Work-based Learning

Building High-quality Work-based Learning Programs for High School Students

By Corinne Alfeld

Introduction

Work-based learning (WBL) has been in practice for centuries, and it is an integral part of the education system in many industrialized countries. Often coordinated with school-based learning, WBL offers project- and problem-focused teaching and learning, rather than the more abstract and theoretical teaching and learning that often takes place in classrooms. WBL is an important way for students to learn about whether they are interested in and good at different types of career areas, as well as learning technical, academic and employability skills.

In addition to helping young people integrate knowledge and experience, researchers and practitioners believe that WBL offers a vehicle for conveying academic concepts, as well as a broad perspective of the skills required for successful transitions from school to further education and careers. Proponents argue that not only can such an approach meet the needs of U.S. employers for a highly skilled workforce, but a focused investment in WBL can also provide "employability" or "21st-century" skills and serve as a foundation for lifelong learning in a time of rapid technological change.[1]

However, compared to other developed countries, students in the U.S. spend the least amount of time learning in a work setting. Furthermore, WBL opportunities for American students are not available to all who want them, and they vary widely in quality. Approximately 72 percent of public high schools reported offering WBL opportunities for students in 2007–08.[2] Unfortunately, there are no national statistics on how many students actually participate in these opportunities.

Since funding for the School-to-Work Opportunities Act ended in the early 2000s, there has been little federal investment in WBL. However, interest in better aligning education and employment has resurfaced following the recession. U.S. policymakers are now reconsidering the merits of WBL in their search for ways to help prepare students for college and careers. It is important that further initiatives in this area are based on evidence about effective WBL programs.

This article summarizes research conducted for the National Research Center for Career and Technical Education (NRCCTE) in 2012 to establish a knowledge base about work-based learning to help state-level educators assist local WBL programs. Details on the background literature review, methods and findings can be found in the full NRCCTE report, "Work-Based Learning Opportunities for High School Students," published in 2013.[3]

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What the Research Says About High-quality WBL

Research conducted over the past 20 years shows that WBL programs can and do have positive outcomes for students, but that these depend on the quality of the program. There are four key factors that determine high-quality WBL programs:

1. They must be "well-structured and well-integrated with the school curriculum and culminate in products or services that demonstrate learning."[4]
2. Students must have "the opportunity to engage meaningfully with the experiences offered and to reflect thoughtfully on their learning."[5]
3. Participating employers must share the learning goals of instructors and students.[6]
4. Programs must have strong links to the labor market to meet employer needs.[7]

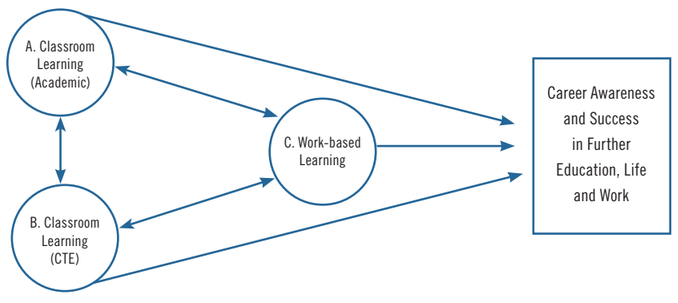
In other words, good WBL experiences should provide more than just a job or credits for the student and more than just "cheap labor" for the employer. The most effective WBL programs, research shows, have a clear link between what is learned in the classroom and what is learned on the job. The school-work connection does not happen automatically. It is clear that intentional planning and pedagogical decision-making need to occur for students to make the connections between school curriculum and workplace learning.[8] As expert Cathleen Stasz noted, "The establishment of a linking component is crucial to WBL because without it, it is unclear why school-supervised WBL has any advantages over regular work experience."[9]

Figure 1 below shows a general conceptual model of how WBL *should* work: CTE and academic classroom learning should be connected to each other; both should be connected to work-based learning, which should in turn enhance the classroom learning.

The key questions are:

- Who is responsible for making the links between the different kinds of learning?
- How should these links be made?
- How can the links be strengthened?

Figure 1. Theoretical Model of Work-based Learning



WBL in High Schools: Methods

The NRCCTE study team collected information on three common WBL models: internships/co-operative education (co-op), youth apprenticeships and school-based enterprises (SBE). The purpose of the study was to better understand the elements of recommended WBL programs operating in U.S. high schools in order to provide models and suggestions for state and local CTE administrators wishing to establish WBL opportunities for high school students.

To identify sites for the case analyses, the research team solicited recommendations from various stakeholders[10] for WBL sites located around the country that offer students opportunities for meaningful work that is integrated with the lessons they are learning in school. Team members conducted telephone interviews with 19 sites and visited four sites. Interview questions focused on:

- the relationship between the school, the employer and any other relevant partners in the delivery of WBL programs
- training for employers
- selection criteria for student participation
- schedule, compensation and learning plans
- assessments

For the purposes of this article, we will not discuss the findings of SBEs, as they take place in school and have very different characteristics from the other two models, which occur in the employer's workspace. Readers interested in SBEs are referred to the full report.[11]

Findings

Internships, co-ops and apprenticeships for high school students look very similar. They all have an adult coordinator or supervisor at the high school, an agreement or plan signed by the student, an evaluation by the employer, and credit(s) and a grade awarded for participation. Whereas WBL coordinators based at the school may understand the nuances between the different types of WBL, many employers do not.[12] From the point of view of the employer, the company has a high school student working part time for little to no pay, to whom they are supposed to teach "the ropes" but in whose education and training they do not necessarily have a lasting investment. It should be noted that this is very different from European WBL.[13]

The study found that the particular focus of the students' work in internships/co-op education and apprenticeships is most often determined by the company. Even if the teacher has some involvement in the content focus of the student's WBL experience, teachers often cannot get leave time to visit multiple employers where their students may be placed. This responsibility usually falls on a WBL coordinator who may not have a content background in the business focus area, and who cannot visit each and every student in his/her placement regularly due to the large numbers of WBL placements. Further, because the WBL coordination is often done centrally, rather than through individual classroom teachers, student training plans cannot be tailored to each students' learning needs, nor can training plans be standardized across placements, due to the variety of industries and employers. For these reasons, many of the student training plans and employer evaluations cover general employability skills rather than specific occupational skills.

In the sites in this study, the key role that the WBL coordinator played was ensuring a positive experience for the students and the employers. In addition, while a rare practice mentioned by only a couple of coordinators, student participation in creating the learning/training agreement is important to the students' understanding of the connection between school and work and to the quality of their experiences, as is support (training, guidebook) for the employer-mentors. However, even dedicated WBL coordinators are stretched in their responsibilities and may not have time to devote to these important practices. (Note: The many challenges faced by WBL coordinators are described in the full report).

Overall Findings

The primary finding of this project is that the out-of-school WBL experiences (internships/co-ops, apprenticeships) for high school students in the U.S. are much less tightly connected to the curriculum than expected, based on the literature about high-quality WBL. High schools appear to have very little control over what happens in out-of-school WBL settings, even if there is a dedicated WBL coordinator making personalized matches and a student learning plan has been established and signed by the teacher, student and employer. Work-site visits by a school representative occur infrequently due to time limitations on the WBL coordinators; thus, there is little opportunity for anyone at the school to understand what students are learning at work.

Overall, the educators interviewed for this study seemed to trust that employers are concerned about and know best what the student should be learning. The primary goal of WBL coordinators was to keep employers satisfied with the WBL experience in order to keep them engaged for the next year. Coordinators were less concerned with ensuring that students were getting from employers the training that they needed to complement their classroom-based education. As a result, most employer-mentors are not properly informed about the goals of WBL in advance of hosting a student in the workplace. Consequently, the student is left on his/her own to try to understand what the employer and the school expect.

Conclusion

In order for WBL to be meaningful and worthy of investment, there must be a

much stronger connection between the classroom and the workplace than currently exists in many WBL programs. The connection must go beyond the WBL coordinator (acknowledging that many districts do not currently have funding for such a position) placing students with employers in a career interest area; the program must *deliberately demonstrate to students the link between skills learned in the classroom curriculum and skills learned and used on the job.* Such an explicit link will increase students' ability to problem-solve in multiple contexts and help them understand the purpose of WBL in the "big picture" of their education.

In the ideal WBL situation, students are learning how to transfer concepts and skills between contexts by solving workplace problems using the academic and technical skills learned at school, as well as applying workplace skills to solve problems in class. This type of "cognitive transfer" is arguably the most important thing that students can learn in WBL that will serve them in future education and work settings.[14,15] For learning to occur, employer-mentors must know how to explain problems to students (which is different from training a new employee).[16] This means more deliberate training of teachers, employer-mentors and WBL coordinators to maximize WBL opportunities for students. More information, resources and training will be needed around "teaching for transfer."

A greater federal, state and local investment in building and sustaining high-quality WBL programs for high school students is needed if we expect our young people to learn about the world of work, gain maturity and employability skills in non-school environments, make informed career choices and succeed in their path toward further training and careers.

Assuming that federal policy will support states in improving WBL programs, recommendations based on the findings from this project are for state leaders to:

- Provide a clear, substantive purpose for and stated value of WBL, emphasizing the learning component in the work experience.
- Offer resources and information about components of high-quality WBL programs.
- Provide professional development for teachers and WBL coordinators to develop instructional strategies, including for cognitive transfer of problem-solving skills.
- Convene meetings with employer associations and labor unions to achieve buy-in for the creation of more meaningful WBL programs connected to school curriculum.
- Provide resources and guidelines for employer mentor selection, training and continued engagement.
- Support teachers (with release time, professional development, etc.) to work closely with WBL coordinators and employer-mentors to construct detailed student training plans (which students can have input into).
- Require the broadening of selection criteria and provisions for access so more students can participate in WBL.
- Demonstrate strategies for involving academic and CTE teachers in the WBL process so that WBL is connected to classroom learning.
- Provide better guidelines for accountability for student learning in WBL programs.
- Fund WBL coordinators for each project with adequate support and resources. Tech

Corinne Alfeld, Ph.D., served as deputy director for NRCCTE from 2002–2006. She continued to conduct research studies for the NRCCTE from 2008–2012 while she was at AED (now FHI 360). Her CTE work encompassed math-in-CTE, CTSOs, programs of study and WBL. She can be reached at cja0523@gmail.com.

ENDNOTES

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10. For example, the National Research Center for Career and Technical Education (NRCCTE), the Office of Career, Technical and Adult Education (OCTAE), National Association of State Directors of CTE Consortium (NASDCTEc), the Association for Career and Technical Education (ACTE), National Youth Employment Coalition (NYEC) and NOCTI.
11. Alfeld, A., Charner, I., Johnson, L., & Watts, E. (2013). *Work-based learning opportunities for high school students.*
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This article is based on a 2012 report conducted for the National Research Center for Career and Technical Education by FHI 360 (Authors: Corinne Alfeld, Ivan Charner, Lisa Johnson, and Eric Watts). The full report can be found at http://www.nrccte.org/sites/default/files/publication-files/nrccte_work-based_learning.pdf.