

# Research Themes in Instructional Theory

NATHANIEL H. MOORE \*

**T**HREE main thrusts seem evident in research in instructional theory. These thrusts are likely to continue to develop during the next twenty years. In order to examine these movements it is necessary to oversimplify their independence of each other. Actually, these thrusts overlap each other to a considerable extent and are not as discrete in form as a writer would like them to be.

The first of these thrusts can be identified as the body of research based on the programmed approach to education and on the reinforcement work done by B. F. Skinner.

A second thrust is in the area of structural analysis and has its base in the work of Piaget. Both deal with the cognitive level of learning and with the new insight we have gained in recent years in the cognitive development in children. Further, both deal with structural analysis of the curriculum and with a similar analysis of the teaching act.

A third main thrust, which the writer believes is readily identifiable in instructional research at the present time, deals with the affective domain and is traceable to work that has been done by followers of Carl R. Rogers, and is reflected primarily in the work of Arthur W. Combs.

Let us attempt to establish as a fact that

these thrusts do exist and are identifiable. They are also, to a certain extent, at odds with one another regarding what they believe education should do and how this should be done.

## Research Based on Skinner's Work

There is already a thrust of instructional theory research which is an outgrowth of B. F. Skinner's work. This theme of development is, incidentally, purer in its delineation than are the other two themes. Perhaps this is a result of B. F. Skinner's conceptualizing the process of education in oversimplified terms as he has sought to bring additional insight to the field of education regarding instructional theory. Skinner's theme emphasizes the concept of individualized learning and immediate reinforcement as the primary touchstone in the work that he has done. Through this work we see the development of programs for pacing cognitive learning at various rates and the provision of reinforcement for the student when he cor-

\* Nathaniel H. Moore, Superintendent, Burlington-Edison School District No. 100, Burlington, Washington

rectly responds to the problem with which he is presented.

Skinner is joined in his pursuit by a very impressive array of industrial giants interested in the field of education, a substantial portion of the U.S. Office of Education, and some of the practicing professionals in the field of psychology. The strength of this theme seems to be its efficiency. When promoters wish to impress one with the possibilities of their theories, they discuss the rate at which they have been able to teach people certain bodies of content.

A second strength of this particular theory is that it describes more specifically what it intends to do and is able to submit scientific evidence for having reached its objective. This again gives Skinner's theory power in a political sense on the modern education scene, for both efficiency of operation and scientific proof of successfully completing that operation have great power in our land. The critics of this particular thrust recognize the efficiency of the individual pacing and programs and the immediate reinforcement, but suggest that the use of this theory is limited to a small portion of the total process of educating the child and, while it can be useful, particularly in cognitive skills development, its use will remain of minor importance.

The promoters of this thrust do not agree. They feel that as their research matures, they will be able to program the total educational process. As their research matures with computer-assisted programming and systems analysis, they believe they will be able to invade the higher levels of the cognitive domain as well as the affective domain. Future implications for instructional theory, as far as this theme is concerned, see the teacher as primarily a diagnostician who will act as a prescriber of programs for each child.

During the next twenty years it is likely that this thrust in educational research, as far as the promoters are concerned, will develop what will represent a total program of instruction. We will see some computerized schools with programs which will seek to affect both the higher and lower cognitive

levels and the affective domain. The homes of students who attend these schools will probably have a considerable amount of individual pacing paraphernalia, and the teacher will be seen primarily in the role of diagnostician. The power of this thrust will, in my opinion, however, diminish in direct proportion to its use. The writer believes that this theme of research has conceived education too narrowly to be accepted by any substantial portion of the nation. Followers of this school of thought have seemed to over-emphasize the importance of cognitive development in a dependent manner that may, as far as the affective domain is concerned, dangerously approach brainwashing. Further, they have failed to comprehend the education of the child as a socialization force, as a force of conserving the society for which the child is being educated. As their failure to deal with the total educational process becomes more apparent, their support will diminish.

Any practicing educator is aware that a system may do a poor job of teaching the skills with only the mildest of reprimands. Yet, when a school system deals inadequately with the socialization of the child, particularly in relation to conserving the society, the educator is in trouble. This theory has a weakness in its development of dependency which should be considered more seriously by educators. Probably the worst aspect of our present educational program is in its development of a dependent relationship which tends to produce weak people, which in turn will produce a weak society. The development of children who are independent in their thought and action must, in the writer's opinion, be one of our prime criteria in evaluating the positive effect of instructional theory.

### **Effects of Piaget's Work**

Piaget's analysis of intellectual growth has, in the writer's opinion, captured the imagination of a much wider audience than was expected or deserved and has resulted in others applying his findings in ways that may have been unwarranted by the original work.

Let us assume here that Piaget's conclusions about the development of intellectual behavior are sound, for it would take at least another article to question effectively the research he has submitted regarding the intellectual growth of a child. Most of the body of instructional theory that is being developed on the theme of structural analysis finds its base in Piaget's work. We have, as a consequence, a great array of projects which have been funded by foundations and the U.S. Office of Education. These projects attempt to analyze the structure of various disciplines with the idea that, by having scholars develop a basic structure for their discipline and by coordinating this structure with the work of psychologists in analyzing the intellectual development of the child, we will develop an instructional program which may challenge the optimum learning power of the child.

The power of this body of research lies, the writer believes, in the weaknesses of the previous curriculum. Much of the traditional content in schools has been poorly thought through, poorly organized, and has resulted in teaching of half-truths and even material that was completely contrary to fact. Whenever the public school curriculum is analyzed by scholars in any special field, it has been found severely wanting. It seems that this field of research should improve this situation immensely as it continues over the next ten or twenty years. However, the strength of research is also its weakness. As this movement contributes to the improvement of the content of the curriculum, it will lose power, for it has again conceived the process of education too narrowly. Perhaps its greatest weakness is that the promoters of this work seem to believe that the child learns that which is taught.

The writer once heard a man suggest that if a child learned, during his educational experience, no more than what was taught in the public school, he would know so little that he would have to be institutionalized upon ending his association with the school. Further, the promoters of this instructional theory have seen the acquisition of content as the primary purpose of the pub-

lic school and have seemed to comprehend little of the importance of this acquisition as a socializing force. They seem to view knowledge as a possession, rather than as a tool to be used. Also, this group is doing little better than the immediate-reinforcement people by way of providing for the development of independence on the part of the child as he goes through the process of being educated. It should be noted, however, that, as this group proceeds to test materials, its members are beginning to see that there is no one best way of structuring the curriculum, and that students will not obtain the insight they wish with one particular approach. As this group proceeds in the future, I would expect its members to develop more flexibility in their development of instructional programs and gradually begin to see how they have underrated the importance of the teacher and his relationship to what is learned. They will, I believe, be able to see that the idea of "teacher-proof" curriculums was simply juvenile and, if their programs are to have any success, these will have to be adapted to the teacher's strengths.

### **Effects of Combs' Work**

Arthur W. Combs' work on instructional theory will, in the writer's opinion, have a great deal of power, if those who utilize his work are wise enough to incorporate into it the materials and programs that have been developed by the other researchers already mentioned. Combs' power is his recognition of the importance of developing independently strong people in a society that is rapidly becoming more relativistic and ambiguous. When societies are simplistic and absolute, strong frameworks are put up for weak and dependent people which allow them to function effectively. As a society becomes more complex and less absolute, more relative, more ambiguous, and less structured, ever stronger people must develop if they are going to be able to function effectively. Combs recognizes this fact in his work and has made progress in demonstrating to the practitioner in the field what the important ingredients of this

process are and how the process can be implemented.

Combs recognizes an important principle that seems to have bypassed the other main thrusts of research on the current educational scene. He realizes that we value people for their likenesses and, because of this respect we have for the worth and the dignity of the human, we seek to analyze and meet man's individual needs as a human being. Thus, individualization is not an end in itself, but a part of a process. Those who miss the implications of this very important point are apt to do much more to weaken education than to strengthen it. From this base, an educator can work to overcome the dehumanizing forces that exist in society, and can overcome the denaturing process that Bruner refers to and, thus, eliminate accepting this process as a fact of life as Bruner does. The strength of Combs' research points to the importance of how one feels about himself as a determiner of what he will learn, how great his insight will be, and what functional use he will be able to make of his own learnings and insights.

During the next twenty years, the writer believes, this theme will grow in power as the society becomes more aware of the need for the type of man this process of education will produce in order for the society to function effectively. If this, in fact, does not happen, Orwell's prediction of a 1984 may very well become a reality.

Another power of Combs' work has to do with his flexibility of operation and the role he projects for the teacher. As his research progresses, we will see the teacher emerge as a more powerful figure. As we begin to understand more completely the interaction between the student and teacher and the effect of this interaction on the child's development of self-concept, the writer believes we will see the teacher becoming more and more crucial in the child's healthful de-

velopment. The evidence to this point suggests that, with wholesome development, the child's capacity to learn is vastly accelerated over what might be done with simply well-developed curriculum materials or intricately paced programs with their immediate reinforcements.

Combs' research also suggests the liberating effect of such an approach upon the child. It seems to improve the child's opportunity to learn *more* than is being taught, for it develops him as an independent person. The other themes of research, however, tend to develop his dependence upon systems of education. It is the writer's opinion that we will see an ever-growing power in instructional theory when that theory weans the child from its system rather than encourages his dependence on the system. It would seem extremely difficult to argue that curriculum materials or other gadgetry can promote independence as well as an insightful teacher can if given the proper background and opportunity.

Future research in instructional theory, the writer believes, will have the greater power when that research concentrates on the humanizing elements in education and on independence from the system by which the educational process is guided. The writer has tried to suggest that much of current instructional theory, which is not directed toward these aims, must be altered drastically in the light of Combs' work. The overall picture of research and instructional theory, however, is a very positive one.

In spite of the proliferation of weaknesses in the programs we have developed, we have demonstrated our ability to conceptualize the process of education that has been needed by our society in the past. This may have some predictive value as we try to conceptualize the process of education that is needed by our society now and in the future. □



Copyright © 1968 by the Association for Supervision and Curriculum Development. All rights reserved.