

The Rise of Competency-Based Education: A Deconstructionist Analysis

Kris Magnusson
University of Calgary

John Osborne
University of Alberta

In this paper, the authors present a deconstructionist perspective of Competency-Based Educational (CBE) technology. First, the historical context for CBE growth is traced with an emphasis on political and philosophical considerations. This context is then used as a focal point for identifying the mechanisms of power and knowledge that form the constituent elements of CBE technology. The authors conclude with a discussion of the impact of the implementation of CBE technology at the personal, institutional, and social levels.

L'objet de cet article est de présenter une analyse critique de l'usage de la technologie éducative connue sous le nom de *Competency-Based Education* (CBE). Les auteurs étudient d'abord le contexte historique, politique, et philosophique au sein duquel cette technologie a vu le jour et a pris son essor. Suit une réflexion sur les présupposés, idéologiques sous-jacents à l'usage de la technologie éducative. Enfin, les auteurs présentent une discussion sur les impacts de cette technologie, tant aux plans personnel, qu'institutionnel et social.

Competency-Based Education (CBE) is a form of educational technology that emphasizes the acquisition of specific, predefined skills. The CBE movement has been gaining momentum in North America, and, not surprisingly, the debate over the efficacy and role of CBE systems within education has also become heated. The relative merits of CBE technology have been described elsewhere (Burns and Klingstedt, 1973; Buttram, Kerschner, and Dusewicz, 1985; Herrscher and Watkins, 1980; Grant et al., 1979), and need not be elaborated on here. In this paper, we will be exploring how and why CBE programs have come to take such prominence in educational thinking. The examination will be conducted from a deconstructionist perspective (Foucault, 1980), in which the concept of CBE will be "deconstructed" in order to identify its constituent elements. We will first set the historical context which fostered the growth of CBE, and follow with an analysis of the technology itself in terms of the bases of knowledge and power that it incorporates.

A Historical Context for CBE Development

The specific conditions governing the rise of the CBE movement are well documented (Burns and Klingstedt, 1973; Buttram, 1985; Grant et al., 1979;

Herrscher and Watkins, 1980; Nickse, 1981; Polk, 1982; Trivett, 1975); however, the context for that development is less clearly identified. To establish such a context, we will first consider instrumental rationality, the power theme in education prior to 1950, and then focus upon three forces of educational critique which have dominated educational reform since the middle of this century: the liberal or humanistic movement and the response to humanist reform by both critical (left-wing) and conservative (right-wing) theorists.

Prior to the 1950s, schooling in Western society could be characterized by two dominant power themes. The first theme, which to this day permeates most of what we call "education," is that of instrumental rationality. The emphasis in education was (and, to a large degree, still is) on technique; belief in the scientific method with its focus on mode of analysis and acquisition of fact was sacrosanct. This emphasis upon *how* rather than *why* resulted in little or no thought being given to the social consequences of the learned activities or methods. In the words of Gibson (1986) instrumental rationality "is the cast of thought which seeks to dominate others, which assumes its own rightness to do so, and which exercises its power to serve its own interests" (p. 8). The interests being served are those of method and efficiency and of the natural science model for education. Thus instrumental rationality was the mechanism of choice for education.

The second power theme reflects the generally-held public perception of the role of schooling in society. In this role, schools have been called "wish mechanisms" (Aronowitz & Giroux, 1985, p.ix). Education was a panacea for all of society's ills; it was viewed as the means to personal success, and the process for maintaining social stability and order. Such views were founded upon an implicit belief in environmentalism in which individuals are merely products of their environment and thus cannot be held personally responsible for their education.

This second power theme — the lofty ideals for education — began to supersede technique as the dominant force in policy and planning. In the early 1960s humanistic educational reformers began to question the ability of the scientific approach to meet the goals of social and economic transformation. The goal of the humanistic reform movement was to utilize schools as a means of obtaining social equality. Aronowitz and Giroux (1985) have claimed that "the fundamental impulse motivating education reform was how to help the excluded get a piece of the action" (p.2). During this time a number of "alternative schools" sprang up, with the intent of "democratizing" schooling; most of these attempts met with only limited success (Center for New Schools, 1976).

The apparent failure of the humanist movement has led to renewed calls for educational reform from both left and right wing critics. Gibson (1986) noted that the critics of education, in attempting to explain the impact of education, tended to focus on one of three levels: personal/interpersonal, institutional, and structural. A truly effective critique must, of necessity, encompass all three levels.

Marxist economic theory dominates the leftist position and forms the basis for the Critical Theory school of thought (Sarup, 1983; Gibson, 1986). This position essentially views current educational institutions and technologies as serving two structural purposes: the reproduction of economic relationships, and the reproduction of state power (Bowles & Gintis, 1976; Karabel & Halsey, 1977). Radical educators argue that the claims of liberal (humanist) educators — namely, that education can serve as a liberating force to the disadvantaged by altering their power base — are unfounded because they do not account for the larger-scale structural functions of education in general. Giroux (1983) summarized the radical position as arguing:

that the main functions of schools are the reproduction of the dominant ideology, its form of knowledge, and the distribution of skills needed to reproduce the social division of labor. In the radical perspective, schools as institutions could only be understood through an analysis of their relationship to the state and the economy . . . the underlying significance of schooling could only be revealed through analyzing how schools functioned as agencies of social and cultural reproduction. (pp. 257-258)

Right-wing conservative critics also responded to the humanist movement in education. Their basic stance is reflected in the oft-heard back-to-basics approach to education (Weber, 1975; Morgan and Robinson, 1976; Brenner, 1979); organizations such as The Council for Basic Education (1975) and the Genuine Education Movement (Morgan & Robinson, 1976) gained in popularity and political impact in the 1970s. According to Aronowitz and Giroux (1985), the rightists' "major concern is the changing world economy and the new divisions of labour" (p. 3). Faltering productivity (and "profit-ability") in the labor force are blamed on the lack of preparation workers receive in schools. Weber (1975) identified four additional reasons for returning to the three-R approach: the rising costs of schooling; the disappointing results of liberal/humanist reform efforts; the deterioration of discipline in the schools; and disillusionment with educational innovations such as the "new math." He also argued that the primary role of schools was to foster intellectual, not social, development.

To counter the perceived regressive trends in education, the conservatives have demanded revitalized curricula and more efficient systems of managing the process of education while concomitantly calling for a reduction in resource allocation to schools. Clifton Fadiman (Council for Basic Education, 1975), who at the time was a member of the Board of Directors of the Council for Basic Education, summarized the conservative philosophy: "We cannot afford bypaths. We cannot afford pleasure. All education, Aristotle tells us, is accompanied by pain" (p. 48). In arguing for educational change, Brenner (1979) acknowledged that "American public education is essentially a conservative institution and . . . no real reforms can be effected unless they are carried out within a conservative framework" (p. 27). His proposals for reform were based on a policy in which the state would only assume responsibility for "basic" education, with all other "frills" obtainable via a voucher system.

There is a surprising similarity in both the left and right positions: both argue that the major (structural) function of schools is to reproduce social and economic order. Aronowitz and Giroux (1985) point out that "most reformers [did not] ask the question about the external and internal orientation of school knowledge since they already assumed that curriculum should be articulated with the labor market" (p. 2). In terms of their relative effects on educational policy and planning, however, there are two fundamental differences. The first reflects a value orientation. The conservative position asserts that it is desirable, or even necessary, to maintain current social order, whereas the radical left views the structure of domination and class repression as anathema. However, given generally acceptable (or tolerable) social conditions, social inertia ensures that the conservative position will dominate. In other words, maintenance of the status quo is easier than radical change.

The second major difference between the two schools of educational criticism lies in their respective solutions to the apparent failure of the schools. Conservative critics respond with specific strategies (for example, back-to-the-basics curriculum, improved management strategies, fiscal responsibility, etc.). In contrast, the radical left is unable to present specific, socially acceptable strategies for reform; as Aronowitz and Giroux (1985) noted, "since left morality prevents a serious consideration of alternatives under nonrevolutionary circumstances, it appears to be devoid of possibility" (p. 6). In other words, the left provides no alternatives or directions other than a massive overhaul of the social structure in which education is embedded.

The impact of the conservative critique became more pronounced during the late 1970s and early 1980s with the general rise of conservative political ideology in Britain and North America. Efficiency in education and the demand for a skilled labor force that would be able to meet changing market demands became hallmarks of government funding. In England, Gibson (1986) noted that special funding was provided to schools that promoted vocational content, while more traditional (public) schools were left to fend for themselves; in the United States, the federal government set up a large research fund in the mid-seventies for the purpose of examining and funding skill-based programs in postsecondary education.

Concomitant with rising conservative political ideology was a more vocal and demanding consumer orientation towards education. Western society in general and North America in particular has been experiencing what Naisbitt (1984) calls a major restructuring. People were scrambling to keep pace with the increasing demands placed on them by technological and social change, and education was viewed as one of the key support systems. There was a sense of dissatisfaction among the general public (no doubt fuelled in part by conservative rhetoric) that was expressed in demands for an improved system of education. This was especially the case for postsecondary education, with greater numbers of adults returning to school (Dennison, et al., 1982; Devereux, 1984). People wanted to improve their station in life, but were burdened by responsibilities of job and family; education as a wish mechanism is still a dominant theme today. To

meet these demands, the educational consumer demanded greater access to educational services in a format that would take into consideration a variety of external demands on time and that would provide "relevant" material to propel the individual on in life. The economic depression of the times dramatically altered the 1960s conception of relevance; as Aronowitz and Giroux (1985) put it, "at a time when nearly everyone is anxious about his/her place in a rapidly shifting job market, relevance has come to mean little else than job preparation" (p. 1).

The demands for educational reform on both a populist and political front could be summarized in four terms: relevance, accessibility, flexibility, and accountability. It was at this time and with the purpose of meeting these demands that Competency-Based Education gained popularity.

CBE As Technology

For Foucault, power and knowledge are inseparable and integral components of technology; he defines technology as the joining of power and knowledge (Rabinow, 1984). An analysis of a technology such as CBE must therefore include three elements. First, there must be an examination of the actual knowledge base (i.e., the content) upon which the technology is built. The purpose of this examination is to identify the specific theoretical concepts which serve to ground the technology. Second, the power base that propels the knowledge must be identified. Knowledge in and of itself is relatively inert; it requires power to transform an idea into action. Third, the nature of the relationship between the knowledge base and the power base must be identified. In other words, the knowledge base describes what the technology is about, the power base demonstrates why it comes to be implemented, and the relationship between the two identifies how it comes to be implemented.

The knowledge base for CBE has been well-documented elsewhere (Block, 1974; Bloom, 1971; Buttram, 1985; Delker, 1982; Grant et al., 1979; Herrscher and Watkins, 1980; Houston, 1974) and need only be summarized here. Essentially, CBE has melded some of the leading natural science-based theories of learning (i.e., the work of Mager, 1975; Carroll, 1978; Bloom et al., 1971; Bandura and Walters, 1963; Glaser, 1962; and Gagne, 1985) into a cohesive framework for instruction. Thus the knowledge base for CBE can be characterized as being an amalgamation of the work of several leading learning theorists; it contains elements of programmed instruction, clearly specified behavioral objectives, hierarchical methods of knowledge acquisition, and social learning techniques. It is important to note that CBE programs do not represent innovative directions in theoretical development, but rather an innovative means of transmitting existing knowledge.

The power that fuelled the growth of CBE programs can be traced to two major sources. The first source represents a product of the political ideology and populist sentiments towards education documented earlier. The structure of the implementation of the technology is such that it at least attempts to provide for each of the four major thrusts of educational reform. Firstly, it is accountable in

that it maximizes existing resources and provides for a more efficient (i.e., cost-effective) system of management. Secondly, it is relevant in that the content of the subject matter is determined by the demands of the market that ultimately will be absorbing the graduates (students feel better equipped to face the job market upon completion of their program and employers feel that the graduates will be immediately productive on the job). Thirdly, it is accessible in that entrance to a program or institute is not determined by level of formal education, but by the possession of requisite skills or knowledge. Fourthly, it is flexible in that it assumes that students will bring a variety of different learning styles to the learning situation, and allows for students to move through programs at their own pace.

The second power source for CBE implementation is more subtle than the first (i.e., the ability of the knowledge base to address major populist issues in educational reform). A major source of CBE's power lies in the fact that the technology can be implemented to sustain the existing sociological superstructure in which it is imbedded. Unlike the reform proposed by the radical left (e.g., the Marxist or Critical theorists), the implementation of CBE does not require major social or structural changes; it can be easily incorporated into existing educational structures. In fact, CBE tends to reinforce the existing social status quo rather than promote change. For example, the content for a CBE program is typically determined by a panel of experts in the field, and is monitored by an advisory panel, both of which are also usually potential employers. By controlling the content of instruction, the people who are in a position to control the labor market are assured a steady supply of individuals trained in the philosophies and techniques of that market. Thus CBE could be seen as a means of maintaining the status quo, and not as a means to social reform. As mentioned earlier, concepts that can be seen to maintain or even enhance the status quo will always have an easier time of securing the resources to be implemented. The implementation of CBE programs has an added advantage at the political level in that it has the appearance of radical reform. The changes it makes, however, are at the personal and institutional level; the structural level is reinforced, rather than reformed, by its implementation. Individuals experience a more flexible and accessible learning environment and institutions need to revise methods of student selection, re-allocate resources for increased individualized learning, and modify the role of instructors (managers of learning, rather than teachers). However, the social structure remains unaffected; CBE is merely a more efficient method of developing the skills that society needs in order to function.

The power-knowledge relationship governing the application of CBE may be more complex than the above cursory view would suggest. For Foucault the educational setting is one arena for the expression of disciplinary technology, whose aim "is to forge a docile body that may be subjected, used, transformed and improved" (in Rabinow, 1984, p. 17). Thus CBE may be seen as a form of disciplinary control. Through the rise of bio-power, in which the state enhances its power base by assuming guardianship of matters deemed to be public welfare,

the state has assumed responsibility for education (as one form of public welfare). It would be natural, therefore, for the state to implement mechanisms of control that would at once satisfy the demands of bio-power while concomitantly ensuring the continuance and enhancement of the overall social structure.

The structure of CBE as a technology, however, may contain some aspects that are more in line with humanistic traditions than conservative ideology. The overall goal of CBE is to provide an efficient and effective means for the identification and development of skills that people will need in order to be more productive, satisfied members of society. During times of economic difficulty that focus will be predominantly on the acquisition of those survival skills which enable individuals to secure and maintain employment. However, if those base needs are met, or larger, more global concerns such as social reform take precedence, the nature of the skills to be developed will change. CBE as presently structured has the potential for removing decisions about program content (i.e., what knowledge is to be taught) from the bureaucrats and placing it in the hands of the people. Thus the politics of control will be a major factor in the rate in which CBE programs become implemented, and will determine the kinds of programming which will be acceptable for CBE implementation. Currently, CBE is being introduced primarily in technical areas (carpentry, electronics, drafting, etc.), but has made little headway in university settings where the acquisition of conceptual, critical, and creative thinking skills are supposedly developed.

Other difficulties from the conservative perspective become apparent when one considers the techniques of control. In relating Foucault's concept of disciplinary technology (i.e., means of establishing and maintaining control) to education, Sarup (1983) has noted that there were three conditions for the implementation of "discipline": the discipline is cellular (people are categorized into age-grade units); it controls activity, by use of timetables, etc.; and it regulates physical activity in a temporal sense, by breaking down training into a series of distinct stages. CBE systematically seeks to avoid, as much as possible, each of these disciplinary technologies. The mechanism of control in CBE is two-fold: orientation to end products, and reliance on the individual's motivation to attain that end product. How the individual attains the skills is largely irrelevant. These control mechanisms place a much greater emphasis on the role of the individual for learning, and de-emphasizes the traditional methods of maintaining disciplinary control mentioned above. Thus, although CBE tends to be product-oriented, it allows for increased variability of individual process; the individual's experience of education takes on a more significant role.

The goal of conservative ideology in education (and politics) is one of normative rationality; that is, attempts are made to maintain the status quo. In this matter, CBE is something of a paradox. On the one hand, it represents a break from the normative rationality of educational technology by forcing both individual learners and institutions to reconsider the means by which learning is achieved. It further deviates from the educational norm by assuming that virtually anyone, given sufficient time and opportunity, can acquire the specified content. This, in essence,

results in fewer of Foucault's objectification categories; people become less a product of specific categories and more a product of general competence. On the other hand, CBE is often being implemented for the purpose of achieving normative rationality in a social context by establishing a structure which ensures a relatively steady supply of labor to fill the demands of the economy. Thus, the paradox is that while CBE is implemented in order to ensure some degree of normative rationality, it possesses characteristics which may result in a deviation from, not a maintenance of, the status quo. Such a deviation, however, depends upon a major shift in public focus; because such a major shift is relatively unlikely given the mechanisms of fiscal and political control, the conservative position is relatively safe.

Conclusion

The questions about the ultimate social impact of the implementation of CBE technology remain: Is it a technology of liberation or enslavement? The answer, of course, will depend upon a person's ideological orientation. In a Foucaultian sense, such questions need to be rephrased in terms of the power-knowledge relationships that govern the technology. In this sense, CBE can be seen as a technology of convenience; it fills the requirements of both populist and, more importantly, political ideology in our present time. The nature of the technology is such that it is very appealing to both on a surface level, but its deeper implications may be cause for consternation among the more conservative elements. For this reason, implementation has been slow in coming; it is, however, unlikely to be halted altogether. The ultimate implementation of the technology may depend on the extent to which populist movements (which seek to make education more flexible and accountable to social needs) gain power, and the degree to which the conservative element (typically those in government and private industry who seek normative rationality) can benefit from even limited application of the technology. As mentioned earlier, the technology has a direct impact at the personal and institutional level. However, at a social level, CBE will more likely reflect structural change than promote it, and as such has greater potential to serve the needs of normative rationality. Thus the implementation of CBE gives the appearance of dramatic educational reform while maintaining the status quo.

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