ED 422 292   SP 038 082

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TITLE   Teaching Teachers: The Problem with Emphasizing "Isms."
PUB DATE   1998-04-15
NOTE   15p.; Paper presented at the Annual Meeting of the American
              Educational Research Association (San Diego, CA, April
              13-17, 1998).
PUB TYPE   Opinion Papers (120) -- Speeches/Meeting Papers (150)
EDRS PRICE   MF01/PC01 Plus Postage.
DESCRIPTORS   Behaviorism; *Constructivism (Learning); *Educational
              Psychology; Educational Theories; Higher Education;
              Information Processing; Preservice Teacher Education; Social
              Cognition; Teaching Methods

ABSTRACT
              This paper argues that in teaching educational psychology,
different experts often compartmentalize theories in substantially different
ways, and there is considerable disagreement within the field regarding the
dividing lines that separate various "isms." The four main "isms"
(behaviorism, information processing theory, constructivism, and social
cognitive theory) each provide unique insights about learning and
instruction. The paper proposes an alternative approach to teaching
educational psychology that focuses on the big ideas that are common to, or
combine elements of, multiple "isms." Ten examples of such big ideas are
explicated. The paper argues that such an approach has several advantages
over the more traditional approach of identifying concepts, principles, and
educational applications as lying within the domain of particular "isms."
(Contains 57 references.) (Author/SM)

Teaching Teachers: The Problem with Emphasizing "Isms"

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Paper presented at the American Educational Research Association

San Diego, California

April 15, 1998

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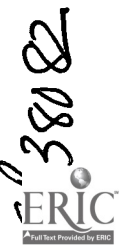
ABSTRACT

A common practice in teaching educational psychology is to present a variety of theoretical perspectives, or *Isms* (e.g., behaviorism, information processing theory, constructivism, social cognitive theory) and to describe the key concepts, principles, and educational applications of each perspective. In this paper, I show that different experts often compartmentalize theories in substantially different ways—that there is considerable disagreement within the field regarding the dividing lines that separate various Isms. I propose an alternative approach to teaching educational psychology—one that focuses on the *Big Ideas* that are common to, or combine elements of, multiple Isms—and argue that such an approach has several advantages over the more traditional approach of identifying concepts, principles, and educational applications as lying within the domain of particular Isms.

A common practice in teaching undergraduate courses in educational psychology is to present a variety of theoretical perspectives, or *Isms*, and to describe the key concepts, principles, and educational applications associated with each one. As the author of an educational psychology textbook, I have sought to write about the field in a similar manner. For instance, the most recent edition of my book includes separate chapters on behaviorism, social cognitive theory, information processing theory, and constructivism—four separate Isms that, in my own mind, each provide unique insights about learning and instruction.

Over the years, more than fifty educational psychologists across the country have reviewed the various drafts and editions I have written of the book. In the process of reading my colleagues' reviews, I have discovered that it is virtually impossible to please everybody not only with regard to which topics I include in the book but also with regard to how I characterize various theoretical perspectives. In some cases, characterizations that delight some reviewers are "hot buttons" for a few others, sending the latter group into tirades that I can't begin to describe. I remember one reviewer who went ballistic when I used the term *retrieval* in a chapter entitled "Constructivism": she argued that *retrieval* was a term from information processing theory, a perspective that was clearly incompatible with constructivist ideas. Because I consider myself to be an information processing theorist who also holds strongly to the idea of construction in mental processes (early readings in my own graduate school experience included Neisser, 1967, and Bransford & Franks, 1971), I was puzzled by the reviewer's reaction.

The cognitive dissonance that the reviewer created for me led me to read numerous theorists' opinions regarding how theories and principles of learning and instruction are best compartmentalized into Isms. I found far less agreement

regarding the Isms that theorists identified than I had expected and hoped for; different people often divided the field in distinctly different ways (for varying analyses, see Anderson, Reder, & Simon, 1996; Bereiter, 1994; Bredo, 1997; Cobb & Yackel, 1996; De Corte, Greer, & Verschaffel, 1996; Derry, 1996; Duffy & Jonassen, 1992; Garrison, 1995; Gopnik, 1996; Greeno, Collins, & Resnick, 1996; Hiebert & Raphael, 1996; Marshall, 1992; Mayer, 1996a, 1996b; McCombs, 1996; Nuthall, 1996; Prawat, 1996; Pressley, 1995; Reynolds, Sinatra, & Jetton, 1996; Spivey, 1997; Steffe & Gale, 1995).

In this paper, I will identify several key areas of disagreement regarding how various theorists categorize and characterize the major Isms of our field. I will also offer an alternative approach to teaching educational psychology—one that focuses on big ideas that emerge from multiple Isms.

KEY AREAS OF DISAGREEMENT ABOUT ISMS

As I read various experts' analyses of how best to divvy up the field, several inconsistencies among them were particularly salient. Here I frame these areas of disagreement as a series of questions, along with the varying answers that I found with respect to each one:

- Is constructivism distinctly different from information processing theory? This was the question that initially motivated my literature review, and yet it was one for which I found no simple answer. Many people see the two Isms as separate and probably irreconcilable (Bredo, 1997; De Corte et al., 1996; Duffy & Jonassen, 1992; Ernest, 1995; Hiebert & Raphael, 1996; Marshall, 1992, 1996; Reyna, 1996; Reynolds et al., 1996). They base their belief on three lines of reasoning. First, they equate information processing theory with a computer metaphor; the linear "thinking" of computers is intrinsically inconsistent with a constructive approach to thinking, whereby multiple pieces of information are pulled together in a

creative, nonalgorithmic, and somewhat unpredictable way. Second, they argue that information processing characterizes learning as a process of knowledge being transmitted to the learner from outside sources, whereas constructivism characterizes learning as involving the construction of one's own knowledge. And third, they point out that information processing theory ignores the social interaction processes that are so central to constructivism and especially to social constructivism.

Yet other people believe that most contemporary versions of information processing theory are decidedly constructivist in nature. They argue that many information processing theorists have left a strict computer metaphor in the dust (notable exceptions would, of course, include theorists working in the area of artificial intelligence) and that knowledge is not necessarily transmitted directly from the outside world nor formed in isolation from other learners. I count myself in this camp (Ormrod, 1995, 1998), as well as Derry (1996), Mayer (1996a), Phye (1997), Prawat (1996), Pressley (1995; Pressley et al., 1997), Reisberg (1997), and Schunk (1996).

- <u>What exactly *is* constructivism?</u> It should be clear from the discrepant opinions about the preceding question that different theorists characterize information processing theory differently. Disagreement regarding the nature of constructivism as an Ism is even more widespread, and there is considerable in-fighting within the constructivism camp these days (Derry, 1996; Phillips, 1995; Steffe & Gale, 1995). Furthermore, little consensus exists regarding how to subdivide constructivism; subcategories that I have seen in the literature include individual constructivism, social constructivism, radical constructivism, radical relative constructivism, critical constructivism, construct*ion*ism, social construct*ion*ism, and sociocultural theory (Cobb & Yackel, 1996; John-Steiner &

Mahn, 1996; Prawat, 1996; Shaw, 1996; Shotter, 1995; Spivey, 1997). Some people even argue that constructivism is not yet a full-fledged Ism—that at the present time it may be better understood as a general philosophical position with a cluster of emerging and somewhat ill-defined concepts and ideas (Anderson et al., 1996; Marshall, 1996; Nuthall, 1996).

- <u>Where does schema theory fit in the scheme of things?</u> Once again, I found little consistency. Some theorists see schema theory as an entity separate from both information processing theory and constructivism (Reynolds et al., 1996). Yet others argue that schemas are an integral part of how people process information and/or construct knowledge (Derry, 1996; Ormrod, 1995; Prawat, 1996; Schunk, 1996); Derry (1996), for instance, proposes that schema theory provides a useful bridge between information processing theory and radical constructivism.

- <u>In what category are situated learning and cognition situated?</u> Some theorists believe that the "situated" approach, which places heavy emphasis on how learners interact with their social and physical milieus, is an Ism quite distinct from such "cognitive" approaches as information processing theory and constructivism (Bredo, 1997; Greeno, 1997; Greeno et al., 1996). Others believe, however, that views of situated cognition can easily be integrated into social constructivism (De Corte et al., 1996). And still others believe that the situated approach is too vaguely defined to be a useful Ism to anyone just yet (Anderson, Reder, & Simon, 1997; Reynolds et al., 1996).

- <u>Where do we fit social cognitive theory (a.k.a., social learning theory) in all of this?</u> Curiously, in all of my readings I saw no reference to social cognitive theory. I suspect that many of my colleagues associate social cognitive theory with the behaviorist tradition. This hypothesis is supported, in part, by where

social cognitive theory is located in educational psychology textbooks. If we look at the five most widely used textbooks in the college market, four of them (Biehler & Snowman, 1997; Eggen & Kauchak, 1997; Slavin, 1997; Woolfolk, 1998) discuss traditional behaviorism and social cognitive theory in the same chapter; the exception is my own text (Ormrod, 1998), where I treat behaviorism and social cognitive theory in two separate chapters.

Certainly social cognitive theory can trace its roots to behaviorist notions; I think, in particular, of Miller & Dollard's (1941) classic paper on modeling. But the current views of social cognitivists (e.g., Albert Bandura, Dale Schunk, and Barry Zimmerman) encompass such mentalistic concepts as *attention, encoding, expectations,* and *self-regulated learning*—concepts that are more compatible with information processing theory.

- <u>But can we at least agree on one thing—that there's a clear division between behaviorism and cognitivism?</u> Historically, many of us have seen a clear-cut distinction between behaviorism and cognitivism (e.g., Greeno et al., 1996; Ormrod, 1995; Reynolds et al., 1996). But even on this point we do not have total agreement. Some theorists lump behaviorism and information processing theory together and see them both as being separate from constructivism; they argue that the former pair are objectivist (i.e., they rest on the assumption that reality has a certain structure that learners must eventually ascertain) and mechanistic, whereas constructivism focuses on how learners organize their understanding of the world in their own idiosyncratic and nonmechanistic fashion (Duffy & Jonassen, 1992; Marshall, 1992).

In my own recent readings of behaviorist literature, I have seen many references to distinctly cognitive notions. For instance, some behaviorists now believe that classical conditioning involves the formation of associations not

between two stimuli but between internal *mental representations* of those stimuli (Bouton, 1994; Furedy & Riley, 1987; Miller & Barnet, 1993; Rachlin, 1991; Rescorla, 1988; Wagner, 1981). Furthermore, the conditioned stimulus may enable an organism to *predict* (in a decidedly mental fashion) that the unconditioned stimulus is coming (Hollis, 1997; Martin & Levey, 1987; Rescorla, 1988). Some behaviorists argue that operant conditioning, too, can be better understood when nonobservable mental processes are considered. For example, they talk about an organism forming *expectations* as to what reinforcer is likely to follow a particular response (Colwill, 1993; Rachlin, 1991; Schwartz & Reisberg, 1991). They find that humans and nonhumans alike develop *categories* of stimuli to which they respond (Killeen, 1991; Rachlin, 1991; Vaughan, 1988; Wasserman, 1993). And behaviorists are beginning to use such phrases as *paying attention* to discriminative stimuli, mentally *encoding* response-reinforcement relationships, and *seeking information* about the environment—all phrases with definite cognitive overtones (e.g., Colwill, 1993; Rachlin, 1991; Rescorla, 1987; Schwartz & Reisberg, 1991). Perhaps even more intriguing is Garrison's (1995) recent proposal that behaviorism might provide one means of understanding both social constructivism and situated cognition.

Despite theorists' disagreements regarding the basic Isms of educational psychology, describing some of these Isms in our educational psychology courses is probably a "must," if for no other reason than to promote students' awareness of some of the overriding philosophical perspectives that dominate the field. At the same time, we can probably better serve our students if we not dwell too much on these Isms, but instead focus on *Big Ideas*—those that transcend any particular Ism.

TEACHING BIG IDEAS

Many principles that we teach in educational psychology are common to two or more Isms. Here are ten examples of such Big Ideas:

1. <u>Learners do not passively absorb information from the environment; rather, they actively work to make sense of their environment and construct their own, unique understandings of the world.</u> This perspective pervades much of cognitive theory; for instance, we see it in constructivists' notion of *knowledge construction* and in information processing theorists' concept of *elaboration*. But it is also shared by the active *information seeking* that some behaviorists describe.

2. <u>Learning is more likely to occur when learners pay attention to the information to be learned.</u> We see this idea in information processing theorists' *dual-store model* of memory, in social cognitive theorists four essential conditions for *modeling* to occur, and in behaviorists' concept of an *orienting response*.

3. <u>Learners learn more effectively when they relate new information to prior knowledge.</u> Such learning may take the form of *chaining* two or more previously acquired S-R associations (a behaviorist notion), *assimilating* a new event into existing schemes (a Piagetian perspective), or drawing on an existing *script* to interpret a new situation (an idea from schema theory).

4. <u>The close contiguity of events increases the likelihood that learners will associate those events with one another.</u> The concept of *contiguity* has historically been associated with behaviorist views of both classical and operant conditioning. But it also plays a prominent role in contemporary

views of information processing: Two pieces of information are most likely to be associated in long-term memory if they have been in working memory at the same time.

5. <u>Learners' future learning and performance are influenced by the consequences that follow their behaviors.</u> In some cases, these consequences may be external (e.g., concrete *reinforcers*, teacher *feedback*); in other cases, they may be internal (e.g., feelings of *satisfaction*, causal *attributions*).

6. <u>Hints about how to think or behave often facilitate performance.</u> Hints take different guises in different Isms; for instance, they may be *retrieval cues* (information processing theory), *scaffolding* (the sociocultural perspective), or *discriminative stimuli* (behaviorism).

7. <u>Learning and development are fostered when learners are challenged to perform increasingly more difficult tasks or to think in increasingly more sophisticated ways.</u> We see this idea in concepts from many theories; for example, we find it in Piaget's *disequilibrium*, Vygotsky's *zone of proximal development*, Kohlberg's *moral dilemmas*, and behaviorists' *shaping*. We see it, too, in information processing theorists' belief that learners develop more complex cognitive strategies only when environmental events challenge them to do so, as well as in social cognitivists' belief that *self-efficacy* is better enhanced when learners succeed at challenging rather than easy tasks.

8. <u>Learners benefit from hearing or reading the ideas of others.</u> As noted earlier, many people conceptualize information processing theory as being based on the notion that information is transmitted from the outside world rather than constructed by the learner. This premise underlies much of

behaviorism as well; we see it not only in programmed instruction but also in the view that organisms are *conditioned* by environmental circumstances. Yet this Big Idea is hardly unique to objectivist perspectives. Even social constructivists acknowledge that group-constructed knowledge does not occur all at one sitting; for instance, the physical, life, and social sciences have evolved over the years (in some cases, over the centuries) through a process of studying, testing, modifying, and sometimes rejecting the ideas of those who have gone before.

9. <u>Learning is enhanced when learners engage in self-evaluation.</u> We see this principle in behaviorists' *programmed instruction*, in information processing theory's concept of *comprehension monitoring*, and in social cognitive theory's view of *self-regulation*.

10. <u>Learning is best assessed by using an assessment instrument that reflects the goals of instruction (i.e., an instrument that has content validity).</u> In some cases, this instrument may be a traditional *paper-pencil test* (a strategy often attributed to behaviorist and/or information processing perspectives). In other cases, a teacher can assure greater content validity by using *authentic assessment* (a strategy often attributed to the constructivist and situated perspectives).

A focus on Big Ideas has at least three advantages over a focus on Isms. First, Big Ideas are far less controversial than Isms; most theorists agree with them to some extent. (As an example, when I changed the title of the "Constructivism" chapter in my educational psychology textbook to "Knowledge Construction"—thus changing it from an Ism to a Big Idea—I received more consistently positive comments from reviewers.) Second, Big Ideas typically describe general principles of learning

and/or instruction that lend themselves readily to concrete classroom applications; in contrast, experts do not always agree regarding the specific applications of various Isms (e.g., see Anderson et al. [1997], or contrast the analyses of Spivey [1997] and Greeno et al. [1996]). Finally, a focus on Big Ideas allows us to draw from two or more Isms simultaneously when developing classroom applications—perhaps to analyze the effectiveness of authentic activities (a notion for which both constructivism and situated perspectives take credit) from the perspective of generalization (as behaviorists describe it), or to talk about teacher scaffolding (a sociocultural concept) when discussing ways to promote effective study strategies (strategies derived largely from information processing theory).

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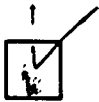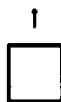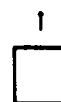| The sample sticker shown below will be affixed to all Level 1 documents	The sample sticker shown below will be affixed to all Level 2A documents	The sample sticker shown below will be affixed to all Level 2B documents
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