Is Constructivism Traditional? Historical and Practical Perspectives on a Popular Advocacy

by J. Wesley Null

As any glance at contemporary educational literature demonstrates, the concept of "constructivism" carries with it enormous appeal. Contemporary literature also reveals that many current educational reform initiatives encourage teaching practices that many people refer to as constructivist (Brooks and Brooks 1993; Roth 1993; Crawford and Witte 1999; Lord 1998). Despite, or even because of, the popularity of constructivism, this approach to teaching should be studied, analyzed, and discussed as it becomes more widespread in the language of educators. Those who advocate constructivism should reach back to important thinkers from past centuries to understand their theoretical predecessors and to devise better plans for the present.

To date, few writers have attempted to connect contemporary constructivist concepts to teaching ideas from past centuries. This essay, therefore, has three purposes. First, it seeks, as best as possible, to develop a working definition of constructivism. Second, this article strives to connect these contemporary notions of constructivism to the work of three educators from past centuries. Third, and finally, this essay seeks to draw attention to and ask questions about why constructivist-like teaching practices often have such difficulty impacting the practical world of classroom action. Consideration of the terribly tortured concept of constructivism appears to be an important place to begin.

Constructivism: An Attempt at Definition

As a term as well as a concept, constructivism presents itself almost as indefinable. Current educational literature, to be sure, is littered with a range of definitions for and understandings of this concept. Thus, to focus this attempt at definition, a sample of literature drawn from general sources, but also from mathematics and science education, provided the basis for constructivist ideas. When reading this literature, several questions were considered. What are some current definitions of constructivism that classroom teachers may have encountered? Also, are these definitions related and, if so, to what extent do they correspond? Further, after a working definition of constructivism was

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developed, two other questions were addressed. Who were some of the primary individuals from the past who gave rise to similar ideas? Finally, were these historical individuals successful in the translation of their ideas into classroom practice? Though these questions clearly are not easy to answer, they do provide a solid starting point for investigation.

After reading this sample of literature and considering the preceding questions, a reasonable conclusion is that at least three levels of constructivist advocacy appear frequently in contemporary educational literature. With regard to the first level, some researchers operate at an epistemological level and focus on the nature of knowledge—that is, they ask questions about how, why, when, and where knowledge is created or "constructed" by members of society (Popkewitz 1998; Roth 1993; Davis, McCarty, Shaw, and Sidani-Tabbaa 1993; Garrison 1995). One central component of this writing is that those who write from this perspective seem to possess an extremely sensitive barometer that helps them identify, analyze, and attack sociopolitical or cultural contentions with which they disagree. In the words of educational researcher Dennis C. Phillips (1995, 10) "it is apparent that although some constructivists have epistemological enemies whom they are anxious to defeat, most have pressing social and political concerns that motivate their work." These "epistemological constructivists," as I have labeled them, often focus on issues of race, class, and gender as they attempt to uncover what they perceive to be a lack of representation for marginalized groups in places of power (Meece and Jones 1996). Because this line of research rarely filters down to the real world of classroom teaching, it was not, however, the primary focus of this essay.

Beyond questions of epistemology, a second level of constructivist literature reveals an emphasis not so much on social or political aspects of constructivism, but rather on the local construction of knowledge by individual students in individual classrooms (Brooks and Brooks 1993; Lord 1998). These constructivists, who reasonably can be labeled "instructional constructivists," emphasize notions of knowledge construction in the process of teaching and learning. That is, many instructional constructivists offer a definition of constructivism that includes several key components. For example, they argue that the teaching and learning process often is nonlinear. They also assert that personal meaning making is central to the learning process. Moreover, they argue that teachers should strive to understand students' points of view. Additionally, they stress the need for teachers to pose to students questions that are relevant to their daily lives and experiences. They also draw attention to the point that teachers should consider prior student knowledge when they plan lessons, as well as to the notion that teachers should make learning as natural as possible. Further, instructional constructivists advocate teaching practices that are interactive in nature rather than domineering and one-sided. Put another way, these individuals argue that teachers should reject "traditional" modes of teaching and learning and, instead, embrace "new" ideas that are based on current constructivist principles. Finally, these writers assert that teachers should incorporate alternative modes of assessment that reach beyond paper and pencil tests (Brooks and Brooks 1993).

In his attempt to answer the question "What in the world is constructivism?" Terry Anderson (1996) defined constructivism as an interactive process during which teachers and learners worked

together to create new ideas in their mutual attempt to connect previous understandings to new knowledge. Other instructional constructivists have emphasized the necessity for teaching that substitutes memorization with more purposeful activities, provides opportunities for students to construct their own knowledge while solving puzzles, replaces rote learning with meaningful lessons, substitutes direct instruction with incidental learning, and emphasizes the construction rather than the transmission of knowledge (Iran-Nejad 1995; Yackel, Cobb, Wood, Merkel, and Battista 1990; Fischer and von Aufschnaiter 1993; Gadanidis 1994).

In addition to the epistemological and instructional constructivists, a third and final group of constructivists reasonably can be identified. This group, who may be labeled "prescriptive constructivists," accepts the task of reducing the plethora of definitions that abound in constructivist literature to useful techniques or tips that teachers are supposed to implement in their classrooms (Rita 1998; Clough and Clark 1994; Wheatley and Clements 1990; Crawford and Witte 1999). Because it presumes to be deductive in nature, some of the writing of the prescriptive constructivists borders on a violation of the nature of constructivism itself. The construction of local knowledge by individual groups (for example teachers) and individual students is anathema to any prescriptions from above that specifically denote the actions to be taken for someone to be considered a constructivist. Nevertheless, efforts of this sort have been made, some of which carry these prescriptions so far as to contend that teachers *must*, for them to be considered successful teachers, participate in the "theoretical revolution" that constructivism represents for the teaching of any subject, for example mathematics (Blais 1988). Similarly, constructivist teacher "training" provides a good example of a prescriptive approach to constructivism (Yost, Sentner, and Forlenza-Bailey 2000; Lesar, Benner, and Habel 1997). This perspective purports to "train" teachers in a method that, by its very nature, rejects the notion of a one best method in the first place.

Despite this broad range of constructivist literature, surprisingly few researchers have critiqued constructivism from historical or practical perspectives. In the few critiques that are available, none of which takes a historical approach, the authors either rejected constructivism as an absurd theory of non-reality or critiqued some aspects of it as, in the words of former education professor Joseph Schwab, "too reliant upon theory" (Lawson 1993; Terwel 1999; Schwab 1969). Though these criticisms may help contemporary educators think more fully and more critically about the latest theories in educational research, neither offers adequate historical understanding of the numerous past educators who proposed ideas quite similar to contemporary constructivist theory. Thus, this article now considers three of these historical educators and their thoughts on teaching and learning. After these descriptions, the work of these thinkers will be connected primarily to the instructional constructivist definition described earlier. The first of these thinkers to be considered is French philosopher Jean-Jacques Rousseau.

JEAN-JACQUES ROUSSEAU

By any account, contemporary educators should recognize Jean-Jacques Rousseau as a major contributor to what is referred to as constructivism today. Rousseau was an 18th-century Enlightenment philosopher who wrote widely on the topics of political science, philosophy, and education. In the mid–18th century, he published two influential works: *Discourse on*

the Origin of Inequality and *Emile*. In both of these works, Rousseau argued for a more equal system of schooling from a philosophical perspective that combined education, politics, and social action. In all of his writings, but particularly in these two books, Rousseau attacked civilization as the root of corruption. To avoid this corrupting world of competition, private gain, and greed, Rousseau called for a return to nature that would allow children to develop almost entirely from their natural instincts. To put Rousseau's approach to teaching in modern terms, he argued that all learning should derive from an environment in which students construct their own knowledge.

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Rousseau described this approach to teaching and learning most explicitly in *Emile*. In this book, Rousseau outlined the ideal education of his fictional son, for whom he entitled the book. In the ideal education that Rousseau described, the young boy was given as much freedom as he desired so that he could explore his natural surroundings without restraint. Moreover, Emile's governess, or teacher, encouraged the young boy to learn only those lessons he found particularly interesting and enjoyable. By allowing young Emile to learn only what he wanted to learn, nature, as opposed to some artificial form of external coercion, served as Emile's primary teacher.

In short, Rousseau sought to provide a vision for education that was based upon the idea that each individual child was perfect by nature. Once this initial proposition is understood, many of Rousseau's arguments follow rather logically. Given that all children, according to Rousseau, are naturally perfect, they become corrupted only when touched by the corrupting hands of man. Numerous notable educators since Rousseau's time—individuals such as the founder of the kindergarten Friedrich Fröbel and the more well-known John Dewey—have drawn upon Rousseau's ideas to encourage a type of schooling that welcomed student freedom, encouraged individualized instruction, and sought to cultivate student self-realization (Dewey and Dewey 1915; Tanner 1997).

Importantly, all of these ideas relate closely to what is commonly referred to as constructivism in contemporary educational literature. More specifically, the plan that Rousseau outlined relates most closely to the instructional constructivist position described previously. At the same time, however, Rousseau was quite concerned about questions of power and economic inequality. As influential as it was, Rousseau's writing, nevertheless, remained rather vague. Moreover, most of his followers encountered significant difficulties when they attempted to put his ideas into action (Smith, Smith, and Pergo 1994). For followers of Rousseau, their would-be leader provided a great deal of visionary leadership, but they also discovered that his visions of how education should be done were much easier to contemplate than they were to enact in the everyday education of students. Put simply, Rousseau's ideas often remained in the realm of theory and, therefore, had marginal impact on classroom action. Another influential educator from the past, Johann Heinrich Pestalozzi,

certainly was aware of this problem. He also drew heavily upon Rousseau's ideas when he incorporated works like *Emile* into his writing.

JOHANN HEINRICH PESTALOZZI

Eighteenth-century Swiss educator Johann Heinrich Pestalozzi read Rousseau's *Emile* when he was a teenager. After reading that book, Pestalozzi immediately adopted Rousseau's romantic view of education. Not unlike Rousseau's vision for teaching and learning, Pestalozzi dreamed of living a life that was free, uncomplicated, and unencumbered by the corrupting bonds of civilization. Moreover, Pestalozzi became convinced, after his reading of Rousseau, that teachers and parents never should teach children anything they could learn or experience naturally during the course of daily living.

Somewhat like Rousseau, Pestalozzi often jumped from job to job in search of his preferred type of employment. After holding various jobs as a young adult, Pestalozzi finally secured the position that would make him famous throughout Europe and across the world. He was called upon to establish a normal school that was to prepare teachers for public school service. More specifically, the school was designed to seek out children of poor parents—children who never would have received an education had this normal school not been established. The Helvetian government expected Pestalozzi and his colleagues to house, rear, and educate children from impoverished homes until they reached an age at which they could begin their careers as teachers.

Within this normal school environment, Pestalozzi developed his famous "object-teaching" method—an approach to instruction that retains powerful appeal today. Like many present-day teachers, Pestalozzi faced the challenge of encouraging marginally motivated students to engage the content that he and others sought for them to learn. The object-teaching method was Pestalozzi's answer to the dilemma of how to cultivate interest in the minds and souls of students. Though object teaching held various meanings to different people, most followers of Pestalozzi's method agreed that object teaching was based on several main principles (Smith, Smith, and Pergo 1994):

- All people, including the poor, can and should learn.
- Learning begins at birth and therefore requires parental attention.
- Instruction should involve dialogue between teacher and learner and should be centered around objects more than books.
- Drawing, music, and physical activity are essential parts of learning.
- Teachers can improve by discovering how to structure their presentation properly and finding out how children learn.

Put succinctly, Pestalozzi argued that students learn best when teachers interest them in lessons through the use of objects or other concrete devices that encourage them to focus on the lesson at hand. Pestalozzi's object-teaching principles spread quickly to several European countries and to the United States. His ideas heavily influenced educators such as Edward Austin Sheldon who, in 1859, founded the well-known Oswego State Normal School in Oswego, New York (Rogers 1961).

To be sure, Pestalozzi's object-teaching methods relate closely to contemporary advocacies for constructivism. Educators who promote the use of manipulatives or objects or other concrete devices should recognize that Pestalozzi introduced these ideas, almost two centuries ago, to the future teachers with whom he worked in his normal school (Gutek 2000). The use of "hands-on" lessons, under the guise of dif-

ferent names has been popular in the classroom, since that time and most likely before. Similarly, a third historic educator, G. Stanley Hall, demonstrated the enduring popularity of Pestalozzian-type instructional methods. Hall, a well-known American psychologist from the late 19th century, reformulated many of Pestalozzi's ideas when he began to establish the field of child psychology. Hall agreed with Pestalozzi that a freer environment allowing students to follow their own interests was superior to classrooms not providing this type of opportunity. Hall extended these ideas, moreover, when he blended Pestalozzian educational thinking with late 19th-century scientific thought and the evolutionary principles of Charles Darwin. A brief consideration of this final historic educator provides even further evidence that current constructivist approaches to pedagogy are deeply rooted in the past.

G. STANLEY HALL

In 1878, G. Stanley Hall received the first American doctorate in psychology. In his dissertation, which he completed in Harvard University's philosophy department, Hall drew upon the work of Rousseau, Freidrich Fröbel, and Charles Darwin to develop an approach to education that emphasized child development, scientific investigation, and the correlation of curriculum with the developmental stages of children. With one of his most well-known and influential ideas, the "recapitulation of the race theory," Hall (1883) asserted, for example, that as each child developed, he or she followed a specific pattern that matched the evolution of humankind from its most primitive times to the present. Furthermore, he thought the curriculum should be differentiated to match these different stages of evolutionary development. Put simply, Hall brought the respectability of science to the study of children. He also laid the groundwork in America for numerous education-related ideas, such as child psychology, developmentalism, and student-centered learning. Also, through his efforts at Johns Hopkins and Clark Universities, Hall influenced numerous eminent psychologists, educators, and scientists, including John Dewey, James McKeen Cattell, Lewis M. Terman, and Joseph Jastrow (Pruette 1926).

In his pioneering 1904 work entitled *Adolescence*, Hall, not unlike Rousseau and Pestalozzi, emphasized the significance of nature's role in the educative process. He also argued for the careful weighing of all available evidence on child development prior to the making of major decisions by teachers and other professional educators. Moreover, he proposed that teachers should "individualize" educational lessons based upon numerous variables, for example student ability, vocational interest, age, and gender. He further sought to demonstrate that science, specifically his version of educational psychology, represented the ultimate outgrowth of the human intellect (Ross 1972). To be sure, many of these ideas have reemerged in the late 20th and early 21st centuries in the name of constructivist teaching methods.

Hall impacted significantly the realm of educational theory. Questions remain, however, with regard to the extent to which his philosophies penetrated the practical world of classroom teaching. Many teachers from Hall's era undoubtedly received instruction in the developmental theory that he so carefully developed. Moreover, they were taught the significance of matching their lessons to the appropriate developmental stages of their students. Whether or not these ideas were translated into classroom action, however, remains an important question for practicing educators and historians to ponder.

IS CONSTRUCTIVISM TRADITIONAL?

Several important questions emerge from the consideration of these three historic educators. The first question perhaps is obvious to many educators. What relevance does the work of these three thinkers have to contemporary educational debates and issues? Second, why do so few educators know about the rich tradition that supports and enhances the contemporary advocacy for constructivist teaching? Finally, historically speaking, why have constructivist-like ideas had such difficulty impacting classroom action?

With regard to the relevance question, any substantive consideration of educational history reveals the ahistoric nature of the education profession. Several points highlight this problem. First, the connection of prior student knowledge to the lessons that teachers offer, a major theme in constructivist writing, is a very old idea in educational thought. All three of the educational thinkers described in this essay advocated this notion in various ways and to differing degrees. Second, ideas such as lecture-only instruction or lessons taught only through "rote memorization" have been critiqued for more than 250 years. This critique of what many people refer to as traditional education can be traced at least to the 18th century with Rousseau. Third, the idea that teachers should encourage students to follow their own interests for most, if not all, of what they learn dates back at least 250 years and possibly even further.

Whether or not contemporary constructivists acknowledge these three writers, and many others like them, they draw upon these *traditions* when they emphasize activity-based instruction or when they advocate lessons that require students to create their own understanding or discover concepts on their own. Though the making of historical connections between past and present advocacies may not provide practitioners with specific actions they are supposed to take in their classrooms, a more robust understanding of historical traditions helps practitioners to *think* as they make wise, individual judgments in their individual classrooms and schools. Although he was writing specifically on the topic of curriculum history, the words of Alan W. Garrett (1994, 395) are instructive with regard to this point:

> *Skeptics who contend that, to be valuable, curriculum history must somehow be related directly and obviously to current practice, are destined to fail to build adequately their own store of curriculum memories. These individuals, consequently, will be vulnerable, devoid of context, able to do little more than flail about the edges of the truly serious problems of education. They will be ignorant of the successes and failures, the folly and wisdom of their predecessors. Only for those educators and educational researchers who awaken in a brand new world each day is the connection between curriculum history and the present irrelevant.*

Garrett's assessment of curriculum history can be extended to educators who fail to embrace educational history because it does not offer simplistic answers to complex problems.

With regard to the second question, why so few educators know the traditions that shape contemporary calls for constructivism, a few general points appear warranted. First, educational history, unfortunately, often is not considered "practical" in the same manner that a "constructivist training session" might be. Second, history does not proffer straightforward and uncomplicated answers to the difficult problems that teachers face. Third,

and finally, connecting history to present difficulties requires concerted intellectual effort, an activity that is not always encouraged in the media-driven, immediate gratification world of the 21st century. History often may be messy, but it is entirely relevant and practical. It may not tell teachers specifically what they must do at a particular time and within a particular context, but it provides them with considerable background knowledge and contextual understanding with which they can *think* and make practical decisions on a daily basis. At the root of this problem, which results in the rejection of history by many educators, rests a false assumption about the nature of practicality as well as the utility of historical knowledge.

The final question, posed earlier, is perhaps the most significant. This question relates to why constructivist-like ideas, considered from the perspective of history, have had such difficulty impacting classroom action. All of the historic educators considered in this essay experienced difficulty in the translation of their ideas into classroom practice (Davis 1998; Cuban 1993; Reid 1987; Hoetker and Ahlbrand 1969; Tyack and Cuban 1995). These difficulties demonstrate that contemporary calls for constructivist curriculum confront difficulties similar to those that were faced by Rousseau, Pestalozzi, Hall, and others from that tradition. Put in question form: Why do so few teachers enact constructivist or, to use a term that was popular during the early 20th century, progressive teaching practices in their classrooms on a daily basis?

Considered from the perspective of history, however, the translation of constructivist-like ideas into classroom action appears to be anything but easy.

No one answer to this complex question exists. Nevertheless, additional lessons from history and from the practical experiences of classroom teachers reasonably can provide considerable background and contextual knowledge that will assist today's constructivists as they seek to introduce their ideas into classrooms. Considered from the perspective of history, however, the translation of constructivist-like ideas into classroom action appears to be anything but easy. History reveals that the practical realization of progressive or constructivist traditions will not occur until a more in-depth understanding of the daily actions of teachers has been forged (Tyack and Cuban 1995). That is, only when additional educators and educational researchers have sought to understand education from practical and historical perspectives will they better recognize why these important ideas, currently referred to as constructivism, often have such immense rhetorical appeal but then quickly disintegrate as they cross the threshold of the classroom door.

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