A Lever for Reform

Does NCLB leave any place for vocational education?

By Paul Weckstein

The No Child Left Behind Act (NCLB) and related standards-based reforms are creating a sense of urgency to quickly boost the academic performance of lower-achieving students and schools to make sure they attain proficiency in the knowledge and skills identified in state standards. At its narrowest, this pressure can be distorted into preparing students for the test, rather than for real mastery of the underlying knowledge and skills.

But even when this approach is viewed more broadly, a serious question arises: Does the magnitude of this academic task really leave any room for vocational education?

The answer is a resounding yes. Not only is there room for vocational education, there is an affirmative need for it as a key vehicle for academic achievement. But this is subject to two big “ifs”: only if we conceive of academic mastery as something quite different from grim drill narrowly aimed at test score gains, and only if we finally discard the outdated notion of vocational education as narrow occupational training for specific jobs.

As of this writing, it seems the only way Congress is likely to finalize a bill this year is by avoiding a major rewrite of current law. Paradoxically, the likelihood of sticking with the status quo under Perkins creates a breathing space for real change in vocational education and, more broadly, in high schools.

But real change depends on making full use of what the act already requires: providing students with “strong experience in and understanding all aspects of an industry” as a lever for high school reform and academic improvement. The act requires that this “all aspects of an industry” (AAI) approach be reflected in local and state Perkins plans, local uses of funds, and personnel development activities.

The AAI emphasis—together with the related requirements in Perkins for integrating academic and vocational education, enabling students to meet academic achievement standards, ensuring successful participation for special populations, and participatory planning—addresses both big “ifs.”

Redefining the Academic Path

To address the first big “if,” we need to look at what we know about the kind of teaching that produces dramatic gains in student achievement—gains reflected in both test scores and real understanding.
substantial body of research shows that such gains are produced when teachers systematically engage students in “authentic learning” tasks that have three key qualities:

1. Students carry out “disciplined inquiry.” They use facts, principles, and methods built by others to dig deeper into things and explain their own ideas. They explore central ideas and connections within and among disciplines, using the knowledge and methods of inquiry of those disciplines to build understanding. They use “elaborated” communication, in which ideas are explained, analyzed, and justified—not simply stated as opinions.

2. Students actually “construct knowledge.” They don’t simply echo back what they are taught; they use disciplined inquiry to discover things for themselves and put together information and ideas to arrive at new meanings and understandings. They explore, manipulate, interpret, and analyze ideas and information.

3. Their work has “value beyond school” and report cards. It deals with issues and problems that have real meaning outside of school—whether the meaning is social, personal, scientific, or aesthetic—and is shared with people outside the classroom.

How often have we heard students complain that they don’t think their schoolwork is meaningful or relevant? Authentic achievement is what high-performing adults do. In a high-performing science class, for example, students will tell you they learn to do what scientists do—design and carry out research to test theories and discover facts. Authentic achievement is also what young children do as they explore and learn to make sense of the world.

All this is worth keeping in mind as school districts develop strategies to comply with NCLB’s mandates for use of scientifically-based and empirically-validated instructional strategies.

Redefining the Vocational Path

The AAI approach is how Perkins aims to put authentic learning into practice in vocational education and address that second big “if.” The law says students are supposed to gain “strong experience in and understanding of all aspects of an industry. Aspects of an industry include planning, management, finance, technical and production skills, underlying principles of technology, labor and community issues, and health, safety, and environmental issues.”

This is not as foreign as some people may think. AAI builds on our long tradition of agricultural education, which is different from other forms of traditional vocational education. Rather than training farm workers to pick crops, agricultural education has long been rooted in learning all aspects of how to run a farm, including soil agronomy, animal husbandry, finance and accounting, and meteorology.

AAI provides a framework for preserving and enhancing the key strengths of vocational education, while helping overcome its key dilemmas in an NCLB world. Specifically:

- AAI provides real education for a lifetime, rather than training for a specific job. Rapid economic, technological, and social changes in the labor market, in the skills and knowledge required for jobs, and in young peoples’ career goals make obsolete the notion of finding a “permanent match” between students and jobs. As too many communities have learned the hard way, our new economy operates very differently. AAI gives students knowledge and experience that are more transferable over time, both within an industry and across industries.

- AAI helps schools realize savings. Once the quest for the perfect match between individual goals and a particular job is abandoned, schools need not purchase expensive but quickly obsolete training equipment to keep up with that outdated approach to vocational education.

- AAI provides a rich context for integrating academic and vocational education without dumbing down the academic side. Limiting academics to the knowledge needed for one specific job comes at the expense of mastering the full range of knowledge and skills that the state has said, through its academic standards, that all students should learn.

- AAI is a key safeguard against slotting different kids to fit into unequal futures. A vocational program might train some students to become relatively low-skilled hospital aides, while different courses prepare others for college and medical school. That kind of model leaves some children behind. But an AAI program focuses on the health industry as a whole, with all students actively exploring the industry’s many aspects.

- AAI is an aid to high-school restructuring. To increase personalization, student engagement, and academic coherence, many high schools are creating smaller learning communities, often built around discrete themes. One challenge is to make these smaller units real, rather than mere labels for different parts of a building. Using AAI to define the program and build the curriculum can provide the thematic integrity for subschools built around a broad but coherent industry theme, such as transportation, law and government, or health care.

Students also can learn all aspects of an industry through entrepreneurship and community development projects. This is
one way to develop skills that are needed in communities where the existing job market does not adequately support its residents.

**Building Bridges**

Here's a three-part exercise to illustrate authentic achievement and vocational education and how they connect through AAI. Suppose students are asked to build a bridge.

**Part 1:** Imagine how a traditional vocational education class in welding or carpentry would approach this task. What would the students do? What would the teacher be looking for? How would the work be discussed, evaluated, and graded? Now look at our three criteria for authentic learning. How would you rate this project in terms of the three criteria? What level of academic achievement would the project help students develop in reading, writing, science, mathematics, and social studies?

**Part 2:** Next, compare the task of designing a bridge as described by leading researchers on authentic learning. They note that to design a bridge that is functional, safe, enduring, and aesthetically pleasing, an adult must draw on engineering, architecture, the natural sciences, and mathematics—and produce new knowledge to deal with such factors as stress points and natural conditions that might threaten the bridge. How would an academic high school focused on high achievement approach this kind of lesson? How would this exercise compare with the vocational class, in terms of the three qualities of authentic learning and achievement? What level of academic skills would it require in comparison with the vocational class?

**Part 3:** Now consider how a vocational education program would approach this exercise if it were trying to meet the Perkins requirements for integrating academic and vocational education by giving students "strong experience and understanding in all aspects of an industry."

A transportation or construction program with an AAI approach uses and expands on these disciplines and others to identify and address the issues in Parts 1 and 2 and more. For example, students might explore such matters as overall transportation patterns and needs in the area and the potential impact of changing those patterns; finance and regulatory issues; management of the design and construction process; organization of the design and construction work, including health and safety issues; and environmental impacts both during and after construction.

How does this approach rate in terms of authentic learning and academic mastery? With an AAI approach, vocational education suddenly jumps from being intellectually less rigorous than the more academically oriented classes to something that is richer, more challenging, and more "real world."

**Steps School Boards Can Take**

School boards can help, at the governance level, to make sure vocational education realizes its potential. Here are eight steps your board can take:

1. Check with district leaders whether your district's vocational programs provide students with strong understanding and experience in all aspects of an industry. This should be evident in the curriculum, instructional methods, student assessments, internships, and other learning experiences.

2. Look at your district's local Perkins plan. It should be a forum for working with teachers, students, parents, and others, to determine how the district will make effective vocational education happen. As the voice of the community, the board can help make this happen. The board also can encourage a participatory process for developing mechanisms for assessing the program's implementation and effectiveness in AAI terms.

3. Consider the AAI framework when asked to approve or review the design and implementation of theme-based schools or subunits at the high school level.

4. Serve as a community liaison to help schools, teachers, and students connect with employers and community organizations to create opportunities for teachers and students understand, learn, and experience all aspects of an industry.

5. Help make sure that board policy and district planning reinforce the idea that vocational programs should not become "poor stepchildren" as the district focuses on meeting academic standards but, rather, an important part of meeting the challenge.

6. Consider expanding the scope of local programs that can be supported under Perkins—such as a science and technology magnet program that has been thought of as geared toward high-achieving students. Understanding the AAI approach helps people can move beyond any negative academic connotations associated with the word "vocational." And, the new program might be more attractive to more students and encourage them to reach higher academically.

7. Provide resources for staff development, taking into account the need under Perkins for teachers and other staff to remain current with all aspects of an industry, and the need for vocational teachers to meet the NLCB teacher-qualification requirements if they are teaching academic subjects in a curriculum that successfully integrates academic and vocational learning.

8. Insist that your state's Perkins plan for ensuring that students get strong experience and understanding in AAI is real and provides the supports your district needs to make this all work.

A school district that is struggling to raise academic achievement among all student subgroups to meet "adequate yearly progress" under NCLB and state law should not overlook how its vocational programs can contribute to real academic progress among its high school students. A well-designed vocational program based on the AAI approach will be a rich experience for all students. And it might be a particularly promising way to succeed with those students our schools typically have found hardest to reach.

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