Progress in Education: A Deconstructionist View

George H. Buck
University of Alberta
and
John Osborne
University of Alberta

In this paper, Foucault's ideas, commonly termed *deconstructionism*, are employed to argue that there are several perennial myths in educational thought and research (e.g., all change is progressive and what is promoted as change is novel). These are discussed with specific reference to statements by two instructional psychologists, R.M. Gagné and B.F. Skinner. Three commonly held assumptions about progress in education that have likely lead to such myths are also discussed from a deconstructive perspective. Work of earlier educators and researchers such as Quintilian, Bloom and his associates, Elkind, and Popper are presented to support this particular method of criticism.

Cet article prend appui sur la thèse déconstructionniste de Foucault, pour mettre au jour certains mythes qui perdurent dans la pensée et la recherche en éducation. Ces mythes, qu'on trouve par exemple chez Gagné et Skinner, sont celui du changement comme synonyme de progrès et celui de l'actualité comme constituant invariablement une nouveauté. Pourtant, les oeuvres d'éducateurs et de chercheurs tels que Quintilien, Boom et ses associés, Elkind et Popper démontrent que certaines pensées et certaines pratiques, bien qu'elles ne soient pas toujours de la plus récentre actualité n'en conservent pas moins une pertinence toute actuelle.

Deconstructionism has been described by some individuals as scepticism or extreme criticism of both specific and general events and phenomena (Norris, 1982, pp. xi-xii). Such descriptions are erroneous since they imply a set method for analysis of social phenomena. While deconstructionism may be a sceptical examination of a philosophy or an idea, it is not a structuralistic (operating in a systematic fashion within a given set of tenets) method of criticism. "To present 'deconstructionism' as if it were a method, a system, or a settled body of ideas would be to falsify its nature and lay oneself open to charges of reductive misunderstanding" (Norris, p. 1). Deconstructionism can be considered to be a novel way of questioning prevalent philosophies, ideas, assumptions, and constructs regarding current social, political, and economic practices. The intended purpose of such questioning is not to discover the "truth." The intent is to free the observer from the often blinding and constraining qualities that belief in a truth

can produce. This questioning can take diverse forms which preclude defining deconstructionism as a single method of analysis or criticism (Norris, pp. 1-3). Deconstructionism is more of an approach to understanding human discourse and behavior than it is a particular method of analysis. It stresses the contextuality and relativity of truth as well as its intimate relation to power. Contemporary contextual psychology exhibits a similar approach to determining the truth. One varient of contextualism coined by McGuire (1986), perspectivism, asserts that all hypotheses are both true and false depending upon the context in which they occur. In other words, truth is contingent upon specification of context (e.g., Newton's second law of motion is contingent upon a frictionless environment).

Foucault's Approach

Michel Foucault, who is recognized as a prominent deconstructionist, has used archival study of historical material to provide new perspectives on some concepts which have influenced modern society, most notably the shifts and emphases of power (Arac, Godzich & Martin, 1983, pp. 196-197). An example of this approach is Foucault's account of the origins and the development of French "houses of confinement" from their establishment in the seventeenth century (1984a). Through the application of deconstructionist methods, such as the consideration of possible factors other than those readily apparent, Foucault reveals that mass confinement of a considerable segment of the population was motivated by socio-judicial considerations rather than by medical and rehabilitation concerns (Foucault, 1984a). While Foucault's findings may not be palatable to everyone, they demonstrate how socio-historical data can be interpreted in several ways depending upon how the observer (historian or scholar) construes the data and the context from which they come.

Application of the Concept

It is inappropriate for others to attempt to replicate Foucault's style of deconstuctionism exactly, since such an action would imply that there was a particular method behind it. One may, however, employ some aspects of Foucault's style in order to perform a deconstruction in a similar manner. In this paper, we endeavor to deconstruct several aspects of the concept of perceived progress in education, including the popular notion that all change is progressive, by employing strategies similar to those which Foucault used on his own deconstructions. Two commonly-held notions in particular will be examined: All change is progressive, and what is promoted as change is novel.

A *leit-motif* prevalent in many works dealing with education is the impression that implementation of a new method, idea, or system leads to improvement. This implicit tenet that "new means better" stems from several *a priori* assumptions, including (a) that what is being proposed is novel, (b) that past practice is inferior, and (c) that the reason for advancing new methods, ideas, or systems is a genuine desire to alter whatever aspects of education are being addressed. If we

accept these assumptions, there will be little difficulty in accepting *prima facie* the belief that new means better. If one questions, in a deconstructionist manner, the validity of these assumptions, then it is possible to see other factors that may be affecting the development of whatever phenomena are at the heart of the new proposal.

Gagné's Learning Outcomes

A recent article by Gagné (1984), for example, appears to promote the idea that new is better. Gagné describes five learning outcomes (intellectual skills, verbal information, cognitive strategies, motor skills, and attitudes) which, he believes, came about primarily as the result of progress based upon the findings of earlier scientific research in the psychology of learning. While he mentions historical memory research done by Ebbinghaus in the 1880s, Gagné does not discuss contemporary researchers who have developed similar learning outcomes, such as Bloom and his associates (1956). In addition Gagné states that his five learning outcomes "appear to be widely accepted" (p.377). Although Gagné may disagree with current work that is similar to his own, by neglecting such work he gives the impression that his findings are quite different from those of contemporaries and that they are, therefore, new and better. The idea of designing and modifying pedagogical methods developed to facilitate particular learning outcomes is not new. In fact, we shall present evidence that supports the contention that past practice, at some points, was certainly not inferior to ideas which Gagné has proposed.

Historical Antecedents

It is possible to locate accounts from the ancient world which show that phenomena associated with learning outcomes were known to some ancient educators. The existence of such information demonstrates that some modern ideas and research are a reinvention of the wheel, since they have arisen from the ignorance of previous work of a similar nature. Furthermore, at least one ancient educator varied his pedagogical methods to accommodate each particular learning outcome. This educator was Marcus Fabius Quintilianus, known as Quintilian.

Quintilian was a Roman teacher and rhetorician of the first century A.D. Many of his texts on educational theory and practice have survived. Quintilian was concerned primarily with the teaching and training of rhetoricians. He provided a description of the curriculum and pedagogical methods that he believed were required for a basic (liberal) education. Examination of his writings reveals that taxonomies such as those developed by Bloom and Gagné were unknown to Quintilian. Ignorance of such structural methods did not mean that Quintilian did not appreciate the importance of learning outcomes. Nor did such ignorance mean that he did not empirically divide performance objectives into categories.

Quintilian was concerned with the teaching of the alphabet. The prevalent method of instruction during that time was to teach the names and the order of the letters and have each student recite the information. This procedure was considered by Quintilian to be unsatisfactory.

> At any rate I am not satisfied with the course (which I note is usually adopted) of teaching small children the name and order of the letters [of the alphabet] before their shapes. Such a practice makes them slow to recognize the letters, since they do not pay any attention to their actual shape, preferring to be guided by what they have learned by rote. (Quintilian, 1.1.24-25)

Quintilian described a solution to this problem:

> I quite approve on the other hand of a practice which has been devised to stimulate children to learn by giving them ivory letters to play with, as I do of anything else that may be discovered to delight the very young, the sight, handling and naming of which is a pleasure. (Quintilian, 1.1.26)

By giving the children the actual letters of the alphabet to play with, it was possible for them to develop a concept of the individual shape of each letter. This was not an onerous task, since the lower case letters had not yet been invented. Thus, when the children were to learn the meaning of the letters, the teacher would have to address only the significance and order of each letter and would not also have to describe the appearance of each letter.

Quintilian's method of instructing the alphabet bears some similarity to modern practices that are based upon learning outcome categories concerned with cognitive strategies. One example is Elkind's (1976) concept of *operative learning*. This type of learning, based upon Piagetian theory, is exemplified by the student interacting with learning materials so that contradictions encountered by the student as the result of the application of either incomplete or erroneous concepts will induce the formulation of new understandings about the materials (p. 113).

Quintilian also described activities that teachers could use in order to address those learning outcomes that could be considered part of such contemporary educational taxonomies as those advanced by Bloom and associates (1956) or Gagné (1984). An example is the procedure Quintilian described for teaching students how to write on a wax tablet (the common medium for writing). Quintilian believed that, apart from the difficulty of writing on wax, the beginning student would not be familiar with the proper sequence of moving his or her hand, wrist, and arm in order to form each letter correctly. The student, in such a case, would be attempting to master two skills at once: forming the letters correctly and writing on wax. This was an important practical consideration, since it was not as easy to erase mistakes from a wax tablet as it is to erase mistakes from paper when a pencil is used. Quintilian recommended that the teacher prepare a practice board for each student. The board was to have each letter of the alphabet engraved on one surface. The student then traced each letter with a stylus. The stylus would tend to follow the grooves, thus guiding the student's hand, wrist, and arm

throughout the tracing of each letter. With additional practice the student became familiar with the motions necessary to form letters correctly, and thereby developed appropriate muscular control.

It is evident from the examples provided that the concepts of learning outcomes and their applications were understood by Quintilian, although he did not discuss them in scientific terms. The implication of this, insofar as contemporary instructional theory (Gagné, 1984) is concerned, are that dividing pedagogical tasks according to learning outcomes is not a new practice, and that previous practices should not be ignored, nor dismissed as being inferior. To imply, as Gagné (1984) has done, that what is being presented is new and will effect a positive change is misleading, since such a position overlooks previous relevant discoveries, not to mention empirical experience (Quintilian 1.1).

Developmental Discontinuity

Foucault (1984b) has noted a discontinuity in the historical development of empirical forms of knowledge. He comments that "the great biological image of a progressive maturation of science still underpins a good many historical analyses; it does not seem to me to be pertinent to history" (p. 54). Although Gagné's (1984) work is not a historical analysis, it does analyze history indirectly by presenting only that historical information which seems to imply a need for his learning outcomes. By ignoring the history of earlier relevant work, such as that of Quintilian, it is possible for researchers or theorists to encounter similar reactions to their work, as did the originator of the idea. This type of repetition is not scientific replication of an earlier discovery, because it arises from ignorance of earlier work. At the same time, however, it is important to realize that similar past occurrences of an event cannot predict the present outcome of that event.

Popper (1960) has presented extensive arguments that refute such elementary methods of historicism. He has stated that much historicism has had its basis in the belief that historical and experiential events possess *cycles* or *patterns* similar to those cycles and patterns within discernible events studied by the disciplines subsumed under the rubric of natural science. Thus, while it may be possible for a biologist to present an accurate account of the life-cycle of an insect, the same cannot be done for an experience or a historical event, since the earlier event, whether known about or not, has effected some change which impinges upon the present (Popper, 1960. pp. 6-19). Popper's criticisms are supported in this instance, since the available evidence indicates that there have been major differences in development between Quintilian's work and the work of both Bloom and his associates (1956) and Gagné (1984). This means that it is erroneous for one to claim that a modern work, which appears to be similar to a previous work, will necessarily parallel the development of the earlier work. Although it is unlikely that the development and the success of Gagné's (1984) learning outcomes will parallel the development and the success of Quintilian, knowledge of previous

work that is similar could enable a theorist such as Gagné to construct and build a theory without having to rediscover or reinvent portions of the earlier work.

The two aspects of change mentioned previously (i.e., what is being described and advanced is really new, and what has been done in the past is inferior) have been applied critically to Gagné's (1984) paper on learning outcomes. We shall now discuss the motivation for the promotion of a new method, idea, or system.

Skinner's Teaching Machines

It is difficult to investigate the motives of an individual promoting an educational innovation. Apart from the usual lack of unequivocal evidence, current legal and ethical systems discourage motivational analysis of such behavior. An example which suggests that there are several reasons for the promotion and the implementation of an idea is B.F. Skinner's advocacy of teaching machines. Although he was not the first individual to adapt or design a mechanical apparatus to perform some type of instruction, he was probably the most successful in advertising and promoting the use of such machines. In his autobiography (1983), Skinner described the development of his two types of teaching machines from his principles of operant conditioning (pp. 42-70, & pp. 94-98). While he claimed that the use of teaching machines would produce many positive developments in schools, he realized that there had to be some method of manufacturing large numbers of the machines, and that there also had to be some means of encouraging schools to purchase them.

Initially, Skinner approached International Business Machines (IBM) with the design of his first teaching machine (Skinner, 1983, p. 71). The company agreed that Skinner's machine was a good idea, and that it had a potential market. Although IBM eventually produced a plaster model and later an operational prototype, the company decided against production of the machine because of internal financial concerns (Skinner, 1983, pp. 143-144). In this instance, neither the machine's potential marketability nor the merit of its pedagogical basis determined its fate. The determining factor was the economic considerations of that particular division of IBM. Foucault (1984a) has noted how seemingly incidental factors have proven to be most decisive rather than those which appear to be of direct concern. In discussing the history and the development of hospitals for the insane in France, for example, Foucault (1984a) stated that, although such institutions were ostensibly erected to house those individuals with peculiar physical and psychological disorders, they "had nothing to do with any medical concept" (pp. 124-126). In addition to housing those individuals labeled as "sick" permanently, these institutions were also repositories for the poor and for any other individuals whom the state did not wish to see remain at large. The institutions for the insane, therefore, were not medical establishments intended to cure or improve the condition of those sent to them, but were actually houses of confinement, erected by and for the pleasure of the state (Foucault, 1984a).

In a similar vein, Skinner's teaching machines were ostensibly developed to provide a method of pedagogy believed to be superior to traditional methods. The primary motives of the manufacturers of Skinner's machines for considering the devices and marketing them, it will be shown, were not based upon a satisfactory evaluation of the inherent pedagogical design, but were instead based upon considerations having little to do with either pedagogical method or the stated motives of Skinner.

While his first teaching machine was being considered by IBM, Skinner had also been constructing another type of teaching machine. He claimed that it was more versatile than the one shown to IBM. It is also important to note that Skinner received several grants for the development, production, and manufacture of prototypes of his second design of teaching machine (Skinner, 1983, pp. 97-98, & pp. 118-120). He encountered difficulty in interesting corporations in the manufacture of his new teaching machine, even though he had already produced working prototypes. Skinner's emphasis had been on the potential usefulness of his teaching machines in the classroom (pp. 147-148). "In May 1958 a representative of the Rheem Company came to see me. The company manufactured steel drums, which were losing out to pipelines, and was planning to diversify. It was interested in teaching machines" (Skinner, 1983, p. 158). "In August [1959] I signed a formal agreement, the terms of which were much less opulent than those we had first discussed. It would be my last commercial venture" (pp. 158-159). As the two previous quotes indicate, while the advancement of education may have been Skinner's primary motive, it was not necessarily so for the Rheem Company, and it was their motives that determined the fate of his machine. Although Skinner may have believed that the promotion of his teaching machine was dependent upon its potential usefulness to educators, it is apparent that the economic motives of the Rheem Company were the decisive factors in determining the fate of Skinner's machines, even though Skinner was unaware of these motives at that time.

Eventually a subsidiary, Rheem-Califone, manufactured and marketed Skinner's second type of teaching machine under the name "Didak 500," but by 1963 production of the machine ceased:

> I was once again on my own. Teaching machines had a commercial future, but I was not the man to promote it. I had been altogether too innocent. I should have seen that Rheem was simply 'waiting to see how the ball bounced'. (Skinner, 1983, p. 237)

Here Skinner admits that he had been unaware of the various mercantile factors which came into play when he was attempting to improve education.

Another factor which impinged upon Skinner's machine was the general attitude toward such devices being used in schools. An article in the *Saturday Evening Post* (cited in Skinner, 1983, p. 186) alluded to the possibility of teachers being replaced by machines. Although this use of teaching machines was not intended

by Skinner, many people believed otherwise. Instead of considering Skinner's teaching machine as a possible instructional aid, many teachers saw it as a competitor for their jobs. Thus, teaching machines became a political issue, with the ultimate result that their intended goal of universally improving instruction was never realized.

Foucault (1984b) has cited three reasons why the use of an ideology as a motivation is a dangerous practice: (a) the ideology is always opposed by something else which others believe to be the truth, (b) the ideology invariably refers to only part of the object addressed, and (c) an ideology is secondary relative to such factors as material and economic concerns (p. 60). In this instance, Skinner's ideology primarily fell prey to the first and third reasons. The continued existence of the Rheem company was dependent upon sales of its products. Criticisms of Skinner's teaching machines by others would be difficult to ignore. Opposing ideologies could be correct and perhaps reduce sales of Skinner's machines. Rheem, as well, had to place economic considerations above the ideologies professed by Skinner, if it were to survive.

One may well ask whether knowledge of the factors mentioned would have produced a more favorable outcome for Skinner's teaching machine. To give a decisive answer would be to fall into the trap of historicism (Popper, 1960), but we may see how an ignorance of such factors leads to the displacement of the initial, idealistic motive by more materialistic considerations. As we have observed, Skinner was unaware of the motives of Rheem that displaced his ideology in the production and the sale of his teaching machines. Skinner's naîvité was a major reason for the failure of his teaching machines to gain wide acceptance.

Summary and Conclusions

In this paper, three commonly held assumptions about progress in education have been analyzed from a deconstructionalist perspective. It has been shown, in relation to all three, that an uncritical belief in one or more of them can lead to unforeseen consequences. These assumptions tend to obscure and exclude other factors which may significantly determine the outcome of interest. Although the examples investigated are contemporary, the use of historical antecedents in this method of deconstructionism with Quintilian and Foucault's account of French houses of confinement serve to illustrate how the development and the implementation of current ideas and assumptions can be affected by similar or related past occurrences, especially if knowledge of the particular historical antecedents is absent. While an awareness of historical antecedents may prevent the occurrence of certain undesirable consequences, it must be remembered that the particular method of deconstructionism used in this paper represents only one strategy of critical analysis. Therefore, deconstructionism offers an approach to identifying a multiplicity of causal relations and contents which extends beyond the confines of popular values.

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