
EDUCATION FOR WORK: A REVIEW ESSAY OF HISTORICAL,
CROSS-CULTURAL, AND DISCIPLINARY PERSPECTIVES ON
VOCATIONAL EDUCATION

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ABSTRACT. In this review essay, K. Peter Kuchinke uses three recent publications to consider the question of how to educate young people for work and career. Historically, this question has been central to vocational education, and it is receiving renewed attention in the context of concerns over the ability of schools to provide adequate preparation for occupational roles and career success in a rapidly changing economic landscape. Philip Gonon's *Quest for Modern Vocational Education* provides a historical account of Georg Kerschensteiner's vision of the role of work as a central subject matter for all students. His approach served as the foundation for the dual system in present-day Germany. Nancy Hoffman's *Schooling in the Workplace* contrasts the U.S. system of career preparation for non-college-bound students with that of five other OECD nations where workforce and academic preparation are more strongly connected to learning in the workplace. Christopher Winch's *Dimensions of Expertise*, finally, offers a conceptual analysis of central ideas of vocational knowledge and underscores the important role of learning in the context of practice. The three texts offer historical, comparative, and philosophical analyses of the complex task of preparation for work and challenge education scholars to move the subject matter into the center of contemporary educational theory.

Work is central to human existence. It provides the necessities for life, sources of identity, opportunities for service and achievement, and determination of social standing and reputation. Work is also an existential concern, offering the possibility for the full range of human experience, including satisfaction, exuberance, and joy, but also disappointment, regret, and despair. Work can be experienced as opportunity for development and growth, as affirmation of self, and as grace, but also as tedium, toil, and exploitation. Communities, regions, and nations depend on education to develop adequate skills, knowledge, and dispositions for participation in the many formal and informal work settings, such as a range of organizations (business, government, educational, religious, and so on), community-based settings, neighborhoods, and families. The lack of preparedness for the demands of contemporary work has been a constant theme in educational scholarship, and so has the mismatch between student interest and growing occupational areas, for example, in science, technology, math, and engineering. In the context of a rapidly evolving global and postmodern moment, education is viewed as one of the most important forces in civil society to advance democratic ideals, foster civic engagement, and promote opportunities for individuals, societies, and ultimately the global community.

A central question for educators is how to prepare young people for work, and this is explored in this essay from historical, cross-country comparative, and philosophical perspectives. This question is critical in the context of the nation's focus on increasing graduation requirements, developing accountability systems for learning outcomes, and implementing high-stakes testing. Increased

rigor at the secondary level along with the push for higher participation rates in postsecondary education through a “college for all” policy have “become the proxy for employability or work readiness.”¹ Without denying the need for solid basic education and the role of public education for the democratic project,² the attempts to infuse more academic content and increase rigor have, for many students, not led to large-scale growth of employability and career opportunities, and neither have there been notable improvements in the nation’s economic performance or its societal progress. Of particular note in this respect is the lack of improvement in vocational education and training commensurate with the focus on academic achievement. This state of affairs should be cause for concern, not only in light of the important role of vocational education in the nation’s past, but also because, in contrast to the United States, many other developed nations have very deliberately opted to strengthen, broaden, and expand their vocational education systems and have done so with solid results.

At the core of the issue are perennial questions about the aims of education and the ways in which education can and should prepare individuals to assume initial vocational roles in society and provide for ongoing development. How can schools best prepare students for a rapidly changing world and for changing forms of social participation across individuals’ life spans? How can the aims of public education be balanced with the economic requirements of organizations, societies, and an increasingly global world of work? How can resiliency be built against the turbulence caused by economic, social, and political upheaval and the vagaries of a postindustrial society with its increasing fragmentation of social and work relations? Clearly, academic preparation is essential but insufficient. Active engagement with the social world connected to classroom learning offers the opportunity to learn through work, to learn about work, and to learn at work, and this should be given far greater importance in the education of young people. The conception of vocation proposed here includes work in various settings, including family and community, and for various purposes, including care of self. The purpose of vocational education, following George Copa and Jane Plihal, then, is to

enhance the vocational development of an educated person. . . . Vocational development is seen as a lifelong process of developing the capacity for assuming vocational responsibilities. Vocational responsibilities are the expectations for accomplishment in social and economic roles in which individuals take responsibility to provide services or produce products of value to themselves and others. Vocational roles and responsibilities are particularly characterized by caring, commitment, and connectedness to the services and products being provided or

1. James R. Stone III and Morgan V. Lewis, *College and Career Ready in the Twenty-First Century* (New York: Teachers College Press, 2012), 19.

2. Walter Feinberg, “The Idea of a Public Education,” *Review of Research in Education* 36, no. 1 (2012): 1–22.

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produced, and their impact on others. Full realization of human potential in vocational responsibilities is critical to human development and the social and economic progress of nations and the world.³

The force of the argument for a broadly conceived field of vocational education, however, has not been matched by commensurate theoretical or applied developments.⁴ As a consequence, calls for modernization and reform are plentiful in the United States, in Europe, and in developed and developing countries around the world.⁵

The three texts I review in this essay provide a much-needed addition to the scholarly dialogue on education and work and argue, specifically, for an increased focus on work as part of education for all students. Philip Gonon's book *The Quest for Modern Vocational Education* offers a historical perspective on the development of vocational education.⁶ He positions the undertaking in the context of the Enlightenment role of public education and the rapid industrialization during the nineteenth century. The core of the text is centered on Georg Kerschensteiner's contribution to the educational reform movement of the twentieth century that led to the articulation of a vocational pedagogy and formed the foundation of the much studied dual system of work preparation in Germany. In contrast to today's focus on college and career, this system positions the workplace not simply as a site of production but as a site for learning for all students. Kerschensteiner's central idea, developed historically in Gonon's book, foreshadows contemporary scholarly interest in workplace learning, organizational and institutional learning, and constructionist frameworks, including sense making and job crafting.⁷

Nancy Hoffman's text *Schooling in the Workplace* offers cross-country comparative perspectives based on recent large-scale studies by the Organization for Economic Cooperation and Development (OECD) that describe, measure,

3. George H. Copa and Jane Plihal, "General Education and Subject Matter Education Components of the Vocational Education Teacher Program," in *Beyond Tradition: Preparing the Teachers of Tomorrow's Workforce*, ed. Nancy K. Hartley and Tim L. Wentling (Columbia, Missouri: University Council for Vocational Education, 1996), 92.

4. Ibid.

5. See, for example, Office of Adult and Vocational Education, *Investing in America's Future: A Blueprint for Transforming Career and Technical Education* (Washington, DC: U.S. Department of Education, 2012); European Center for the Development of Vocational Education (Cedefop), *Modernizing Vocational Education and Training — Fourth Report on Vocational Education and Training Research in Europe: Synthesis Report* (Luxembourg: Publications Office of the European Union, 2009); Wim J. Nijhof, Anja Heikkinen, and Loek F.M. Nieuwenhuis, eds., *Shaping Flexibility in Vocational Education and Training* (Dordrecht, The Netherlands: Kluwer, 2002); and Organization of Economic Cooperation and Development (OECD), *Learning for Jobs: OECD Reviews of Vocational Education and Training* (2012), http://www.oecd.org/document/16/0,3746,en_2649_39263238_45926672_1_1_1_1,00.html.

6. Philip Gonon, *The Quest for Modern Vocational Education: Georg Kerschensteiner Between Dewey, Weber, and Simmel* (Bern, Switzerland: Peter Lang, 2009). This work will be cited in the text as *MVE* for all subsequent references.

7. Joseph A. Raelin, "Toward an Epistemology of Practice," *Academy of Management Learning and Education* 6, no. 4 (2007): 495–519.

evaluate, and analyze vocational education systems in Australia, Austria, Germany, the Netherlands, Norway, and Switzerland.⁸ This text offers comparative analyses, draws inferences, and suggests implications for the United States, a country that, in Hoffman's analysis, "would show up as having no VET [vocational education and training] . . . at all" if judged by the participation rates of upper secondary (high school) students in vocational as compared to academic general education in 2006 (SW, 6). Christopher Winch's book *Dimensions of Expertise*, finally, offers a fine-grained and deep conceptual analysis of vocational knowledge by delineating universal dimensions of expertise that might be considered universally valued outcomes of education.⁹ Winch's text is of import to vocational education, but equally to the related domains of adult learning, professional development, and education in the professions, and it provides substantive considerations to understand the historical and systems perspectives of Gonon and Hoffman.

CONTEXT: EDUCATION FOR WORK IN THE UNITED STATES

To provide context for the subsequent discussion of these three books, an admittedly cursory outline of the present contours of education for work in the United States might be helpful. In 2006, federal legislation formally adopted the term career and technical education (CTE) to replace the previously accepted label vocational or vocational-technical education.¹⁰ Older still are terms such as industrial education, industrial arts, and technical education.¹¹ In most countries around the world, the phrase remains vocational education and training (VET). In the United States, the name change was intended to signal reform and reorientation from preparation for specific occupations or occupational groupings¹² to educational focus on a range of goals: academics and career, employment and college, initial placement and lifelong learning, and industry as well as social skills.¹³ CTE is now the commonly accepted term adopted by the field¹⁴ and its

8. Nancy Hoffman, *Schooling in the Workplace: How Six of the World's Best Vocational Education Systems Prepare Young People for Jobs and Life* (Cambridge, Massachusetts: Harvard Education Press, 2011). This work will be cited in the text as SW for all subsequent references.

9. Christopher Winch, *Dimensions of Expertise: A Conceptual Exploration of Vocational Knowledge* (New York: Continuum, 2010). This work will be cited in the text as DE for all subsequent references.

10. *Carl D. Perkins Career and Technical Education Improvement Act of 2006*, Public Law 109-270 (2006).

11. Melvin L. Barlow, *History of Industrial Education in the United States* (Peoria, Illinois: C.A. Bennett, 1967).

12. A standard vocational education department at a university would have included teacher preparation in areas such as agricultural education, business education, marketing education, and education for the trades.

13. Richard L. Lynch, *New Directions for High School Career and Technical Education in the Twenty-First Century* (Columbus, Ohio: ERIC Clearinghouse on Adult, Career, and Vocational Education, Center on Education and Training for Employment, The Ohio State University, 2000).

14. Of note is the fact that university academic programs and departments have, by and large, not followed suit but instead use labels such as workforce or human resource education.

leading professional associations.¹⁵ CTE and VET should be viewed as comparable in scope for comparative purposes.¹⁶ The name change has been criticized for severing the link to long-standing debates and traditions, for adopting a new label for an old system, and for confusing the matter in international comparison.¹⁷ The following excerpt from a recent U.S. Department of Education report provides a description of the scope of CTE:

Career and technical education (CTE) spans secondary, postsecondary, and adult education levels. In high schools, CTE encompasses family and consumer sciences education, general labor market preparation, and occupational education, and may form part of a course of study leading to college, employment, or both. At the postsecondary level, career education is linked to preparation for employment in specific occupations or careers, although postsecondary credentials in career fields may also lead to further education. Adults may participate in formal education and training to acquire, maintain, and upgrade their workforce skills.¹⁸

Several features are of note in this description: first, the temporal reach of CTE from youth to adult, which represents a departure from earlier efforts focused on secondary education alone; second, the articulation of the specific objective of secondary CTE to prepare both for employment and postsecondary education known as “college and career readiness”; third, the differentiation of the curriculum, with general information about work at the secondary level and specific preparation for employment at the postsecondary level; fourth, the inclusion of further formal education upon obtaining a postsecondary credential; and finally the stated link to further education and training during adulthood, such as skill upgrading, career change, and labor market reentry.¹⁹

The *Blueprint for Transforming America’s Career and Technical Education*, the policy document accompanying the current reauthorization of the Perkins

15. Major associations and research centers are the Association for Career and Technical Education (ACTE), the Association for Career and Technical Research (ACTER), the National Association of State Directors for Career and Technical Education Consortium (NASDCTE), the University Council for Workforce and Human Resource Education (UCWHRE), and the National Research Center for Career and Technical Education (NRCCTE).

16. The convention in this essay is to use CTE to refer to U.S. education for work, VET to refer to non-U.S. education for work, and “education for work” for the field and its systems in general.

17. Morgan Lewis, for example, decries the narrowing of focus on employment and the loss of earlier attempts to orient the field on the broader notion of vocations, including work, family, and community responsibilities; Morgan V. Lewis, “Vocational Education and the Dilemma of Education,” *Journal of Vocational Education Research* 25, no. 4 (2000): 575–584. Even sharper critiques are expressed by critical vocational educators, such as Peter McLaren and Joe Kincheloe.

18. Karen Levesque, Jennifer Laird, Elizabeth Hensley, Susan P. Choy, Emily F. Cataldi, and Lisa Hudson, *Career and Technical Education in the United States: 1990 to 2005* (Washington, DC: U.S. Department of Education, 2008), iii.

19. As will be discussed later, the link to continuing education in the workplace or the formal education system after initial employment is substantially underdeveloped in the U.S. CTE system and has largely been taken up by corporate/industry and employer-based training and development.

legislation that provides funding for CTE, states the intended rationale and scope:

Today, postsecondary education and training are prerequisites for jobs of the new economy. Of the 30 fastest-growing occupations, about two-thirds require postsecondary education or training. With the average earnings of college graduates at a level that is about twice as high as that of workers with only a high school diploma, postsecondary education and training are now the clearest pathways into the middle class and future prosperity, and central to rebuilding our economy and securing a brighter future for all.²⁰

The document also identifies major shortcomings of present CTE: a lack of alignment between CTE programs and labor market needs, insufficient focus of CTE programs on high-demand occupations in high-growth industry sectors, and poor levels of collaboration and articulation among public education, employers, and industry partners.²¹ Further criticism is directed at a limited ability to account for academic outcomes and technical and labor market skills based on common definitions and metrics, and the slow pace of innovation and systemic reform of state policies and practices to support CTE at the local level.

Even a cursory survey of the U.S. system of education for work would be incomplete without alluding to corporate, employer-provided, and employer-financed education, training, and development. Often labeled corporate training or human resource development, this undertaking is separate and often disconnected from public education for work. Its history can be traced to the times before compulsory public education: the European guild system of the Middle Ages, education provisions for children working in textile mills of early British industry, welfare capitalism in coal and steel industries in Germany, and colonial apprenticeships and schools in the United States. In contemporary times, the role of corporate training has been recognized in a series of publications by the Carnegie Foundation. Asserting that the existence and function of this system had been largely overlooked, Ernest Boyer's introduction to Nell Eurich's 1985 book *Corporate Classrooms* states,

To train and educate their employees, corporations are spending huge amounts of money ... approaching the total annual expenditures of all of America's four-year and graduate universities. And the number of employees involved in corporate education may equal the total enrollment of those same institutions. ... Programs offered by industry and business increasingly overlap those in the nation's colleges and schools.²²

Operating independently of public governance and accountability frameworks for curriculum, access, standards, teacher preparation, and administration, the

20. Office of Adult and Vocational Education, *Investing in America's Future*, 1. In its goal to encourage near-universal postsecondary education and degree completion as preparation for work, the United States stands alone among virtually all OECD nations.

21. Analyses of the shortcomings of VET systems in non-U.S. OECD countries list quite similar challenges. See, for example, Directorate for Education, Education and Training Policy Division, *The Vocational Challenge* (Paris: OECD, May 2011).

22. Ernest L. Boyer, foreword to Nell P. Eurich, *Corporate Classrooms: The Learning Business* (Princeton, New Jersey: Carnegie Foundation for the Advancement of Teaching, 1985), ix–xv.

corporate training sector serves, according to industry surveys, more than one-half of the nation's workforce. The average annual time in training per employee is well over forty hours, and a wide variety of short- and long-term content is offered. Subject matter content ranges from remedial academic subject matter to executive development and from entry-level training and company orientation to advanced technical skills. It also includes all manner of function-specific training, such as sales, marketing, and customer service.²³ The fit of business-focused research and degree programs within colleges of education has been described as uneasy and contested, and the functional orientation of the standard corporate curriculum has been criticized as insufficient from educational and pragmatic points of view.²⁴ There is, however, agreement that corporate training has developed into an integral part of education for work. The term workforce education is now being used to encompass corporate training and CTE and to signify

that form of pedagogy that is provided at the prebaccalaureate level by educational institutions, by private business and industry, or by government-sponsored, community-based organizations where the objective is to increase individual opportunity in the labor market or solve human performance problems in the workplace.²⁵

JUSTIFICATION FOR VOCATIONAL EDUCATION

As noted previously, Philip Gonon's text provides historical and philosophical perspectives centered around the contributions of Georg Kerschensteiner and his influence on the system of vocational education in the German-speaking countries. Gonon includes a short historical treatise on the development of educational thought by Johann Pestalozzi, Johann Friedrich Herbart, and Wilhelm von Humboldt, and traces the justification for vocational education against the backdrop of industrialization in Prussia and the rest of the German-speaking principalities prior to the founding of the German Reich in 1871. Kerschensteiner's approach to public education is based on the notion of work for all students and is described in its theoretical foundation and applications in public schools. A second part compares and contrasts Kerschensteiner's theories of education in relation to those of John Dewey, Max Weber, and Georg Simmel. The book closes with chapters on the rise of the dual system of vocational and academic education in Germany, a brief comparative summary of the arguments for vocation-oriented education in the United States, and, finally, an update on vocational education reform and the current state of vocational pedagogy in contemporary Germany.

23. American Society for Training and Development, *2011 State of the Industry Report* (Alexandria, Virginia: ASTD, 2011).

24. K. Peter Kuchinke, "Contested Domains: Human Resource Development Programs in Colleges of Education," *Workforce Education Forum* 3, no. 1 (2004): 43–60; and K. Peter Kuchinke, "Birds of a Feather? The Critique of the North American Business School and Its Implications for Educating HRD Practitioners," *Human Resource Development Review* 6, no. 2 (2007): 111–126.

25. Ken C. Gray and Edwin L. Herr, *Workforce Education: The Basics* (Boston, Massachusetts: Allyn and Bacon, 1997), 4.

Gonon, professor of vocational education and teacher training at the University of Zurich, provides justification for a text focused on Kerschensteiner with reference to the international interest in vocational education and the renown of the German dual system. The historical scope of the text is broad and spans educational theorizing from the late eighteenth century to the present, with a central focus of the role of work in compulsory schooling and continuing education. The main tenets of Kerschensteiner's approach are framed against the backdrop of modernization, technological developments, and social change during a period of rapid industrialization; they address the need for reform of the school curriculum and school administration, professionalization of teacher education, and relevance of schooling for a larger segment of school-age children. The classical, elite, and abstract forms of education were to give way to education that introduced children to the "latest developments in science and the arts [and included] manual work and personal experience relating to modern culture — understood as revaluation and reform of industrial culture" (*MVE*, 14). Education had to respond to far-reaching economic, industrial, and social change and to the prevailing education based on classical philology. Participation in the productive function of society, for individual and societal reasons, demanded the parity of general and vocational education. The goal was a preparation for the "useful life" — that is, the acquisition, development, and application of knowledge, skills, and attitudes required for full citizenship. At a societal level, the reform ideas corresponded to the political concern of the "social question": the task of warding off the specter of labor unrest and overthrow of the political order through an integration into economic life. The reformed school was to offer work-based education for all pupils rather than segregating and tracking students by type of curriculum. As Kerschensteiner stressed, "The essence of the human being in this period is work, creating, taking action, trying things out, experiencing, so as to learn ceaselessly in the medium of reality" (*MVE*, 80). The *Arbeitsschule* — roughly translated as school organization and curriculum based on real-world activities and active participation — would fulfill the twin goals of fostering social welfare and protection and ensuring a moral polity through the education of the useful and active citizen. Each person "should be rendered capable . . . and prepared to . . . be active in a given vocation . . . not only for earning a living but also for the moral self-assertion of the individual while also providing a basis for services to society" (*MVE*, 80).

Kerschensteiner's reform pedagogy refers to Pestalozzi's ideas of the ideal state, the productive power of the child, and the promise of schooling for social renewal and moral development. The distinction between vocational and general or academic education is viewed as artificial and misleading. Education here takes the wider social, economic, political, and cultural worlds as its central subject matter and organizes learning and doing around those worlds. The main focus of Kerschensteiner's philosophy centers (in opposition to the "book school") on the important function of manual activity and, more broadly, the role of work as educational subject matter for a "more encompassing sense of *Bildung*" (*MVE*, 187). This notion, as Gonon portrays in detail, connects with Dewey's approach to teaching through projects, with Weber's conceptualization of education as self-guidance, and with

Simmel's philosophy of life. Kerschensteiner's legacy continues in the dual system of vocational education in Germany and other countries in Western Europe.

It is remarkable and perhaps ironic how relevant Kerschensteiner's ideas appear in illustrating the path *not* taken in the United States. The establishment of federally funded vocational education in public schools following the passage of the Smith-Hughes Act in 1917 declared a far narrower and more functional role for vocational education, and this based largely on the arguments provided by Charles Prosser and David Snedden in key debates with John Dewey over the role and scope of the undertaking. Rather than framing the term "vocation" in its broader sense as partaking in the various social roles — including work, family, community, and polity — preparation for jobs became the primary task of vocational education. According to Frederick P. Fish, president of AT&T and chairman of the Massachusetts State Board of Education, for example, schools are to "revise their values by providing training to meet the practical needs of life for the rank and file."²⁶ The purpose of vocational education was to offer training programs "designed to lead graduates to gainful employment in specific occupational fields."²⁷ The social efficiency view of vocational education led to its strict separation from academic education, to tracking, and to the second-class status for at-risk and special needs students, but also to the relatively isolated and arguably marginalized status of vocational education research and academic departments. Lowered demand for vocational teacher certification, widespread acceptance of alternative certification for vocational instructors, and diminished enrollment in vocational courses at the secondary level has led to a decline in demand for university preparation, research, and scholarship in vocational education since the 1980s, and a commensurate refocusing of research and teaching on training in industry.

The idea of the role of work in education, so central to Kerschensteiner's work, prevails, though not for all students, in the dual system of vocational education in the German-speaking countries and other parts of Western Europe. In many countries with highly developed vocational qualification and certification systems, the conception of the proximity of learning and doing has found much acceptance. In the United States, this is a minority view that urgently needs to be strengthened in order to complement the current focus on academic skills. Theoretical developments have occurred — for example, the formulation of the "new vocationalism"²⁸ — and it is echoed by the resurgence in interest in CTE preparation at the postsecondary level, primarily at two-year community colleges

26. Arthur G. Wirth, *Education in the Technological Society: The Vocational-Liberal Studies Controversy in the Early Twentieth Century* (Scranton, Pennsylvania: Intext Educational Publishers, 1972), 156.

27. *Ibid.*, 157.

28. Theodore Lewis, *Towards the Twenty-First Century: Retrospect, Prospect for American Vocationalism* (Columbus, Ohio: ERIC Clearinghouse on Adult, Career, and Vocational Education, Center on Education and Training for Employment, The Ohio State University, 1988).

and technical colleges.²⁹ As will be described in the review of Hoffmann's text, the United States stands alone with its policy of college preparation for all and its neglect of meaningful integration of work into education.

SYSTEMS OF VOCATIONAL EDUCATION

Nancy Hoffman's interest is in the systems, structures, and outcomes of vocational education and training. She provides an international and cross-country comparative analysis, with much of her material based on OECD reports, including *Learning for Jobs*, *Jobs for Youth*, and *Helping Youth to Get a Firm Foothold in the Labor Market*. *Learning for Jobs* is series of studies of the VET systems in sixteen countries in Europe, North and South America, Asia, and Australia. Hoffman served on the *Learning for Jobs* team that examined VET in Norway, Sweden, and Hungary, and is vice president and senior advisor for the nonprofit organization Jobs for the Future. Her text is situated in a human capital framework that emphasizes the economic, social, and personal outcomes of vocational education. The central concern is with the "forgotten half," those "young Americans who — for reasons of poverty, poor-quality high school education, no faith in the future, lack of engagement in traditional schooling — are adrift in a harsh economy with no structures or supports as they grow from being adolescents at school into adulthood" (SW, 1). The United States, admonishes Hoffman, can and should do better, and the six countries featured in her book provide points of comparison that she highlights through detailing the alternative ways in which they structure education for work.

The need for reform is underscored by the mediocre results of the U.S. system of transitioning young people from school to stable employment. About one-third of U.S. youth "spend most of the five years [following their departure from school] . . . in and out of employment, unemployment, and inactivity, signaling difficulties in settling on a promising career path" (SW, 3). In comparison to other OECD countries, the United States ranks high in youth unemployment. The "college for all" policy in this country is described as the exception to the existence in other OECD countries of strong vocational education systems that offer desirable and demanding options for a majority of students. An integration of learning and working can provide viable alternatives to higher education and presents, according to Hoffman, "the smartest and quickest route to a wide variety of occupations for the majority of young people in the successful countries" (SW, 6). In contrast, U.S. high school graduation requirements allot too small a portion of CTE courses to enable students to attain marketable skills. High school CTE is centered on career exploration and retention of at-risk students rather than career preparation. Early work experiences tend to be in low-skill, part-time, and temporary jobs that offer little in terms of vocational development or preparation for future careers. At the postsecondary level, student career preparation is similarly hampered,

29. See, for example, Dewayne Matthews, *A Stronger Nation Through Higher Education: How and Why Americans Must Achieve a "Big Goal" for College Achievement* (Indianapolis, Indiana: Lumina Foundation for Education, 2012).

particularly by the need for developmental courses with high dropout rates and by restrictive admission standards for promising career pathways, such as nursing, engineering, and information technology. Even where students succeed, Hoffman asserts, too few programs offer sustained, demanding, and long-term workplace learning opportunities, and this creates further difficulties in job placement and transfers the burden of job-relevant training of new hires to employers.

Strong VET systems, as Hoffman emphasizes, require strong partnerships between the state, schools, employers, and labor unions. Employers assume primary responsibility for defining the qualifications for clusters of occupations in specific industry sectors. Employers and employer organizations play major roles in approving and revising curricula and in developing and implementing assessments. Government education agencies, in concert with employers and employer associations, articulate standardized vocational qualifications systems and safeguard educational quality, assessment, and improvement. Countries with strong VET expand those systems by revising curricula to meet labor market needs, adding postsecondary career pathways, and opening up opportunities for at-risk youth. VET is promoted as the pathway of choice for a majority of students. Postsecondary curricula include trainee programs, and university-only education is designed for a small number of students and restricted to fields that are research-intensive and to codified professions such as law, medicine, and education (SW, 15).

Hoffman's book provides applied examples of the type of integration of education and work that Gonon expands upon in his text. The philosophical rationale provided here moves toward a broad conception of vocational education as preparation for work. Work, in turn, is inclusive of but also broader than employment alone. Work means fulfilling basic human needs for the expression of self, for the ability to support and nurture oneself and one's family, and for contributing to the well-being of society and community by providing goods and services. Work provides the nexus between the individual and the public, and is an integral part of identity and standing in society. Hoffman's analysis is focused on those who aim at the middle-skill jobs rather than all youth; these are a group of jobs and occupations that, in recent studies, have been shown to offer solid returns in terms of income, opportunities for advancement, social standing, and also high growth in job openings and demand.³⁰

Strong VET systems provide balance between relevance and rigor as well as among the need for skills currently in demand, broad conceptual understanding of the subject matter, and the ability to adapt, grow, and learn throughout one's life. This balance can avoid the risk of favoring employer demands for entry-level labor over long-term career development for individuals, a charge that has rightly been leveled against early forms of training in corporation schools,

30. Anthony P. Carnevale, Nicole Smith, and Jeff Strohl, *Help Wanted: Projections of Jobs and Education Requirements Through 2018* (Washington, DC: Georgetown University Center on Education and the Workforce, 2010).

current forms of corporate training, and older forms of vocational education.³¹ This balance can be achieved, according to Hoffman, through active employer engagement that ensures relevance, currency, and introduction to up-to-date work technologies and processes. At the same time, state regulation and oversight for standards, evaluation, and assessment provide the necessary rigor and ensure occupational mobility. In countries such as Germany, employer associations, organized labor, and state education agencies form active partnerships that deliver broadly conceived career education that is relevant and held in check through a public and uniform system of assessment of vocational education outcomes, validation to ensure stakeholder-derived standards, and formal recognition of vocational achievement.³² While such systems operate well at the national level — Hoffman provides case examples along with a detailed description of country-level systems — a similar European Union-wide framework for vocational knowledge, skills, and competence has been pursued by the European Commission since the Lisbon meeting in 2000. With the goal of economic modernization, the European Qualification Framework aims at “transparency, comparability, transferability, and recognition of qualifications” (SW, 37); this project seeks to achieve a level of harmonization of vocational education comparable to the Bologna process for higher education.

Hoffman provides strong support for the ability of vocational education to expand opportunities for individuals and to advance families, communities, and nations. Differences in educational, labor market, and occupational structures alone prevent the easy recommendation that we should copy or import other educational systems here; still, local and often nonstandard district- and state-level examples of effective CTE policies and practices exist in the United States. These should be encouraged, examined, and strengthened in light of the lessons available from strong VET countries; they should be seen as an alternative or, at minimum, a complement to the “college for all” policy for ensuring the workplace success of young people.

VOCATIONAL KNOWLEDGE

Christopher Winch’s conceptual analysis of expertise provides the deepest and perhaps most challenging reading in the trilogy of texts covered in this essay. It offers wide-ranging and yet detailed philosophical analyses of vocational knowledge, expertise, and related concepts.

The opening argument — that such an undertaking is long overdue — is correct: vocational knowledge is a central concept in the array of work-related

31. See, for example, Barlow, *History of Industrial Education in the United States*; Kuchinke, “Contested Domains”; and National Commission on Secondary Vocational Education, *The Unfinished Agenda: The Role of Vocational Education in the High School* (Columbus: National Center for Research in Vocational Education, The Ohio State University, 1984).

32. See, for example, Kirsten S. Wever, *Negotiating Competitiveness: Employment Relations and Organizational Innovation in Germany and the United States* (Boston: Harvard Business Review Press, 1995).

educational endeavors, including career and technical education, vocational education, professional development, adult education, and human resource development. Curricula in schools in general and higher education in particular are often accused of lacking relevance for the practical world that students will transition into upon graduation. Corporate training offices struggle with transfer of training and often resort to simplistic competency models that offer little guidance for the practical tasks faced by employees.³³ Winch's book deepens the scholarly debate on expertise, a debate that appears to have slowed in educational research in the early 1990s³⁴ and has moved to the behavioral quarters of organization behavior research and to cognitive psychology and neuroscience.³⁵ Winch's concern with vocational knowledge is broad and covers learning for work in many settings: school, university, workplace, community, and family. It addresses knowledge of varying degrees of complexity. His text should be viewed as laying a conceptual foundation for the other two books under review here by providing insight into the central questions of what we mean by practical knowledge, how such knowledge is related to expertise, and how specific understandings can lead to its development.

Following Gilbert Ryle, Winch positions practical knowledge as related yet epistemologically distinct from declarative knowledge. *Knowing how* involves *knowing that*. It includes moral aspects of knowing how to act well, practical judgments about how to discern among alternatives, and the narrower ideas of skill and competence. The *degree problem* illustrates the difference: one can have knowledge how to do something in degrees, developing from, for example, a novice to a master cabinetmaker. It is not possible, however, to say in the same sense that one can *know that* in degrees: for example, knowing that a bolt of a particular tensile strength is required to hold together a piece of furniture. A further distinction resides in the role of *intelligence concepts* in practical knowledge — normative activities such as instructing, encouraging, demonstrating, and assessing. Expertise — defined as the practical knowledge of the master cabinetmaker, for example — is recognized by the ability to put to use declarative knowledge to build a beautiful piece of furniture. It requires, in addition, that the cabinetmaker has knowledge about new designs, materials, and tools, and continues to broaden this knowledge over time. Expertise includes the capacity, interest, and motivation to acquire new knowledge, and here Winch relates the expert to the classic notion of the educated person expressed by R.S. Peters.³⁶

33. See, for example, K. Peter Kuchinke and Hee-Young Han, "Is Caring a Competence? (Re-)Opening the Dialogue Over the Limitations of Competency Frameworks in HRD," *Human Resource Development International* 8, no. 3 (2005): 385–391.

34. See, for example, K. Peter Kuchinke, "Employee Expertise: The Status of the Theory and the Literature," *Performance Improvement Quarterly* 10, no. 4 (1997): 72–86.

35. See, for example, Michael I. Posner and Mary K. Rothbart, *Educating the Human Brain* (Washington, DC: American Psychological Association, 2007).

36. R.S. Peters, ed., *The Philosophy of Education* (Oxford: Oxford University Press, 1973).

Winch provides much needed conceptual clarification regarding the notions of skill, competence, capacity, and ability — central terms in vocational and professional education that are often used in simplistic fashion. Expertise cannot be properly understood without considering the “capacities for normative response that are part of human species-nature” (DE, 78). Expertise, thus, should be viewed as worthwhile activity, doing something well; exhibiting expertise is not an end in itself,³⁷ but aims at a broader social good and is, therefore, an expression of moral agency. In this discussion, perhaps more strongly than in other sections of the book, Winch addresses the broader purpose of vocational education and the dangers of narrow skill building disguised as education and development. In my view, Winch’s focus on the ethical nature of vocational development and practical application of expertise is the core contribution of this book. Whereas the public debates over the scope of vocational education leading up to the passage of the Smith-Hughes Act concluded with a narrow understanding of the undertaking — job training for the purpose of social efficiency and Prosser’s admonition to “leave the inner man alone” — Winch’s discussion connects vocational practice squarely with the normative notions of virtue and excellence. While a social efficiency orientation is silent on the ends to be pursued,³⁸ the concepts of practical knowledge and expertise carry within them as integral and inseparable parts the normative notions of *working well* and the good or worthwhile life. Isolated ethics training, a curriculum requirement in colleges of business and mandated on an annual basis for state employees, makes little sense under this notion.

Winch closes the conceptual analysis of practical knowledge and expertise with a debate about the possibility for a general theory of expertise, and he critically assesses a number of popular works by education scholars, including Carl Bereiter, Marlene Scardamalia, and Donald Schön. He concludes that extant universal theories of expertise fall short given the complexity and variety of human activity, the role of tacit knowledge, and the contextual nature of expertise in various domains, fields, and occupations. The final chapter addresses the implications for vocational education and the development of expertise, and refers, in major sections, to the dual system of vocational education in Germany, the British system of National Vocational Qualifications, and the European-wide Qualification Framework.

Winch’s work accentuates further the need for greater connection between education and work. Expertise is gained through immersion in tasks in authentic situations where outcomes matter, feedback and guidance is provided, and long-term engagement is possible. Classroom learning can do little more than ensure adequate levels of declarative knowledge. The formation of moral and ethical

37. However, it may contribute to the Rawlsian notion of self-respect as a primary social good.

38. For a related discussion, see K. Peter Kuchinke, “Adult Development Towards What End? A Philosophical Analysis of the Concept of Human Resource Development,” *Adult Education Quarterly* 49, no. 4 (1999): 148–162.

judgment, so integral to the notion of expertise and professional competence, requires practical engagement, often over many years. Where education systems fail to provide opportunity for learning in practice, they leave the formation of professional capacity to a workplace that is ill equipped to nurture these essential dimensions and instead enforces the pursuit of self-serving goals. Education for work, in essence, is too important to be left to the vagaries of the commercial world.

CONCLUSION

The three texts I have reviewed in this essay provide important contributions to the field of vocational education and, more broadly, to educational theory, where the subject matter has not been integrated sufficiently into broader theorizing and has instead been left isolated in specialized academic programs, departments, associations, and journals. The need to reclaim the topic of education and work as central to educational research, theory, and practice undergirds the three texts reviewed here. In Gonon's book, it is the historical legacy of Kerschensteiner who, building on central educational thought in the age of Enlightenment, claimed the subject matter of work as educational in a deep sense and for all children. This reform idea laid the foundation for the dual system of vocational education. Western European countries, as Hoffman explains, are expanding their VET systems, and these systems complement or, in the case of Switzerland, serve as an alternative to the university in preparing young people for work. Her analysis questions the policy decision in the United States to increase college enrollment and degree completion as the primary means for vocational preparation, a path that in an earlier era gave rise to Kerschensteiner's development of alternatives to the "book school." Hoffman's analysis further shows the ability of a strong VET system to integrate at-risk youth, to lower youth unemployment, and to serve the needs of societies and communities. Winch's text, finally, offers deep discussion of the core concepts of practical knowledge and expertise, and provides insight into the normative and moral dimensions of practice and vocational development. All three texts are important contributions to the canon of education scholarship in general and to the specialized fields of human resource development, professional training, and occupational development in particular. The three texts link back to the recent definition of vocational education as education *for, at, through, and about* work³⁹ and also to conceptual writing on the new American vocationalism.⁴⁰ The resurrection of dialogue regarding the role and goals of vocational education is all the more welcome in light of recent federal- and state-level "college for all" policies that threaten the intricate nexus of education and work. Based on the arguments provided here, the bifurcation of academic training and vocational education defined in narrow economic terms as preparation for jobs is ineffective and counterproductive. While neither the importance of academic subject matter

39. George H. Copa, *A Framework for the Subject Matter of Vocational Education* (Berkeley, California: National Center for Research in Vocational Education, 1992).

40. See, for example, Lewis, *Towards the Twenty-First Century*.

and the liberal arts nor the vital role of preparation for employment are in question, current trends in this country point to a widening divide rather than greater integration. For all the reasons provided by Gonon, Hoffman, and Winch, these trends should be viewed with concern, and vigorous scholarly attention to this topic should become a priority for the educational scholarly community.

This dialogue will, of course, include points of critique and commentary on the work of these three authors. For example, the admiration of the German dual system, common to the three texts, provides little in terms of practical guidance for the United States. This is for reasons of size, governance, and labor market structure. A better point of comparison with Germany might be a single U.S. state, and the decentralized manner of education in the United States should be compared to that of the European Union at large. Moreover, German industrial structures enable far greater coordination among the educational system and employers, labor unions, and industry groups. A second point of observation is the fact that the dual system of vocational education in Germany and other West European countries is far from uniform. Instances of excellence in combining academic and work preparation followed by stable employment opportunities are characteristic of large and well-known employers. Competition for these spots, however, is keen, and many youngsters make do with apprenticeships in smaller firms where resources, time to learn, adequate mentoring, and access to current work processes and equipment are limited. Not all employers participate in the apprenticeship scheme, and a sizeable portion of each age cohort — in particular, immigrant youth and high school dropouts — are denied participation and have little access to employment other than unskilled labor and the shadow economy. What the United States lacks in structure and a strong VET system, it offers in flexibility and opportunity. Despite the persistent and misleading myth of rags-to-riches — an ideology of success in self-determination perpetuated since the founding of the country⁴¹ — opportunities for entrepreneurship and self-directed career behavior⁴² are, arguably, available to a larger degree in a flexible labor market, but they are also accompanied by the lack of a social safety net, employment insecurity, and lower rewards.

Further, the time-bound nature of Kerschensteiner's approach requires consideration, translation, and adaptation to meet the needs of present circumstances. Kerschensteiner wrote at a time when state, school, and employers held stronger roles in imparting information, serving as resources, and being able to model behavior. Today's youth are subject to a far wider variety of influences that compete with school and workplace.⁴³ Corporate scandals, institutionally sanctioned misdeeds,

41. Wellford W. Wilms, "Captured by the American Dream," in *Vocationalizing Education: An International Perspective*, ed. Jon Lauglo and Kevin Lillis (London: Pergamon, 1988).

42. This has been popularized under the notion of a protean career; see Douglas T. Hall, *Careers In and Out of Organizations* (Thousand Oaks, California: Sage, 2002).

43. Jennifer A. Sandlin, Jake Burdick, and Trevor Norris, "Erosion and Experience: Education for Democracy in a Consumer Society," *Review of Research in Education* 36, no. 1 (2012): 139–168.

instances of personal wrongdoing while in office, and the highly complex moral and ethical decision environment faced by global organizations require that the role of work as education be interpreted anew. *That* a greater connection between work and education is desirable appears to be indisputable. *How* to accomplish this task in light of the highly complex administrative structure of U.S. education, its slow rate of change, and multiple and competing priorities requires concerted effort by and intense dialogue among education researchers, policy experts, educators, and the wider employer communities. Gonon, Hoffman, and Winch, in their respective books, have provided valuable contributions to this undertaking and should be applauded for encouraging discussion, dialogue, and debate.

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