Integration Is Losing Ground to the Tech-Prep/School-to-Work Movement

In a highly competitive, multicultural workplace, integrated skills and personal qualities are in great demand. Technical innovations have altered the way work is performed and new management processes have changed the way people perform it. School-to-work and tech prep legislation calls for school reforms that will prepare students with the academic, technical, adaptive, and interactive skills they will need in this changing workplace. Rather than being in competition with academic and vocational integration, school-to-work and tech prep programs provide ways to enhance it.

Tech prep, which has a strong applied academic focus, is “grounded in an integrated, authentic, and highly relevant core curriculum” (Pisapia and Riggins 1997, p. 20). As a component of academic and vocational integration, tech prep has the capacity to benefit all students, not only those enrolled in tech prep programs, linking them to postsecondary educational opportunities. School-to-work efforts extend integration beyond subject area connections to include workplace experiences that afford social integration as well. School-based and work-based learning, two examples of such efforts, offer educators an opportunity to connect classrooms to workplaces by increasing “students’ exposure to authentic work practices that provide opportunities to apply abstract concepts or knowledge to real problems” (Stasz 1997, p. 218).

School-based learning gives students an opportunity to use academics in authentic workplace contexts through such means as applied academics. It can include “training on the job, supervision by workplace mentors, and instruction in general workplace competencies and ‘all aspects of the industry’” (Stasz and Kaganoff 1997, p. vi). Work-based learning, which engages students in worksite learning experiences, is an expanded academic and vocational integration activity that affords students an opportunity to receive mentoring and instruction for industry-recognized skills (Pisapia and Riggins 1997). Each of these practices offers the potential for students to engage in problem solving, teamwork, and communication within the job context, taking into account the unique aspects of the job’s purpose, work tasks, organizational structure, job culture, and so forth (Stasz and Kaganoff 1997).

The concept of curriculum integration offered by Beane (1998) illustrates the potential for academic and vocational education to connect students to all aspects of the workplace: “A sit is meant to be, curriculum integration involves four major aspects: the integration of experiences, social integration, the integration of knowledge, and integration as a curriculum design (p. 5). In Beane’s explanation, integration as a curriculum design has several features: problems and issues of personal and social significance guide curriculum; learning experiences are designed to integrate knowledge in context of its use; knowledge is developed and used to address relevant issues, not in preparation for future tests; and learning activities involve the application of knowledge in real-life settings where students can experience problem solving and the intricacies of social interaction.

To be able to implement curriculum integration in the classroom, teachers and other school personnel require continuing education and skill development. In Florida’s Indian River Community College, faculty have been able to use funds from school-to-work and tech prep legislation, along with money from the state general edu-
culation fund, to attend conferences on integration, which has led to improved communication and collaboration across the different disciplines in the general education area ("In Florida" 1997, p. 38). Teacher externships, also supported through school reform legislation, afford teachers opportunities to learn how academic and vocational concepts are applied on the job and ways that they might tie their curriculum to the broader social purposes of the community. Externship programs also benefit employers, giving them opportunities to provide educators with input regarding the knowledge, skills, and attitudes they expect of their employees and, thereby, guide curriculum (Bidwell 1997).

Coordinated Academic and Industry Standards Drive Integration

Although there is considerable interest in curriculum integration, academic and industry skills standards are typically developed in isolation from each other (Bailey 1997). A cademic assessments tend to focus on subject matter knowledge, often tested through multiple-choice and true/false test items, with little demand for the real-world application of knowledge. Vocational education assessments have traditionally focused on the demonstration of technical skills identified by the industry. However, with the recent movement toward contextual learning and curriculum integration as means of preparing students for meaningful employment, the need for integrated skills that cross disciplines and can be transferred across jobs is becoming more apparent.

The skills identified by the Secretary’s Commission on Achieving Necessary Skills and their expansion in the New Standards Project have brought focus to the kind of preparation needed for the workplace and citizenship (Resnick and Wirt 1996). Generic in nature, these skills are especially appealing to employers who must satisfy any number of customers and do so in an economically proficient manner. “Today’s high performance workplace calls for persons . . . able to analyze a situation, make reasoned judgments, communicate well, engage with others and reason through differences of opinions, and intelligently employ the complex tools and technologies that liberate or enslave according to use” (ibid., p. 10).

Attention to generic transferable skills is consistent with vocational education’s continued interest in preparing students for the expectations of the workplace. However, as Bailey (1997) suggests, “ultimately generic standards will be meaningful only to the extent that they can be assessed so both academic and industry groups have a large stake in the success of those efforts” (p. v). A cademic skills must reflect not only a person’s ability to know, but his/her ability to relate learning to work applications. Their measurement must be related to industry standards and include a differentiation among those standards for various levels of jobs, e.g., those for entry-level jobs and those for higher-level jobs in the same field. “Ideally, industry skill standards should be able to refer explicitly to appropriate academic standards” (ibid).

The Ohio Department of Education is moving toward the development of a coordinated set of competencies directly linked to academic, employability, and occupational standards, building upon its O Occupational Competency A nalyses Profiles, which specify the competencies required for entry-level positions in specific industries or occupations, and its Tech Prep Competency Profiles, which identify the skills required in high technology occupations. In its effort to connect these competencies and integrate them with academic competencies, Ohio is developing the Career-Focused Education for Ohio’s Students model, which combines three types of Integrated Technical and Academic Competencies (IT A Cs): core, cluster, and specialized.

These IT A Cs use sample scenarios to create a workplace context in which students engage in solving problems or performing tasks to demonstrate knowledge and skills in context (Ohio Department of Education, forthcoming). The purposes of the scenarios are to illustrate the workplace context for which a particular strand of competencies are important, to demonstrate opportunities for integrated learning of both technical and academic competencies, and to set the stage for the development of instructional plans that engage students in active learning.

Ohio’s enhanced curriculum model, which is intended to expand students’ options for achieving career and educational goals, is one example that a movement toward the adoption of coordinated academic and vocational standards is underway. With coordinated standards, a contextualized constructivist foundation, and the work and learning connections of tech prep and school-to-work, the integration of academic and vocational education can remain focused and effective.

References


Brown, B. L., and Pritz, S. G. Teaching and Assessment Perspectives. Columbus: Division of Vocational and Adult, Education Ohio Department of Education, forthcoming.


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