

DOCUMENT RESUME

ED 393 814

SP 036 558

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TITLE Humanistic Influences on a Constructivist Approach to Teaching and Learning.
PUB DATE Apr 95
NOTE 19p.; Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, CA, April 18-22, 1995).
PUB TYPE Viewpoints (Opinion/Position Papers, Essays, etc.) (120) -- Information Analyses (070) -- Speeches/Conference Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Cognitive Structures; *Constructivism (Learning); Educational Philosophy; Educational Research; Elementary Secondary Education; Higher Education; *Humanistic Education; *Learning Theories; Teaching Methods; *Theory Practice Relationship
IDENTIFIERS *Humanistic Psychology; *Rogers (Carl)

ABSTRACT

This paper outlines the constructivist approach to teaching and learning and reviews some of the literature to establish a linkage between constructivist theories of learning and humanistic psychology. In particular, the paper recognizes the work of Carl Rogers and suggests that his contributions to the professional literature on teaching and learning might promote the advancement of constructivism. The insights provided by the linkage between the humanistic view and the constructivist view in cognitive psychology would enhance the knowledge base for the teaching and learning process. Points for consideration by those who attempt to employ the constructivist approach are: (1) this approach may be best suited to a small group setting; (2) teachers must possess superior knowledge of the subject matter and demonstrate excellent communication skills; (3) people change their perceptions and mental conceptualizations only when they are ready; (4) this approach takes considerable time, energy, and patience; (5) teachers must believe that all learners can learn, can find their own best way to learn, and will learn the things that hold meaning for them; (6) a healthy and creative student-teacher relationship is very important; and (7) the outcomes of such education will be unique. Support for such a vision of teaching can be found in the humanistic literature. (Contains 23 references.) (JB)

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Humanistic Influences on a Constructivist
Approach to Teaching and Learning

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Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, California, April 18-22, 1995.

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Abstract

This paper outlines the constructivist approach to teaching and learning and establishes an important linkage between the theories of constructivism and humanistic psychology which has been relatively neglected by scholars, researchers, and policy makers. The insight provided by this linkage enhances the research and knowledge base for constructivism and highlights critical questions for the application of a constructivist approach to education which strives to offer cognitive structures, humane treatment, and personal meaning.

Humanistic Influences on a Constructivist Approach to Teaching and Learning

The developments in the cognitive science of instruction have had a significant influence on researchers, teacher educators, teachers, and prospective teachers in teacher training programs. Unfortunately, the renewed interest in constructivism like most fields of exploration seems to have developed out of a need to be distinctive rather than integrative. The need to package ideas in wrappers which offer new labels with the appearance of being on the "cutting edge" may limit the advancement of any theory.

The proliferation of appealing new wrappers for ideas is at least partly due to the nature of the reward system that exists in academia, schools, and society. Since excellence in teaching, learning, and thinking is such a tremendous challenge, those who employ and study a constructivist approach to teaching and learning must be mindful of other philosophical and theoretical connections and additional research evidence which can guide the use of such a model.

This paper will attempt to respond to the following important questions:

- (1) What is the constructivist approach to teaching and learning?
- (2) What are some of the philosophical and theoretical linkages between the constructivist and humanistic psychology viewpoints?
- (3) How can these humanistic ideas which are normally considered outside the boundary of cognitive psychology inform the advancement of constructivism?

What is Constructivism?

The constructivist approach to learning is one of the prominent theories in cognitive science that can be traced back to Piaget's cognitive developmental theories, Vygotsky's socio-cultural view of learning, and Bruner's discovery learning (Slavin, 1994, p. 225). Saunders (1992) defines constructivism as "the notion that learners respond to their sensory experiences by building or constructing in their minds, schemas or cognitive structures which constitute the meaning and understanding of their world" (p. 136). The following five points are among Narode's (1987) seven contributions that a constructivist epistemology might offer educators:

1. Epistemology matters in the classroom. A student's epistemology shapes the attitude toward, and conceptions of, both the content and process of learning.
2. Concepts and their symbolic representations contain hidden epistemologies which must be elucidated by education researchers and then communicated to educators and students.
3. All knowledge is ultimately self-referential and all self-referential knowledge is relative--not absolute. It is constructed individually. Consequently, students need individual attention.
4. Actions contain knowledge. Many logical structures may be traced to goal-oriented actions. Knowledge, therefore, is fundamentally active and dynamic.
5. There being no absolute knowledge, responsibility for the construction of knowledge lies ultimately with the learner. The teacher may facilitate this process by providing conceptual problems, and actively engaging in dialogue in which both student and teacher learn.
(pp. 34-35)

Watts (1994) describes "strong" constructivism in terms of the following elements: cognitive meaning that is active,

anticipatory, whole-bodied, and form giving; processes of construction, deconstruction, and reconstruction are employed; cognitive processes include structure and organization; meanings are constructed and qualified against a backdrop of other meanings; knowledge is transitory and provisional; self-determination is used since the person is at the center of the inquiry; and ideas need to be communicated, tested, and cared for in a social context (p. 52).

What does a constructivist approach to teaching and learning look like? Prawat (1991) provides such an example in what he characterized as an "immersion approach" to teaching. The use of the term "immersion" is found in the critical thinking skills literature and Ennis (1989) cites McPeck (1981) as a proponent of this view. Although Prawat clearly identifies this approach as a viewpoint within cognitive psychology, the characterization of the immersion approach as one possible representation of constructivism is made by the author of this paper based upon Prawat's references to Piaget, schemata, and mental processes.

Prawat (1991) analyzes Lampert's classroom lesson (see Lampert, 1989) where money is being used to teach decimal relationships to fifth graders. Although I am certain that my brief summary of Prawat's (1991) and Lampert's (1989) contributions to the professional literature fails to do justice to either author's work, this description should provide the reader with insights into the pragmatic issues of such learning.

After a discussion of the relative value of the amounts of \$89.00, \$8.90, and \$.89, Lampert asked students to consider the meaning of the amount \$.089. One student explained why this value was almost equal to nine cents and most students in the class concurred with the answer and the student derived explanation. Next, Lampert proceeded to write .0089 on the chalkboard and one student exclaimed, "That's negative." Lampert decided to pursue the student's line of reasoning and eventually a number line was brought into the discussion as students proposed that .0089 would lie slightly toward the negative side of the number line before the class ended.

Lampert reports considering several hypotheses related to the "ideas" that students were offering in the classroom. She discovered that "zero" was used in two different ways (some students reasoned that in our monetary system less than a cent implied "less than nothing") and developed two new ways of teaching about these relationships. Prawat (1991) astutely suggested that Lampert resisted the temptation to diagnose the student's conceptual problem and teach the "right" way to think about the math problem.

Research Questions

The implementation of a constructivist approach to teaching and learning such as the example presented should evoke many questions in the minds of those who intend to research or employ such an educational theory. The following items represent only a partial list of possible questions that researchers and educators

might ponder:

- * What cognitive, affective, social, and environmental factors contribute to the construction of knowledge?
- * How can we best determine and analyze the existing conceptions of knowledge held by students and teachers?
- * How might students and teachers better learn to explore and understand this very personal process of knowledge construction?
- * How can we help students and teachers judge the usefulness and efficiency of existing conceptions of knowledge? (Individual conceptions still need to be held to a logical standard, since not all conceptions are equally valuable in making sense of the world.)
- * What are the motivational elements which inspire the need to change existing conceptions of knowledge?
- * After knowledge is constructed, how do students and teachers modify these conceptions of knowledge?

The professional literature is not replete with adequate answers to these and other relevant questions surrounding the implementation of constructivist theory. Such a scenario leads to the major premise of this paper--that many of the theories and research findings from humanistic psychology that rose to prominence in the 1960's and 1970's can provide valuable insights for applying a constructivist approach to teaching and learning.

Humanistic Connections

Why examine the link between humanistic theories and constructivism? A quick review of an ERIC data base search generated 228 records on the topic of "constructivism," while additional searches which combined this descriptor with "humanistic psychology" and/or "phenomenology" generated only 2 records. Slavin (1994) points out that modern approaches to

humanistic education are largely based upon constructivist theories of learning (p. 300). Could it be that such a connection has been identified but it is largely overlooked or undervalued?

The humanistic viewpoint in psychology is a broad, loosely organized set of ideas that sees the primary mechanism of intellectual and behavioral change as internal, respects the human dignity and uniqueness of the individual, promotes personal freedom of choice with responsibility for actions, and depicts motivation as being optimal when learners perceive personal meaning in learning. Although much of this perspective originally emerged from counseling and psychotherapy, applications were soon made to the teaching and learning process. Scholars and practitioners of the humanistic school of thought were quick to point out the weaknesses and limitations of modern behaviorism that are well accepted today.

The topics and works of many theorists exemplify this view and deserve to be discussed here such as: the professional preparation of teachers (Combs, Blume, Newman, & Wass, 1974); confluent education (Brown, 1971); teacher effectiveness training (Gordon, 1974); humanizing education (Aspy, 1977), humanistic education (Patterson, 1973), and invitational learning (Purkey, 1978; Purkey & Stanley, 1991). The work of Carl Rogers (1969; 1983; Rogers & Freiberg, 1994) probably represents the best single synthesis of theory and research for understanding how this view can contribute to the advancement of a constructivist view of the

teaching/learning process.

The contributions of Carl Rogers to the professional literature of teaching and learning have never been fully recognized, perhaps in part because of his use of clinical rather than experimental research methodology. Lefrancois (1994) suggests that the Rogerian approach is clearly "soft-nosed" and "not based on rigorous, replicable research" (p. 246).

Contrary to popular misconceptions, Rogers constantly promoted the use of research findings as a means of understanding and advancing theoretical ideas. Gendlin (1988) stated in Roger's obituary published in the American Psychologist that Carl Rogers was a pioneer in research who insisted on objective, quantitative research evidence to validate his theories.

Several other reasons might explain why the Rogerian influence has been relatively underrecognized and not fully appreciated. Herman (1990) suggested that many students/readers appear to misunderstand the message of Carl Rogers due to one or more of the following points: (1) his purpose of writing, (2) his use of the first person, (3) his use of personal examples, and (4) his use of an unfamiliar reader/writer relationship.

Rogers (1983) defined significant, meaningful, and experiential learning as possessing the following characteristics: (1) it involves personal involvement of the whole person, including affect and cognition; (2) it is initiated by the learner; (3) it is pervasive in its influence of behavior, attitudes, and personality; (4) it is evaluated by the learner;

and (5) it provides meaning to the learner (p. 20).

Both Piaget and Rogers employed clinical methods to study human behavior. Rogers focused upon the organismic nature of the person and believed that learning was optimal when intrinsic motivational factors were in place and students found personal meaning in what they were learning. Piaget viewed the student as an amateur philosopher who interacts with an environment in order to comprehend and organize his/her observations so as to master, control, understand, and survive the forces of the environment. According to Piaget's interactionist view, students learn best through intrinsic motivation where optimal levels of motivation are created through cognitive disequilibrium.

A teacher or situation creates an appropriate level of cognitive disequilibrium when students are intrinsically motivated to reorganize their thinking after experiencing a dilemma which fails to meet an original expectation. When confronted with such a learning situation it is theorized that students will be motivated to clarify their own thinking in order to create a more tranquil state of mental equilibrium.

The relationship between student and teacher in the constructivist model becomes a critical factor in the learning process. Although Rogers developed his approach in the therapeutic setting, a mentally healthy relationship between student and teacher would appear to be a logical criterion for altering preconceived notions or personal beliefs that are not supported in reality, since defenses are likely to be well

established. Rogers (1980) proposed that the conditions of unconditional positive regard, empathy, and congruence would promote personal growth in therapy and meaningful learning situations.

The focus upon learning processes and mental conceptualizations surrounding meaningful learning is another inescapable characteristic of both a constructivist approach to learning and what Rogers describes as the facilitation of learning. It is not that end products are unimportant, but rather that mastery of the processes of learning and conceptualizing will lead to greater transfer of learning in other situations. The current popularity of one of the elements of the wholistic language approach to writing can be seen in this light. The use of "invented spelling" is deemed as acceptable student behavior in the early elementary grades with the hope that the processes of writing, thinking, creativity, and self-expression need to first be valued at this level before the more formal writing products will emerge in later grades.

Active rather than passive involvement on the part of the learner promotes meaningful learning. Students must be discovery oriented and the content under investigation must appeal to the learner. In a wholistic sense, the student could be actively involved intellectually, emotionally, socially, and physically in the learning task. Since intellectual and emotional involvement are often particularly difficult to observe directly, the role of communication becomes crucial in promoting this type of learning.

The active involvement of students in the facilitation of learning is not meant to imply that a teacher is a passive participant in the learning process. The teacher has a responsibility to engage in the "role of student" through actively listening to students while learning about their views as well as guiding the educational experience. Such listening deepens the teacher's understanding of the content and ideas under consideration, as well as the student's conceptual viewpoint. In the ideal situation, the teacher can learn from students while at the same time students can learn from the teacher and other students. Such a learning environment, epitomizes certain aspects of the cooperative learning strategies which are currently popular and promotes mutual respect and healthy relationships in the classroom.

Educational Implications

What does the established link between the humanistic view and the constructivist view in cognitive psychology contribute to our knowledge of the teaching and learning process? The following points seem worthy of consideration by those who attempt to employ or research the constructivist approach to teaching and learning:

- (1) This approach is probably best suited to a one-to-one or small group setting, since teaching and learning must be extensively individualized.
- (2) Those involved in such teaching must possess superior knowledge of the content to be taught, demonstrate outstanding communication skills, and foster the idea that students create and translate mental conceptualizations into thoughtful actions.

- (3) People are likely to change their perceptions and mental conceptualizations only when they decide that they are ready to accomplish this difficult and complex task.
- (4) Helping students discover personal meaning in learning will require considerable time, energy, and patience for all those involved in the teaching/learning process.
- (5) Teachers must truly believe that all learners possess the ability to learn, can find their own best ways to learn and think, and will learn the things that hold meaning for them.
- (6) Students and teachers must be actively involved in a healthy relationship focused on exploring and understanding the nature of human knowledge.
- (7) The outcomes of such education will inevitably be unique since learners construct their own meanings and solve their own problems. Such educational outcomes for many reasons will not be adequately measured by standardized/criterion-referenced testing or grades.

Those who are interested in promoting and researching the constructivist approach to teaching and learning will likely find considerable support for their viewpoints in the work of Carl Rogers and others cited in this paper. The intersection of these two prominent viewpoints will provide additional quantitative and qualitative evidence for the inherent benefits of a constructivist viewpoint.

Researchers and educators who choose to investigate the constructivist approach will be particularly pleased to find supportive evidence for such a vision of teaching by exploring the following ideas in the humanistic literature:

- * active learning, freedom to learn, and facilitation of learning
- * respect for individual differences and creative ideas
- * healthy relationships between teachers and students

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- * the search for personal meaning
- * a teacher's beliefs about students, subject matter, and personal change
- * the skill of the teacher in creating an atmosphere of trust and openness where students are likely to accept the invitation to learn
- * learning which involves critical thinking and excitement about the process of learning

Summary

In conclusion, there would appear to be many pitfalls and problems in revolutionizing American education along the lines of constructivism. The limited optimism that I can offer rests upon the ability to unify fields of educational theory and research to promote convergence and integration so that more professionals are pulling in unison on the teaching/learning tug-of-war rope in order to achieve excellence in education. American education needs to be problem centered and student centered. As the Gestalt notion suggests, the combined whole created through unification of similar ideas will far exceed the sum of ideas contained in any particular viewpoint.

I hope that this paper stimulates further discussions related to advancing the constructivist approach to teaching and learning. Researchers must shoulder the responsibility for providing ample evidence that such end products of learning are feasible and worth the price we must pay in providing a quality education for the American masses. The failures of American

education can be most simply characterized as deficiencies in an interrelated triad of elements: cognitive substance, humane treatment, and personal meaning. Let us learn from the many success stories in American education that such learning as described in this paper is not only possible but essential in a democratic society.

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