentors;
- do a poor job of teaching the so-called advanced generic skills or workplace basics such as problem solving and teamwork, and the job-specific skills that are taught atrophy as young people spend a few years churning through unskilled youth jobs; and
- provide a form of schooling that is ineffective in its pedagogic strategy.<sup>6</sup>

To what extent can placement in an appropriately structured work experience overcome the problems I have outlined? Advocates of work-based education suggest four related advantages. It has crucial cognitive benefits, creates necessary institutional linkages between schools and workplaces, provides a unique motivation for students to learn, and can promote the maturity and behavior needed to be an effective worker.

—*Cognitive benefits.* Work-based education is a crucial part of an increasingly popular teaching strategy that emphasizes problem solving, teamwork, learning in context, and more active participation of students in their own learning. Much of this approach can be used in the classroom, but advocates suggest that it works best if students get a chance to learn and use skills in a well-designed work experience. By incorporating education into real-world situations in which what is being learned will be used, work-based education bridges the intellectual or cognitive gap between school and work (or social activity in general). This is a much broader justification for the approach than the argument traditionally advanced by advocates of vocational education that academic schooling does not teach useful or marketable skills. Advocates of work-based education contend that traditional schooling (academic as well as vocational) prevents the full development of each student's cognitive abilities. Thus appropriately organized and structured work-based education is not simply a good way to teach high-quality vocational skills for those not bound for college, but it is a valuable educational strategy for the intellectual development of all students.

—*Institutional linkages.* Work-based education forces schools to forge linkages with workplaces. Such relationships are much less likely to occur in purely school-based reforms. Work-based education also gives students contacts among employers. Thus by moving part of the

formal education into the workplace (presumably not primarily in so-called youth-jobs), work-based education breaches the barrier between youth jobs experience and higher-quality employment. Perhaps even more significantly, work-based education creates a formal relationship between employers and schools, promoting a more interactive flow of information.

—*Student motivation.* Work-based education motivates students by showing them how skills are used in real-world settings and how their success and advancement can depend on learning particular skills. Although some students are excited by the learning that dominates much of the traditional curriculum, others are not convinced that they have any use for it. Experience on an appropriate job gives a student an opportunity to use skills gained in class. Not only do students learn that skills are useful on some generic “job,” but that they are also crucial steps in a ladder leading to particular jobs and occupations.

—*Maturity and appropriate workplace behavior.* One common criticism of the U.S. labor market is that employers are reluctant to hire adolescents for jobs that carry any significant responsibility. Employers believe young people simply do not know how to behave on the job and that they cannot be counted on. But school-to-work advocates argue that, to the extent employers are correct, the behavior is not surprising because young people, isolated with their peers in school and in youth jobs, have little contact with adults other than their teachers. How can they develop appropriate behavior if they have no models? Experience in the right type of job gives them an intensive experience in a mostly adult environment. The beneficial effects of this may be especially strong if the student works closely with a mentor who not only demonstrates through his or her own behavior how the student should act, but also helps teach the student directly.

Thus, work placement is a crucial component of a reform strategy that confronts some of the major deficiencies of contemporary American education. The chapter by David Stern returns to this issue and discusses alternatives to full work-based education programs for achieving some of these ends. But the urgency of the search for alternatives depends very much on the difficulties and costs associated with its implementation, issues that I take up in the next chapter and that are also addressed in the chapters by Robert Poczik and Margaret Vickers.

### *The School-to-Work Model*

Reformers have advocated a variety of models to address the perceived deficiencies of traditional schooling, and in the late 1980s and early 1990s, states and many individual schools and school districts have been experimenting with different approaches. Some of the lessons from this experience were incorporated into the School-to-Work Opportunities Act of 1994, and even if the act is not renewed, reauthorized, or funded in future years, the program model it specifies can be taken as a general example of the type of reform being developed to address these problems.

According to the act, a comprehensive reform plan must include three broad components—school-based learning, work-based learning, and connecting activities.

The school-based component, as outlined in the act, emphasizes student career awareness and career exploration and counseling, followed by selection of a career major. It includes a program of study designed to meet the same academic content standards the state has established for all students. Program instruction (including applied methodologies and team teaching strategies) and curriculum integrate academic and vocational learning. The program also includes regularly scheduled evaluations and procedures to facilitate the entry of students into additional training or postsecondary education programs.

The work-based component includes a planned program of job training and work experience that is coordinated with learning in the school-based component, and workplace mentoring. Students receive instruction in general workplace competencies, including instruction in and activities related to developing positive work attitudes and employability and participative skills. The act also lists paid work experience, job shadowing, school-sponsored enterprise, and on-the-job training as permissible activities.

The third component of a comprehensive reform plan, according to the act, is connecting activities. These include matching students with appropriate work-based learning opportunities and providing a school-site mentor to act as liaison between the employer and the student's school, teacher, school administrator, and parent. A further activity is to provide technical assistance to employers and other parties in designing school-based learning components and in training teachers and workplace mentors and counselors. Assistance to schools and employers to integrate school-based and work-based learning and

integrate academic and occupational learning must also be supplied. The active participation of employers must be encouraged, and graduates must be assisted in finding a job, continuing their education, or entering into additional training. Youth development activities need to be linked with employer and industry strategies for upgrading the skills of their workers.

Many of these characteristics have been developed in several models, some of which have been common in the United States for many years. The models include cooperative education, career academies, occupational-academic clusters, technical preparation programs, and youth apprenticeship.<sup>7</sup>

### *Cooperative Education*

Cooperative education was developed in the early 1900s. It is defined by the 1990 amendments to the Carl D. Perkins Vocational Education Act of 1984 as “a method of instruction of vocational education for individuals, who, through written cooperative arrangement between the school and employers, receive instruction, including required academic courses and related vocational instruction, by alternation of study in school with a job in any occupational field. Such alternation should be planned and supervised by the school and employers so that each contributes to the student’s education and to his or her employability.” The quality of these jobs varies, but most include a training plan relevant to the work the student is doing in school. Until very recently, cooperative education has been closely associated with vocational education. The work experience is the core of cooperative education, and the related school-based component is often a traditional vocational education curriculum. There are about 500,000 secondary school students in cooperative education at any given time.<sup>8</sup>

### *High School Academies*

The academy model was established in Philadelphia about 1970 but has spread, most notably to California. There are now more than a hundred academies in the country. Each academy is organized as a school within a school, maintaining a small-school atmosphere within a much larger institution.<sup>9</sup> Each also has a particular occupational or industrial focus, such as electronics, health, or business. The curriculum derives

from the focus; instructional techniques include practical and team-based projects. Local employers are involved with the academies, donating equipment and time as advisors and mentors. They also often provide job placements and internships for academy students and graduates. The academy model is built on the principle that the focus on industry gives coherence to the curriculum. Work placements have a clear role in this model, but in practice that role is often not well developed.

### *Tech-Prep Programs*

The central concept of tech-prep (technical preparation) programs is the articulation of secondary school and community college programs in specific occupational areas. Although the concept dates from the late 1960s, the 1990 amendments to the Carl Perkins Act allocated funds to encourage the coordination of curricula during the last two years of high school and two years of community college “with a common core of required proficiency in mathematics, science, communications, and technologies designed to lead to an associate degree or certificate in a specific career field” (section 344). Coordination and consultation with local employers and labor unions are also key components of the model. The concept lends itself to the inclusion of a work component, although many tech-prep programs still have not developed this component.

### *Occupational-Academic Clusters*

Cluster programs are typically large-scale efforts to offer all of the students in a high school a choice among several career pathways, each one based on a sequence of related courses tied to a cluster of occupations (such as environment-related industries, service industries, or manufacturing and engineering occupations). Students are usually exposed to a wide variety of careers before choosing an occupational cluster, and they may switch clusters in the course of the program.

Each cluster offers occupations-related courses; students receive training in broad, work-related skills after taking introductory career exploration courses. Academic and occupational instruction are integrated and applied learning techniques are sometimes used. Work-based experiences enable students to explore potential careers.<sup>10</sup>



The School-to-Work Opportunities Act incorporates the clustering idea, suggesting that students choose one of a small number of clusters at the end of their sophomore year. Oregon is working toward a policy in which all students would be enrolled in such clusters in their junior year, although some clusters are academic rather than occupational. Clustering lends itself to the inclusion of work placement, although that can be a secondary aspect. The breadth of the clusters may make it easier to find placements because a wide range of occupations and jobs may be appropriate for a given cluster.

### *Youth Apprenticeship*

The most ambitious work-based education program among the current school-to-work models is youth apprenticeship, modeled after the German apprenticeship system. Students spend a substantial amount of time in paid work in which they are guided by adult supervisors who work closely with them on job-related and general employment-related skills. In principle, the classroom work, designed to integrate academic and vocational learning, is closely related to the work experience. Youth apprenticeship models also coordinate secondary with postsecondary education. The youth apprenticeship is very demanding on employers. As a result, there are still only a handful of full youth apprenticeship programs nationally, enrolling perhaps 1,000 students.

This is not an exhaustive list of school-to-work models. Various versions of school-based enterprise, restructured traditional vocational education, and expanded career counseling can be grouped under the school-to-work rubric, but in none of these models is job placement a primary concern. The models I have discussed structure learning through an occupational or vocational focus. The approach is designed to use the occupations or industries to provide a context, meaning, and concreteness to the skills. Thus all the models attempt to integrate occupational and vocational learning. Connections to the workplace are created both through employer involvement and school-based counselors who develop work placements and keep in touch with the employers.

All the models also make some attempt to provide work-based education through internships or cooperative placements, although the intensity of the experience varies and is of secondary importance except in cooperative education and youth apprenticeship programs.

Job placements in traditional cooperative education programs often have little to do with in-school learning, and although training plans are common, they rarely lead to a mastery of a coherent sequence of skills. Youth apprenticeships have much more ambitious work-based education components, but there are still only a handful of them in the country. Thus despite strong and reasonable arguments in favor of expanded work-based education, the component remains far more a concept than a reality.

## CONCLUSION

Why has a strategy that seems so attractive to many educators, policy-makers, students, and parents been so slow to spread? In some places structural problems within the schools stand in the way. Incorporating work-based components into mainstream education requires changes in school scheduling patterns and reforms in the ways teachers work together. The components challenge traditional divisions between vocational and academic teachers and programs. They also require innovations in teacher preparation and professional development, profound improvements in the quality and nature of counseling, and significant changes in approaches to student assessment and high school graduation requirements. The admission policies of selective colleges are also a barrier to implementation. Colleges generally do not recognize work experience, forcing high schools that focus on college admissions to maintain a more traditional approach to the secondary school curriculum, or to include work-based education only as an add-on program. Thus there is little movement away from traditional education in private schools and elite public high schools. This creates the possibility that the traditional vocational track might simply be replaced with a second-class school-to-work track for students who are not able to make it in the college preparation programs.

Even if solutions to these problems could be found, work-based education will come to nothing if enough work placements are not forthcoming. Developing educationally productive work experience is one of the most challenging problems facing school-to-work program developers. Thus this book focuses on this crucial issue.

One of the main conclusions of the following chapters is that work-based education should not be thought of as one strategy but rather as

a continuum of possibilities. There may be a consensus among educators that some form of structured learning on the job that is coordinated with classroom work could be important in the education of many young people, but the consensus provides little practical guidance. Although many may agree that some coherent practical experience can serve an important purpose, there is less agreement about when that experience should take place, who should have it, how long it should last, and how much it is worth.

An impediment to more definitive answers to these questions is that empirical research has so far failed to provide measures of the benefits of work-based education in relation to various types of entirely school-based programs. Case studies contain convincing accounts of benefits, but again quantitative measurements are lacking. Although some research does suggest that academy programs reduce dropout rates and raise test scores, the analysis does not identify the separate effects of the work placements.<sup>11</sup> Analysis of wage gains attributable to cooperative education suggests that higher wages accrue only to those students who stay on in the workplace in which they were placed as students. But most cooperative programs are among the less intensive versions of work-based education, and little is known about how quickly wage gains might rise (if indeed they would) as a work-based education program becomes more intense. Thus research has not been able to provide a definite measure of the benefits of work-based education, although logical arguments, experience abroad, and optimistic reports from pilot projects are strong enough to encourage further experimentation and study.

In addition to surer understanding of the benefits of work-based education, policymakers need more information on the cost of such a program. How difficult would it be to develop an adequate number of high-quality work placements, and what financial and political resources would be needed to implement and sustain work-based education? What other reforms, including school-based education reforms, will have to be forgone to recruit employers?

This book tries to provide a stronger foundation for policy development by addressing some straightforward questions. What barriers stand in the way of employer provision of work placements? Given those problems and the potential benefits, what should the nature of employer participation and work placements be? Are there alternative approaches to achieve the same ends that are less demanding of

employer participation? What policies are possible to promote these desired objectives?

In chapter 2, I explore the barriers to employer participation and the incentives they have to provide work placements. In chapter 3, Margaret Vickers explores lessons for participation of employers in the United States by examining employer participation systems in Sweden and Germany. In chapter 4, David Stern considers how employers might be involved other than by providing job placements. In chapter 5, Robert Poczik points out that if employers and the workplace are going to become much more involved with education, schools will have to change to be able to work more effectively with employers and with students in the workplace. In chapter 6, Paul Osterman suggests possible state and federal policies to promote employer involvement. And in chapter 7, I summarize the arguments and the discussion that took place at the conference.

## NOTES

1. Commission on Excellence in Education, *A Nation at Risk* (Government Printing Office, 1983).

2. Stephen F. Hamilton, *Apprenticeship for Adulthood: Preparing Youth for the Future* (Free Press, 1990).

3. Perhaps the best-known statement of this position is in the William T. Grant Foundation report, *The Forgotten Half: Pathways to Success for America's Youth and Young Families* (Washington, 1988). Since then, many other studies have pointed out the absence of any system to structure the transition from school to work for those not bound for college. See, for example, General Accounting Office, *Management Practices: US Companies Improve Performance through Quality Efforts*, MSIAD091-190 (1991); and Commission on the Skills of the American Workforce, *America's Choice: High Skills or Low Wages* (Rochester, N.Y.: National Center on Education and the Economy, 1990).

4. See Sue Berryman and Thomas Bailey, *The Double Helix of Education and the Economy* (New York: Institute on Education and the Economy, Teachers College, Columbia University, 1992), for a review.

5. Lauren B. Resnick, "Learning in School and Out," *Educational Researcher*, vol. 16 (December 1987) pp. 13-20; and Senta Raizen, "Reforming Education for Work: A Cognitive Science Perspective," National Center for Research in Vocational Education, University of California, 1989.

6. There is some dissent from this diagnosis. Many labor market economists argue that the so-called churning of young workers is actually productive job

search activity in which they try different jobs, learn what is expected of them, and decide what types of work they might enjoy. Although school-to-work advocates decry the apparent chaos in the youth labor market, others suggest that the lack of structure has promoted flexibility. The much more structured German system is considered rigid and slow to react to increasingly rapid change; see James J. Heckman, Rebecca L. Roselius, and Jeffrey A. Smith, "U.S. Education and Training Policy: A Reevaluation of Underlying Assumptions behind the 'New Consensus,'" Irving B. Harris Graduate School of Policy Studies, University of Chicago, June 1994. Some critics also point out that while apprenticeships keep down unemployment among German youth, joblessness increases at the end of the apprenticeship period. By their late twenties, however, a much larger share of Germans than Americans are in long-term jobs; see Paul Osterman, "Is There a Problem with the Youth Labor Market and If So How Should We Fix It?" Sloan School, MIT, July 1991.

7. The following descriptions are drawn from Thomas Bailey and Donna Merritt, *School-to-Work Transition and Youth Apprenticeship in the United States: Lessons from the U.S. Experience* (New York: Manpower Demonstration Research Corporation, 1993); Edward Pauley, Hillary Kopp, and Joshua Haimson, *Home-Grown Lessons: Innovative Programs Linking Work and High School* (New York: Manpower Demonstration Research Corporation, 1994), pp. xvi, xvii; and David Stern and others, *School to Work: Research on Programs in the United States* (Bristol, Pa.: Palmer Press, 1995).

8. Thomas Bailey, "Can Youth Apprenticeship Thrive in the United States?" *Educational Researcher*, vol. 22 (April 1991), pp. 4-10.

9. Stern and others, *School to Work*.

10. Pauley, Kopp, and Haimson, *Home-Grown Lessons*, p. 7.

11. Stern and others, *School to Work*.