REVIEW ESSAY

Simon, R.I., Dippo, D. & Schenke, A. (1991). *Learning work: A critical pedagogy of work education.* Toronto: OISE Press, 199 pp., $21.50 (softcover).

Wirth, A.G. (1992). *Education and work for the year 2000: Choices we face.* San Francisco: Jossey-Bass, 232 pp., $26.95 (hardcover).

In the last decade educational and economic policy-makers have been increasingly occupied with tracing changes in technology, global re-structuring of economies, and the probable effects of these on the work force of the future. Many new educational policies and curriculum plans, which have resulted from these studies, attempt to address such issues as drop-out rates, declining standards, and work skills development. Often such plans exhibit an obsession with "the future" which promotes education for a largely speculative set of economic and social conditions. *Education and Work for the Year 2000* is representative of this preoccupation; *Learning Work*, however, is an innovative, radical contribution to pedagogy that gives priority to the present realities of school and work life.

Arthur Wirth is concerned that the economic effects of computerization lead some educators to accommodate new technology and to emphasize a results-based curriculum at the expense of general analytical skills. Wirth argues that this jeopardizes America's democratic traditions and compromises its cultural values. He is concerned that the often idealized Japanese model, with is its "exam-driven" linkage between education and work, deprives students of "the strengths of the Dewey tradition with its emphasis on the cultivation of inquiry, individuality and creativity" (p. 50).

Wirth argues that computerization must be understood as an "informating" system which makes the knowledge generated in school and work available to all participants. The computerized work environment is

more democratic than the industrial environment because it negates the traditional Taylor-inspired division between the conception of work and its execution. New technology demands an ecologically oriented knowledge, called "symbolic analysis," which focuses on the interconnectedness of social functions. This requires educational systems to teach "new" symbolic analytic skills: abstraction, system thinking, experimental inquiry, and collaboration.

The changing work situation of grocery clerks is one of Wirth's examples of the basis for understanding symbolic analysis. Formerly limited to taking money and making change, clerks are now also involved in inventory control, decision-making about re-ordering stock, and related matters. Clerks are more valuable now because they are involved in an "informating" network that fosters cooperative relations between clerks and managers. Wirth shows how students can prepare for the grocery store model of work through such computer networks as Apple Classrooms of Tomorrow (ACOT). Old classroom barriers and management problems are dissolved by the electronic relations between teacher and students (as was the division of labor in the grocery store). He cites such teachers' experiences with the program as the production of a class newspaper. This project opened up "the space of classroom instruction" (p. 142) *because* it was done on a network of computers, enabling teachers to offer students more attention via individual computer terminals.

Technology is so essential to Wirth's vision of education and work that it has taken on a life of its own. His claim is that technological advances create new physical and social environments, and promote new attitudes among users. This claim provokes questions about the validity of his argument. For example, how many teachers have expanded the social space of the classroom by initiating a cut and paste version of a school paper? Do teachers who become aware of the time needed for individual attention reorganize their timetables or work groups? Is there a difference between personal interaction and interaction via computer? Is it the marvels of computerization or teacher effectiveness operating here? Wirth fails to address these and related issues.

While "new" skills may be necessary for an efficient transition from school to work, the informating environment is a less than adequate picture of everyday work life. If the rationale behind his argument is that better human relations and a different form of knowledge are inherent in the computerized environment, then a return to the grocery store is revealing. More realistically than Wirth's vision, the clerk is "involved" in high-tech work relations because he or she moves a package with a bar code across an infra-red light signalling the computer to begin a process which eventually results in a programmed decision to order another carton of wheat flakes. It is difficult to understand where the relevance of symbolic analysis is in a work situation governed by computer programming. While rejecting the "technological fix fallacy" (p. 187), Wirth does not show that human social relations have priority over technical relations. It is also difficult to understand how the "Dewey tradition" can be sustained in these situations.

Technological changes in society do require a more creative and analytical kind of knowledge. In the concluding chapters, Wirth discusses programs (at MIT and the Rindge School of Technical Arts) which explore the historical development of technology and occupations as part of their core curricula. The critical orientation of these programs is essential for education because they are collaborative, interdisciplinary, and "family-like" in organization. We learn that similar results are achieved in these programs as in ACOT but surprisingly, computers are not, according to his description, a central part of the curriculum. Critical educators would appreciate these programs, but the author uses them to support his argument that technological change itself produces more collaborative social arrangements and more emancipated persons, citing John Dewey for support. Dewey was as interested as Wirth in the adjustment of persons to their society, and equally interested in "the power of science and technology ... for extending democratic and human values" and for freeing people "from the age-old drudgery of physical toil" (p. 183). What Wirth seems to miss is that technology is the object of inquiry in these innovative programs, as it was in Dewey's curriculum on occupations; it is not the mediator of social relations as are ACOT and the grocery store computers.

Further, although Dewey could not have been aware of the capacity of present technology to displace persons, and to make them less autonomous, less effective citizens, Wirth is. He acknowledges (p. 191) that only 20 percent of students are being prepared for symbolic analytical work. As for the remaining 80 percent, he admits that computer technology will reduce the number of socially necessary workers, and those left out of the picture will likely suffer unemployment and poverty. It is a problem created by the technology so central to his argument, and it indicates how little space his system offers students to *critically* participate in the work/education continuum.

Learning Work, on the other hand, is a book about developing a critical pedagogy that allows students to make the strongest contribution possible in the shaping of their future. This ethnographic study is an attempt to integrate students' experiences in work education programs with the principles of critical pedagogy. The result is an example of what critical pedagogy is supposed to do: theorize about schooling and knowledge in society and transform that theory into a guide for practice in the classroom and beyond. Simon, Dippo, and Schenke pose questions in the first chapter which frame their inquiry.

> What knowledge is of most worth? What does it mean to know something? How might we construct useful or truthful representations of ourselves, others and our physical and social environments? .... How might our efforts be directed, to adapting to the world "as it is" or to considering what would have to be done for things to be otherwise? (p. 4)

The authors go beyond what they consider to be established ground in work education to emphasize "an understanding of the historical, cultural and economic character of work as an exchange relation" and to critically approach the "problematic character of experience" (pp. 8-9).

The book is organized around three types of relations which conceptually and practically distinguish the way students will find themselves relating to their work environments: exchange, technical, and social relations. Some of the topics covered under technical relations are

cooperatives, work design, differences in skills, and task performance. The first theme, "working knowledge," is useful for demonstrating something of the authors' strategy. Through individual and collective activities students develop a critical appreciation of the division of knowledge and labor in their workplace, and how those distinctions are constructed and sustained through the use of specialized language. Students learn that language breaks down the barriers between insider and outsider, and is the key to understanding and participating in work situations.

In the section on social relations, Simon, Dippo, and Schenke address such issues as the social conventions of the workplace, authority, health and safety, and leisure time. They also discuss "taking up an identity" and the exploration of the self as a particular kind of worker with specific responsibilities and a body of technical knowledge. They see identification as a process which occurs in work relations through the development of a sense of autonomy and competence, but they also see that identification is influenced by factors outside of work. Here teachers can usefully integrate material from the section on technical relations in order to clarify the process of identity formation.

The authors demonstrate their commitment to critical pedagogy by concentrating on the self rather than, as might be expected, the economic aspect of exchange. At issue is how students can come to understand themselves and can "facilitate a self-awareness that ties one's interest, abilities, temperament, and values to existing social arrangements within which people work, learn, play and live" (p. 151). Here the authors could be more clear about how "self-assessment" is an expression of exchange relations. Admittedly, this can be rather complex, for the issue is really "What is it in oneself that is being exchanged in the labor process?" In a note to teachers, they approach the problem as a necessary distinction between self-assessment and self-evaluation: Where the latter evaluates the person against the demands of the labor market, self-assessment is the discovery of the self in a complex of social relations, history, and culture.

Throughout this book the educational environment acts as a mediator between students and their work, providing them with a place in which to

come to terms with the ambiguity of their experiences. In this context experience is not viewed as purely subjective but becomes as much a part of the curriculum as technical language or the objective reality of wages. The program considers actual and possible experiences and problems, and the web of personal and social relations common to student and work life. It provides an opportunity for educators to distance themselves from a way of thinking, current in policy discussions, that what we must do better is educate young people for the "real world." *Learning Work* demonstrates that the school is an integral component of the total social world, and it provides educators with a critical response to the false dichotomy of school and work.

But this may be a problem, not *of* the book, but *for* it. Work education programs are being examined with greater interest by government and business. If work education is to be a part of the future, such issues must be addressed as who will create the agenda of these programs and whose interests will be served. Or, will technological determinism dominate our thinking to the extent that the agenda will appear to be constructed outside of human agency, as Wirth seems to allow? The difficulty for a critical pedagogy of work education may be that educators will find themselves struggling over some of the fundamental issues addressed in *Learning Work* which continue to be contested terrain: health and safety, trade unionism, the difference between the on-the-job-self, and the leisure-time-self. Depending on one's point of view, these issues may undermine a school/business partnership, or become a springboard for reforming authority relations and expanding democratic participation in both schooling and work. If the latter scenario prevails, educators like Wirth who wish to create "worker citizens" in school may have to settle for a redefinition of citizenship that has little to do with its traditional meaning: patriotism, cultural affirmation, and political subjection.

One way in which educators may get a headstart on these probable battles is to use *Learning Work* as more than a text on work education. If critical questioning and thinking, and the critique of experience is applied across disciplines, as the authors suggest it should be, students may develop a greater desire for knowledge generated in a context over which they have

some control. If this approach is widely accepted and applied it might mean that work education programs will not be the only hope that working class students have that schooling will be of some practical value. A critical pedagogy of work education might become fertile ground for "the Dewey tradition": "an education with broad social meaning aimed at transforming society and the organization of work within it to reflect participative, democratic values" (p. 5).

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