

CHAPTER 11

TEACHING FROM ALTERNATIVE FRAMES OF REFERENCE

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TRANSITION: In the second half of the 1960's, university students throughout Western Europe and North America intensified their efforts to engage in effective political and social action. One of the centers for this activism was the University of California at Berkeley. Rachel Elder, a lecturer with the teacher education program at Berkeley during those years, found that in working with university students, she needed some means of distinguishing between the educational process, itself, and conception about that process. In drawing that distinction, she coined the term 'educology' and used it in the sense of 'ideologies about education'. Following that conception, she wrote a short paper for Far West Laboratory of Education Development (San Francisco, 1971) to which she gave the title "Three Educologies." The substance of that paper was an explication of three ideologies about education and the necessary implications of those ideologies for the roles of the teacher and student and for the nature of learning and the curriculum. It was an extension of the "schools of thought" approach to the philosophy of education which still has some currency amongst professors of educational philosophy.

Professor Elder subsequently took a position at Pepperdine University in Los Angeles, and there she introduced the term and the conception of 'educology' as 'ideologies about education'. One of her colleagues, Professor Diana Buell Hiatt, worked with Professor Elder in explicating this conception of 'educology' and extending it to the graduate program in early childhood education at Pepperdine. Chapter 11 is one of the outcomes of that work.

To use 'educology' in the sense of 'ideologies about education' illustrates many of the points made by previous authors. In Chapter 1, for example, Brezinka traced the European origins of three traditions of inquiry about education. The tradition to which the ideas of Chapter 11 are most closely related is that of producing normative philosophical knowledge claims about education. Also, Brezinka, along with Steiner, Maccia, and others argue for the importance of distinguishing amongst normative philosophical, scientific, and praxiological knowledge about education. Otherwise, what exists in education becomes conflated with what is desirable and what is effective in education. Chapter 11 illustrates this point in that it argues for teachers evaluating their practices in terms of sets of consistent conceptions about education.

Maintaining an argument for ideological consistency can lead to this difficulty: Problems of seeking to achieve knowledge about education are set aside in favor of the task of seeking to achieve consistency of language and action in relation to education. Ideological consistency in

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itself is not sufficient to establish knowledge about education, nor is it sufficient for developing expertise as an effective practitioner within the process of education. To determine whether a generalization about an effective educational practice is true requires the observable evidence of results. And to find out whether a generalization adequately characterizes an existing state of affairs in education also requires the observable evidence of extant behavior and relations. Neither requires the conceivable evidence of consistency with ideology. Thus, scientific knowledge and praxiological knowledge about education are overlooked. The conception of 'educology' as 'ideologies about education' does not permit their distinction.

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THE RATIONALE

The term 'educology' is an unfamiliar word to most teachers.¹ Most teacher preparation programs include educational philosophy, educational psychology, instructional methods, and principles of curriculum as discrete entities. The end result is that each teacher acquires a vast storehouse of knowledge and skills that is seldom tied together with a conceptual framework of the teaching-learning process. Educology is the study of the teaching-learning process as a holistic entity.²

Educology brings together the various components that affect the teaching-learning process and describes the interaction among those various components. Figure 11.1 outlines the interaction.

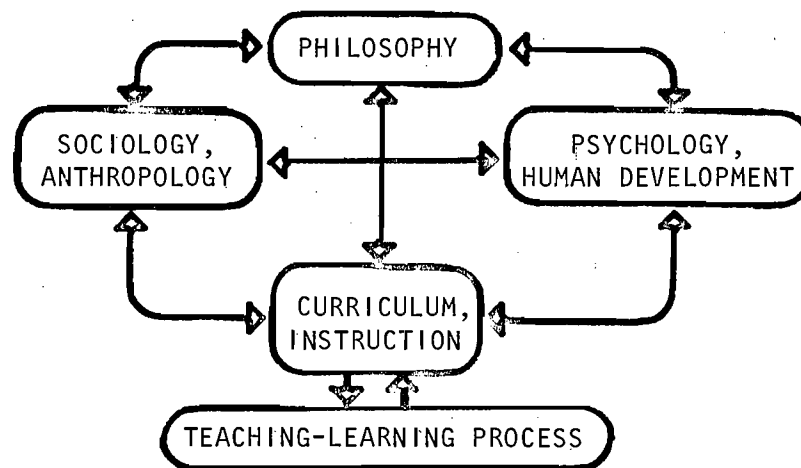


FIGURE 11.1

Interaction of Components that Affect the Teaching-Learning Process

Theories and empirical findings in philosophy, sociology and anthropology, psychology and human development, and curriculum and instruction interrelate.

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Many teachers, when faced with explaining their point of view on teaching, end up saying that they do a little of this or that, or suggest that they are eclectic in their approach. Many of these teachers do not understand which practice goes with which theory and how theoretical conflicts are created if one attempts a "mix-as-you-go" procedure. Such teachers are gullible to each new educational fad that comes along. Seldom are these teachers aware of the patchwork array of teaching techniques they are collecting. Persons who have only a loose leaf notebook of educational recipes and cannot match instructional practice with theoretical underpinnings will tend to become followers, not leaders in the educational process.

Educology is a relatively new term that has yet to catch favor among most educators. Most of the persons involved in teacher education have acquired expertise in one area of the field, such as philosophy, learning, curriculum development or administration. Educational methods courses have traditionally been taught in subject matter areas, thus, slicing the field of study into even smaller bits. The content of such methods courses tends to consist of current trends in those areas, rather than examining a range of alternative practices.³ A few institutions have adopted a particular school of thought on teaching, such as behaviorism, and have educated teachers from that frame of reference. Such an educational policy provides students only one explanation for human behavior and limits the possible solutions that may be available. In only a few instances have teacher education programs been organized to offer students alternative modes based on a holistic notion of the teaching-learning process.⁴

Like medicine and engineering, education is an applied field of study.* Such a field draws upon research findings and theoretical principles from several related areas, such as human development and psychology, human management and group processes, and cultural anthropology. Human behavior is highly complex. Teaching, an occupation that is involved with changing human behavior, requires that its practitioners acquire knowledge and skills in identifying behavior, mastery of the processes that change behavior, and means to assess the changes in behavior. There is need to call on more than one theoretical explanation to describe all of human behavior.

The time devoted to preparing teachers with the needed pedagogical skills for handling a classroom of thirty pupils is very little compared to other semi-professions and professions.⁵ There is little opportunity for reflective thinking. Instead, student teachers are propelled forward by a sense of urgency to accumulate those skills and pieces of information that will equip them to be successful in the classroom. Rather than

*From this statement, the reader can see that Hiatt is not distinguishing clearly among a field of phenomena, praxis within that field, and knowledge about that field. Compare this with Fisher's discussion in Chapter 13, "The Concept of Educology."

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being able to acquire a vast spectrum of alternatives, teacher candidates tend to pattern their behavior after other teachers they observe practicing in the schools. A noted educational psychologist casually remarked after a session with student teachers that his students seemed more concerned with classroom management than with the forces affecting pupil learning!

Our underlying assumption here is that the individual teacher needs to be aware of the major alternative approaches to the teaching-learning process and to develop a personal conceptual framework of education and teaching. Such a framework will provide a rational basis for daily decision making in the classroom. Teachers make hundreds of split-second decisions a day involving an active clientele who are in their custody. A well thought out conceptual framework will operate as a filing and retrieval system for huge amounts of information. It will serve as a device for sorting incoming information and accommodating it so that rational decisions can be made.

FOUR MAJOR APPROACHES

Educology can be subgrouped into four schools of thought or four major approaches to the teaching-learning process -- (1) behaviorism, (2) psychoanalysis, (3) humanism, and (4) cognitivism. Each approach constructs a unique network of the various components of the teaching-learning process. We will describe the essence of these four approaches. As in any attempt to bring together divergent thinking in convergent terms, not all educators or theories ascribed to a particular school will fit tidily into the scheme.

The description of each approach will include that school's ideas regarding the following: (1) an explanation of how learning occurs; (2) the role of the learner in the teaching-learning process; (3) the role of the teacher; (4) the effects of the environment, including facilities, materials, and other persons; (5) the source of motivational rewards of learning; and (6) the structure of time and space.

1. *THE BEHAVIORIST APPROACH.* The most prevalent school of thought that is observed in classrooms throughout the Western world is behaviorism. This approach has a strong scientific tradition, which may be traced back to Aristotle and updated by Locke. The outlook of the behaviorists is that an individual's behavior can be controlled by exerting specific influences on the environment of the learner. The intent of the behaviorists is to focus on specific behavior that needs to be learned or reinforced in the educational setting. A great deal of basic research has been done in this area and translated into instructional methodology and materials.

In behaviorism, learning is described as the production of a desired response to a given stimulus or set of stimuli. Teaching is the structuring of the environment so that a desired response or set of responses will be elicited from the learner. The role of the teacher is to arrange the environment -- facilities, materials, and persons -- so that the

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learner will focus on acquiring the desired behavior. Appropriate reinforcement will be administered so that the learner will continue to make the desired response. The schedule of reinforcement will affect the retention of the desired responses and the rate of learning.

Teachers can be held accountable for student learning by behaviorists since teachers control the variables in the environment related to the learning process. It is assumed that the better teacher is able to organize the environment for specified ends. If pupil achievement is low, it can be traced to a teacher not being able to control the environment sufficiently so that the learner's attention is directed towards the desired behavior.

The measure of success for behaviorists is the amount of student achievement of predetermined desirable behaviors. They place importance on preciseness of educational objectives, preferring behavioral terms; standardized tests, either norm-referenced or criterion-referenced, to measure those objectives; and accountability of performance.

Behaviorism has been applied in many situations with reports of high success of mastery of desired behavior. Programs such as "Distar," the "Keller Plan," the "Premack Principle," and Cantor's "Effective Classroom Discipline" exemplify the principles of behaviorism. B.F. Skinner is the epitome of the behaviorist movement. He has researched and published extensively, and he has developed the teaching machine, programmed learning materials, individual instruction packages, and methods for behavior modification in teaching.

2. *THE PSYCHOANALYTIC APPROACH.* Freud and the Neo-Freudians, such as Erik Erikson, propose an alternative explanation for human behavior. They assert that man operates from basic internal drives or forces and his behavior is determined by the manner in which he resolves internal conflicts. Psychoanalysts provide strong arguments for the need to take into account both the inner meanings and the outer behavior of learners. Erik Erikson's eight stages of man⁶ outlines the significant conflicts that must be met in one's life and how one's resolution of those conflicts influences psychosocial development and the level of one's mental health. Bailey⁷ eloquently elaborates how these stages can serve as bases for the goals of education at different stages in life.

Louise Tyler⁸ reminds teachers that the goals of education should reflect an insight into "What has happened or is happening in the hidden layers of the mind?" Emotions, as well as cognitive processes and outer behavior, are aspects of the learner which should be taken into account by the teacher. Body and mind should function as a unified whole.

Psychoanalysts suggest that alternative explanations may be given for behavior and different modes of acquiring any selected skill or knowledge may be possible. The environment is perceived from an existential point of view, in which personal experience is the foundation on which abstract knowledge is built. Each person has his own particular interpretation of a situation. The selection of an instructional plan by a

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teacher should be determined by a thorough understanding of the learner's past behavior and experiences, its inner meanings, and the learner's commitment to future outcomes of the learning. In such teaching, what may be an appropriate plan for one individual's learning may not be desirable for another.

Identification is an important concept in psychoanalytic theory. A person identified with persons he feels are significant in his life and internalizes their behavior patterns. Ben Wright developed a self-analysis procedure for student teachers. The student-teacher analyzes his behavior as a product of his own psychological structure and plans ways to control his own actions. This plan will be self-motivating so that the teacher is aware of the impact he is making on the students with whom he is working. Teachers need to be aware that the state of mental health affects their self-concept, ability to teach, and communication with others.

Ways to assess learning in this school of thought include projective techniques, personal log of activities and interpretations of those experiences, interviews and direct observation. Certain projective techniques have received widespread attention and have been used for many years, such as the Rorschach and Picture Completion tests.

Bruno Bettelheim and Robert Havighurst are proponents of the adaptation of psychoanalytic thought to education. Havighurst detailed certain developmental tasks children should master at given ages in their education.⁹ Bettelheim stresses the importance of mental health and inner perception of the world on learning. He strongly advocates the teaching of moral values.

Psychoanalytic thought has remained closer to the field of clinical psychology and psychiatry than to the classroom teacher. This may be attributed to the fact that the movement introduced the role of counselors and school psychologists into the schools to promote the positive mental health of students. Teachers may have relegated psychoanalytic thought to "specialists."

3. *THE HUMANISTIC APPROACH.* Abraham Maslow and others felt uncomfortable with both the previous psychological bases of human behavior and argued for a third force psychology. This approach is based on the discovery of the inner self through self-growth, rather than conflict resolution of reinforcement. Maslow's work emphasizes the self and inner direction, and thus it has been named, "humanistic."

Humanism is derived from the philosophical notions of Rousseau that man is inherently good and that it is society that imposes "evil" on the emerging man. Man is asserted to be curious, and thus he has the innate potential for learning. Learning occurs when the individual feels the need to acquire knowledge or skill that has relevance for his own purposes. Learning is perceived from a personal point of view. The individual

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learner is the source for determining what is important to learn, when and how it should be learned. The role of the teacher is to serve as a facilitator or counselor. The teacher views each person in the class as a unique individual rather than a collective group directed towards gaining certain knowledge or skill. In this approach, the teacher and the learner will mutually establish educational goals, select optional means to reach those goals, specify how other learners may become involved, and choose how the learning will be evaluated.

Rather than the school being perceived as an organization which directs learning toward preordained ends, the school is an open concept. In it, the child learns through discovery while exploring all aspects of the environment. From a limitless array of options, the learner must adjust his decision making skills so that the experience he encounters help him actualize the potential within himself. True heights of learning are called peak experiences.

Choices can be threatening when one is selecting and evaluating one's own learning. Therefore, learning requires a supportive, nurturing environment. Maslow describes various levels in the supportiveness of the environment for human growth. He begins with the basic necessity of provision for physiological needs and continues to construct a hierarchy of needs with successive levels being security and safety needs, love and belongingness, self esteem and esteem by others, and finally self actualization. He cautions teachers that most persons are not good choosers, and therefore they will not become self actualized. He suggests that learners venture into new areas, try the unknown, and create more difficult challenges to conquer. Some have misinterpreted Maslow as one who releases children from all constraints. As A. S. Neill¹⁰ cautioned regarding his own program at Summerhill, the self selection process is to foster "freedom, not license." The support system is maintained, assuring the child's success and well being.

Humanists use space and time, seldom as constraints, but as natural sources of limits to any activity. Examples heard may include: "We will need half of the school yard in order to play soccer; I will take three days to complete this chemistry experiment; I think I will use the dark-room for ten minutes to process these negatives." The environment of the classroom reflects flexible furniture arrangements, displays of children's work, and many opportunities for the children to plan, organize, and decorate their room.

Humanists prefer modes of evaluation that include case studies, pupil profiles, and products of the individual learner. Evaluation is based on the personal growth of each learner according to the goals the learner has intended to obtain.

There have been a number of programs designed to help students develop sensitivity to their feelings and the feelings of others, examine their values, and acquire decision making skills. Some programs that have achieved widespread interest include the Glasser Circle and behavior con-

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tracts, Carl Roger's student oriented curriculum, Rath's and Simon's value clarification techniques, and the Magic Circle for the elementary grades. Each of these programs is an educational adaptation of client centered group therapy. Krathwohl's taxonomy of educational objectives in the affective domain is a tool that teachers can use to develop goals and assess student growth in this area.

4. *THE COGNITIVE APPROACH.* The most recent thrust to educology is spearheaded by a diverse group of educators, who are concerned with information processing. They are coming together and calling themselves "cognitivists." Cognition is the term used by this school of thought's most well known thinker, Jean Piaget, to describe the process of how one acquires knowledge of the world. The philosophical foundation of these theorists rests on Hume's and Kant's arguments for the perceptual basis of knowledge. Each man acquires his own knowledge through perception with his senses.

The work of cognitive psychologists is presently more involved with basic research than with educational applications.¹¹ Consequently, teachers maybe the least aware of this approach to the teaching-learning process. However, as cognitive theory reaches the educational setting, it will find favor with those teachers who value the tradition of scholarly inquiry or the action based school environment.

Many of the researchers in cognitivism are focusing on one particular aspect of information processing. Jean Piaget has the most comprehensive explanation of the learning process, yet one that is regarded as controversial with some American psychologists studying in the same area. Piaget describes learning as the change in an existing internal schema. The process of learning occurs as a learner assimilates new information from the environment. The existing schema serves as a screen to detect likenesses and differences in the new information as compared to the stored schema. The person may alter his existing schema to fit the incoming information, a process called accommodation; or, the person may ignore the information and not process it at all. In those instances, the existing schema acts as a gatekeeper to halt any new information to the brain. When the individual has accommodated successfully to the new information, Piaget states that the schema is in a state of equilibration. He borrowed that term from the field of biology. The term refers to the mutual relationship between elements entering a system and the existing system; a change in any one of the elements will effect change in all of the others, so that a balance or state of homeostasis is maintained.

Piaget has identified three major states through which each individual must progress in order to reach the fourth stage of adult formal reasoning. These stages are the sensorimotor period lasting from birth to language expression, preconceptual operations lasting from approximately two years of age to seven, and concrete operations lasting from age seven to abstract thinking. Research has suggested that not all persons reach the stage of formal operations and some rely on concepts of actual objects in order to reason. Piaget's work stresses the need for sensorimotor

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experiences to serve as the groundwork on which to build concrete operations before reaching the level of adult abstract or symbolic thought.

The role of the teacher is to perform as a guide in the discovery process of learning. The teacher may pose problems, ask questions, and stimulate the learner's inquiry. The evaluation of the learning process centers on the learner's increased competency in problem solving and reasoning. Students are encouraged to study failures as well as successes as means to obtain understanding. For example, in a cooking class it was noted that one child mistook 't' to mean tablespoon when measuring mustard for a sauce. From the strong taste of the sauce, the student was able to identify that too much mustard had been added and queried the teacher on the meaning of the symbol 't'.

Jerome Bruner, Constance Kamii, and Herbert Klausmeier are a selected few from a growing number of contemporary psychologists in this area. Bruner emphasizes the importance of the discovery approach to learning as a way for children to internally organize perceived relationships. He applied his ideas to the development of a social studies program, called "Man: A Course of Study." Kamii's work centers on the development of preschool children and training teachers to utilize small group discussion and decision making, self selection of action based activities, and sensorimotor exploration coupled with teacher questioning in their teaching. Herbert Klausmeier has been active in the creation of individually guided instruction which includes modules for teacher training, school organization, and a wide range of instructional materials.

Preferred methods of evaluation include anecdotal information from observations and student responses to inquiry questions in order to formulate individual student profiles of academic progress.

A SUMMARY

This survey was intended to explore frames of reference that comprise the legacy of contemporary education. Each suggests alternative approaches to the means and ends of education and differing roles for the learner and the teacher in the educational process. There does not seem to be any inherent superiority of one approach over another, only a different explanation of certain aspects of teaching and learning.

One of the approaches may be more appealing to you than another. As you analyze your own teaching, you may determine which approach you tend to prefer. Comprehension and mastery of the four schools of thought will increase the number of alternative solutions that may be possible in any given teaching situation. Knowledge of all four should foster a wider understanding of other teachers' positions and a deeper appreciation for the legitimacy of their point of view. There is a strong disagreement within as well as among advocates of each approach to education.

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Each thrust contributes to the knowledge of the science of teaching. But, it is the individual teacher who, in the act of applying such scientific knowledge, demonstrates the art of teaching. It takes a highly skilled professional to create a blend that possesses internal consistency between the various theoretical conceptions and day to day practice. The ability to draw from divergent points of view and to create a contextual whole is the hall mark of the true professional. Such a person is open to new ideas, but has an internal conceptual stability. The art of the science of teaching is bringing a range of theoretical principles to the decision making process of teaching and applying those principles to meet the needs of a given situation.

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FOOTNOTES

1. The author wishes to express appreciation to Rachel Ann Elder, a former colleague at Pepperdine University, for introduction to the term 'educology'. Elder used the term in a paper written for Far West Laboratory of Educational Development (San Francisco, mimeographed, 1971): "Three Educologies." She also used it in her classes with students specializing in early childhood education. Her conception of educology is the one that is followed in this chapter.
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