

## *Editorials*

### **Program Equity and the Status of Technological Education: The Apologetic Nature of Technology Teachers**

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Equity issues are often a formalized part of teacher certification programs. Their relevance and importance, beyond underscoring the egalitarian mission of schools, is to sensitize teacher candidates to the many cultural, social, political, and economic concerns which are relevant to students' welfare and performance in schools. Seldom discussed, however, is the way that the subjects or programs in which students register are victimized or segregated as a result of a program being mis-represented or treated in a different way from other subject areas. This paper will examine differential treatment issues with respect to programs, particularly the importance and place of technology education in relation to liberal/humanist programs. Is there a subtle but significant bias among school and university educators that needs to be explored or exposed? Are technology programs and, by association, technology educators victims of a subtle but deeply entrenched set of anti-technology values and attitudes held by people, schools, and the community? If such sentiment exists, how universal is this viewpoint and what can be done about it?

The premise that schooling and, by association, teacher education, are not neutral in their organization and curriculum content with respect to program equity is one that investigators in a recent teacher development project at The University of Western Ontario (Hansen, 1995) analyzed in their research. The literature is conspicuously vague about the problem. The one exception is Goodson's (1987) writing in which technical education in Britain is analyzed and depicted as too utilitarian to be a mainstream subject in schools. What is found in the literature is expressed in terms of either classism in the schools or program politics. Wotherspoon (1987), for example, suggests that "despite claims for 'democracy,' 'objectivity,' and 'equality of opportunity,' schooling has continued to reinforce a social structure which is highly stratified along class, gender, and racial lines" (p. 2).

The idea that some school policies and practices may work against rather than for the betterment of all student groups may seem a radical and absurd one to raise. However, the notion of schools proclaiming "equality for all" but also serving as a screening mechanism which segregates students into less than equal

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groupings was found during the teacher development project (Hansen, Fliesser, Froelich, and McClain, 1992), to exist and to be significant. Moreover, technology teachers, albeit unknowingly, were found to be perpetuating rather than discouraging such program differentiation. Project investigators assumed that an understanding of the political realities that face technology educators in their day to day practice was/is crucial to personal survival and ultimate effectiveness, in instructional activities and in everyday school programming matters.

Naively, many people, teachers included, assume schools are democratic institutions and every student has an equal opportunity to achieve the literacies espoused in educational goal statements. Others recognize that schooling is a socializing process in which people are screened by attribute and ability for certain roles in society. Few understand how the screening purpose of schooling (Collins, 1979) prospers and how subject/program status promotes or deters this unwritten purpose of schools. Just recently, a university faculty member announced to a colleague (a school principal) that efforts to secure tenure had been successful. The colleague's response was: does this mean that you can now teach some subject other than technology? One might infer from this anecdote that teaching in the field of technology is not much of a calling, perhaps in comparison to other more classic subject areas. This story suggests there is an inferior status associated with technological education as a subject/program.

### **The Complexity of Equity Problems**

Equity is defined as a system of rules and principles based on fairness and justice. It covers cases in which fairness and justice require a settlement not covered by common law (Canadian Senior Dictionary, 1979). It is most often rooted in the democratic and ideal notion of justice and equality for everyone. It is manifest in many forms within Canadian and American societies. The most prominent of these forms are class, gender, and race, (Government of Ontario, Ministry of Education Report, 1987). The themes common to all three forms are underrepresentation, stereotyping, disenfranchisement, misunderstanding, bias, discrimination, and prejudice. Given these themes at least three important issues for technology educators can be identified. Is the subject/program misrepresented in school and university settings and, if so, why? What form does the misrepresentation or misunderstanding take? Is the underrepresentation significant?

Exposing or illuminating the technology program equity problem which besets schools and teachers is a challenge. The problem, like many forms of differential treatment, is often so prevalent that it is taken for granted and accepted as part of everyday practice without being scrutinized. A hierarchy between or among school subjects, by definition, undermines the goals and purposes of schools. Why would learning activities undertaken in the name of human development for all need to be differentiated. As educators, we are guilty of modeling inequity the moment we give special status to people or programs. Equity issues, as such, are important to understand, especially for teachers and teacher educators.

In sociology of education terms, schools initiate the working class versus governing class distinctions found in communities and regions across North America. Much of the literature on the conflicting purposes of schooling over recent decades (Bowles and Gintis, 1976), has brought attention to both the latent and manifest function of schools. Teachers and school leaders seem to have an insufficient understanding of the dissonance between espoused purpose and actual function so as to be able to counter it through teaching and curriculum policy. Or, if they understand it, they choose to ignore it as something over which they have no control. At the personal level most teachers will acknowledge often making unique or unusual decisions regarding a particular student or group of students because of some intangible factor. When asked about such decisions teachers elude to correcting an injustice without making a big issue out of it. The prudent teacher simply addresses what he or she perceives to be an imbalance. The same scenario could be played out for a school principal who is responsible for the allocation of finite resources across a range of subjects or programs. In both cases the action taken may or may not have been in the best interest of the student(s) or program(s).

At the state or provincial level the imbalance and subsequent action associated with the imbalance is more complex. The opportunity for corrective or judicious action is also more cumbersome. A recent Royal Commission report (Government of Ontario, Ministry of Education and Training, 1995) articulated the dilemma very clearly. The challenge, according to the report, is one of balancing excellence and equity. Paquette (1995), in a review of the report, articulated the challenge for school leaders as a "troubling nexus". The schools are, on the one hand, victims of the "the popular but destructive myth of 'excellence for all'" (p. 1). Equity, on the other hand, "lies in the distribution of education benefits across the population as a whole" (p. 1). The authors admit, states Paquette, that it is better to be honest at the outset about what the school system is capable of.

...only a substantial minority will receive truly superior standing in the multiple literacies offered as a basis for renewing the Ontario curriculum. That, in my view, is a crucially better and more realistic stance from which to embark on educational improvement, than creating unfulfillable expectations of excellence for all--as so many other recent educational policy statements and proposals in this country have done. (p. 1)

### **The Apologetic Nature of Technology Teachers**

During the teacher development project at the University of Western Ontario (UWO), the preconceptions and perceptions of a sample group of teacher candidates were probed (Hansen et al, 1992). Project investigators wanted to know if technology teacher candidates could conceptualize the "competing purposes" view of schooling. All student participants questioned were sure the intent of the schools was to help students develop their intellectual, affective, and psychomotor skills. Even direct discussion about an alternative purpose for schooling was greeted with disbelief. How could the main purpose of school practice be anything less than a completely democratic one? Attempts within the teacher education program (foundation and curriculum

courses) to provide a broader picture and perspective, moreover, made little difference in the deeply held conviction and mind-set that schooling truly gave every student an equal chance at success. For some reason many of the technology teacher candidates in the project could not accept that a larger and more complex reality might exist. Investigators found many of the randomly selected participants to be almost apologetic in their personality make-up, about both their own achievements and their role as autonomous and reflective professionals.

The conclusion we reached is that teachers need a comprehensive and discerning mind-set to guide them in their everyday practice. The classification of school subjects is an issue, for example, about which technology teachers should be informed. Good policy development and practice within and across schools is enhanced when teachers are involved in the process. The "competing purposes" function of schooling must be more widely proclaimed and addressed. The school system is designed first and foremost to be egalitarian. These positions and opinions, moreover, are central to the teacher development process, especially for technology teachers.

### **The Challenge in Technological Teacher Education**

Based on the perceived differential treatment experienced at The University of Western Ontario by teacher educators and associate teachers in nearby schools, a pro-active teacher education curriculum for teacher candidates was designed. The professional development patterns that emerged from the teacher development project suggested there was a need to modify how technology teachers were recruited and prepared in teacher education programs, if a more reflective and proactive kind of teacher who could recognize, understand and resolve equity matters, was to emerge. For starters, teacher candidates with formal postsecondary studies in the social sciences as well as technological expertise, were/are recruited to the profession. In the teacher education program itself, case studies were developed, refined, and inserted into the curriculum. Their content built upon leadership and curriculum policy experiences. The preconceptions of candidates were also identified at the beginning of the program and teacher candidates asked to establish a set of goals for themselves. In short, teacher and curriculum development was conceptualized and the program re-designed in such a way that equity issues were an important segment of the curriculum. The framework was/is one within which curriculum studies in technology can be liberated.

One case study (Hansen, 1995) looks constructively at the arguments for and against technology as a curriculum area in the schools. It [the case] is germane to the program equity problem outlined in this paper.

The ideological connections technological education is perceived to have with business and industry provide a vivid example of how technology educators and programs are often labeled by others. Those connections, according to Apple (1990), make technological education vulnerable to the "corporate agenda". Policy level leaders who treat programs and students differentially will continue to do so, Apple suggests, unless their biases and

prejudices are exposed. The claim made recently by a faculty member at a nearby university serves as a case in point. His view was that many educators, technology educators in particular, serve business and industry interests rather than the interests of students and the schools. Such "social engineering", the faculty member suggested, is contrived and propagated by business and industry to produce yet another generation of human widgets for business and industry exploitation. His argument was countered by an opposing and equally compelling position outlined in the following quote:

Educators, who in the name of "humanistic" education or any other slogan, refuse to entertain manpower [sic] considerations in educational planning should ponder whether anything is less humane than for their students to experience unemployment or demeaning, inappropriate employment after years of well-intentioned and hopeful endeavour under their tutelage. (Pratt, 1980, p. 70)

One might well ask of the conspiracy theory advocates: which is worse, preparing our young for a world of work characterized by differentiated roles, or perpetuating a school system which inadvertently or willfully condones bias? Imagine you are a professional teacher trying to fully and successfully articulate a position which neutralizes the conspiracy view. What arguments would you make and how would you express them?

Real instances of competing interests are a common feature of institutional life in universities and schools. Students benefit from group discussion and analysis of them. In fact, the case study method may be the only way to prepare teacher candidates for program politics.

Layton (1993) describes technological education as the only subject/program area in schools which contextualizes knowledge. Such a statement is encouraging to and supportive of technology educators trying to map out the program and research terrain for this emerging field of study. However, technology teacher educators and the research associated with teacher development need to assist prospective teachers with conceptual frameworks for contextualizing issues beyond knowledge. Such context can be built into curriculum courses. It can also be an important factor to consider in the recruitment and selection practices of education faculties as they improve their programs. Teacher candidates who have both the necessary characteristics and competencies to teach, and the political savvy to survive in antagonistic institutional environments need to be identified and recruited into the profession. Our teacher education syllabi need to include curriculum conflict resolution strategies.

The general principles that were developed at UWO to guide the teacher education program included; a "students are all equal and capable" conception of human development, attitudes and belief systems (one's preconceptions) need to be continually scrutinized by oneself and checked against changing social situations, technology as a subject/program serves a liberal as well as an instrumental purpose, and institutional policies and practices are often politicized thereby requiring political responses.

At issue and associated with the "political will" principle is whether or not technological education is to be fully included in or excluded from the curriculum of the schools. Curriculum reform has the potential to increase the relevance of school courses by introducing reasoned and balanced views of technology, or it may falter due to on-going misunderstanding and distrust among rival interest groups. The good intentions and work of all teachers, when and where differential status problems exist, can be undermined by feelings of inadequacy, anxiety, powerlessness, uncertainty, and alienation. Differential treatment is a silent and subtle phenomenon and such feelings often enslave and limit segregated individuals and groups. Technology educators would do well to be alert to rhetoric, well-intentioned but oblique leadership, and complex outside interests, as they prepare themselves for a politicized profession.

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