

VYGOTSKY'S SOCIOCULTURAL THEORY AND CONTRIBUTIONS TO THE DEVELOPMENT OF CONSTRUCTIVIST CURRICULA

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An analysis of Vygotsky's sociocultural theory indicates that his conceptual framework contributed to the development of constructivist theory and curricula. These contributions are evident in light of how his theoretical framework connects with the praxis of constructivist curricula and pedagogy. This theory and practice connection is demonstrated in the background, query, conceptual framework, assumptions, and methodology of his approach's theoretical framework. Conceptual parallels between Vygotsky's theory and constructivism were evident in the following components: networking, socially negotiated meaning making, experimentalism, collectivism, adults and more competent peers as learning facilitators, the social and historical dimensions of learning, problem solving, and active learning participation.

Introduction

Vygotsky's (1930s) theoretical contributions to the development of curricula and teaching strategies are widely known among educational theorists. Vygotsky devised a sociocultural theory which subsequently influenced the development of the constructivist movement. Although Vygotsky's contributions to the field of education are apparent, what has not been specifically addressed is how the particulars of his theoretical framework helped shape the development of constructivist curricula. In short, how does his sociocultural theory connect with the schooling praxis of constructivism.

Goals

The purpose of this paper is to analyze Vygotsky's (1930s) sociocultural theory of learning with respect to how it relates to education. To do this, I deem it essential to examine how this theory of learning impacted the teaching strategies and curricula of the constructivist movement. The conceptual content of this paper addresses the following primary educational query: With respect to the learning theory of constructivism how do students learn? To

answer this query, I deem it essential to investigate how his approach was ultimately based on a theoretical framework because this phenomenon shapes the methodology of an educator's research and teaching.

Objectives

The objective is to describe how this approach was intrinsically shaped by a theoretical framework. This theoretical framework consists of the following interrelated procedural components: query, conceptual framework, philosophical assumptions, methodology, data, principles, techniques, and learning setting. That is, as a researcher of curricula and learning, Vygotsky ([1933] 1978) conceived these ideas and strained them through a procedure to form them, whereas practicing teachers tend to explicitly apply each educational theory's teaching implications to the classroom¹. Fortunately, Vygotsky taught in the classroom setting and conducted research, which probably gave him valuable insight as to how to connect educational research theory with practical application in the classroom.

Teacher-Practitioner and Education Researcher Roles

Although the teacher and researcher of learning both utilize theory, they do so in different ways. In general, the teacher, as a *practitioner*, primarily employs theory when constructing curricula and teaching strategies while the *researcher* primarily utilizes theory to test its efficacy in a student-learning setting, or to devise novel ones. Although these distinct roles exist, there is a general relationship between each theory of learning and the respective curricula and teaching strategies that distinct schools of educators employ. Those educators who adhere to behavioristic, cognitivist, and positivistic theoretical frameworks tend to instruct their students in a teacher-centered mode, whereas those who adhere to constructivism, collectivistic, and thematic holistic theories tend to teach students in a collective learning environment. The teaching strategies and curricula that educators adopt implicitly reflect the learning theories which they advocate. Because teaching strategies and curricula are based on theories of learning, it is necessary to initially examine the explanation of Vygotsky and *then*, relate it to curricula instruction.

Methodology of this Paper

I interpreted Vygotsky's approach from the standpoint of an educational anthropologist. This perspective involves adopting the roles of an arm-chair researcher and a field-based classroom researcher. The duties of these roles comprise reviewing the literature, interpreting classroom lecture-notes, and employing past participant-observations of various classroom settings; that is, one who interprets student-teacher interactional-learning settings at the school site.

Context of Limitations: Disclaimer

My interpretation of Vygotsky's sociocultural theory is based on English translations of

his work, and further upon the interpretations of his works by psychologists, such as Berk (1994), Tudge (1990), and Gallimore and Tharp (1990). Since translations from one language to another tend to lose some of the original language's meaning, it follows that other English-speaking interpretations of Vygotsky's works are bound to lose some conceptual significance. Aside from the translative loss and the psychological interpretations of Vygotsky, the sheer exhaustive breadth of this theorist's writings requires that I address only a small cadre of his approach's components.²

Background of Vygotsky

Prior to examining Vygotsky's theoretical approach, I deem it necessary to investigate his educational background because there were a diversity of fields and mentors who shaped his approach. The influence of the fields of psychology, gestaltism, linguistics and enculturation are evident in Vygotsky's sociocultural approach. The field of psychology's influence upon Vygotsky, naturally, produced some parallels. On the other hand, Vygotsky also developed unique theoretical interests which are reflected in his divergent views. Vygotsky was a social scientist and communist who desired to educate Russian peasants about the virtues of communism. As a social scientist, Vygotsky employed a micro view towards studying how we learn in a given social situation. In order to further delineate his approach, it is necessary to initially examine his approach's theoretical framework.

The Theoretical Query and Conceptual Framework of Learning

Educational theories are explanations of the human phenomenon of learning, not truth statements about why we do what we do. They provide a conceptual framework for us to explain how and why we learn. They are essentially based on beliefs that direct the question that each theorist proposes. In this respect,

Vygotsky implicitly adhered to a primary theoretical query which largely directed his approach. To address the main query as to how students learn, Vygotsky explored how students construct meaning.

Vygotsky: Sociocultural Theory/Precursor to Constructivism

Although Vygotsky's sociocultural theory (1930s) predates the constructivist movement, I am classifying him as a constructivist, because his theoretical framework contributed immensely to the development of this approach. In this theory, he posits that social experience shapes the ways of thinking and interpreting the world. He notes that individual cognition occurs in a social situation. They cannot be separated which correlates with the integrated nature of holism. The group is therefore vital to the learning process for all initiates who learn higher forms of mental activity via more knowledgeable peers and adults who jointly construct and transfer this activity primarily through language.

Constructivism

Constructivism has a spectrum of contributors whose divergent theoretical orientations subsequently provided this theory with a range of teaching styles. Although one end of the spectrum is delineated by Piaget's notion that we learn in developmental steps, rather than in leaps and bounds, my focus is upon Vygotsky's view of a nonlinear learning sequence, which constitutes the other. Vygotsky's version of constructivism, then, is a non-developmental view of education whereby a child's intellectual personality and socio-moral knowledge is "constructed" by students internalizing concepts through *self-discovery*. Because Vygotsky's approach falls within the constructivist theoretical spectrum, it is imperative that we examine this theory's assumptions.

Assumptions of Constructivism

To describe how students construct their

view of the world, radical constructivists, unlike behaviorists and cognitivists, assume there is no real world.² Contrary to their behaviorist counterparts, constructivists posit that *objective reality* is a mental fabrication that a group of individuals devised and accepted to define their world's parameters.

In virtually every case, these individuals in turn devised involuntary and voluntary associations, such as the church, science, and social science institutions and often impose their interpretation, under the guise of formal authority, as to what constitutes reality upon the masses in their countries and throughout the world.

This largely Eurocentric consensus is incongruent with their view that we, as individuals within group contexts, construct our own interpretations and therefore knowledge of the world, rather than accept a universally imposed scheme. In this way, each learner's conception of reality varies, based on his/her interpretative experiences. The learner, then, constructs knowledge via his/her prior experiences, mental structures, and beliefs. The learner is not an empty passive vessel waiting to be filled with drops of knowledge from an instructor's lecture. Rather, he/she prefers to be actively involved in hands-on learning activities that interest him and that are just above his current level of competence. To learn concepts, the learner must experience them and *socially negotiate* their meaning in the authentic context of a *complex learning environment*.

In the classroom setting, students learn through interacting with their peers, teacher, manipulatives, and their contextual setting. Vygotsky advocates this setting, and uses holism to unite his approach's components. Commensurate with the use of thematic holism. Vygotsky similarly employed the congruent concept of networking in his constructivist approach. He sought to determine how students make sense of themselves and their world via their learning experiences. To do this, he posits that teachers should obtain knowledge

about how students categorize their world, in order to devise interdisciplinary *themes or schemata networks* that correlate with the interests of students. Teachers use thematic holism or networks by posing a theme to students, such as the zoo, where students can respond with subthemes, such as kinds of animals, types of animal noises, and formal script roles of staff. Thematic holism and constructivism's theoretical application to reality is apparent in how teachers and students as humans relate to the learning settings of the formal and natural world. Unlike traditional teaching, Vygotsky would advocate a bottom-up teaching approach where the teacher facilitates, as opposed to directs, *what and how* students learn concepts both in and out of the classroom. Ideally, teachers would likewise employ participant observations of student actions to inductively and deductively ascertain how informants derive meaning from their social settings (see Erickson, 1986).

Social Interactions

In symmetry with holists, constructivists address the question as to how students learn by focusing on how each individual constructs knowledge in a social setting. Vygotsky noted that individuals interact with one another in social situations to socially negotiate meaning. The notion of *social* for Vygotsky separates him from behaviorists and the sensationalists of the British school of thought, who viewed the individual experience as being detached from the social setting. Unlike behaviorist and sensationalists, Vygotsky stressed that the mind and body of the subject are joined, and that this connection is further expressed between the subject and objects in his environment. The subject develops his own interpretative meaning of an act while communicating with others. This is exemplified in a math lesson where a teacher conveys the concept of a mathematical operation, such as addition, to a group of students, by providing them with manipula-

tives and diagrams (see Brenner, 1995). These students can initially construct a concrete understanding of this operation by interacting with one another and numerical tangibles (blocks), and then, later, construct abstract meaning by associating the tangibles with written symbols (Jaramillo, 1996). Eventually, they surpass these manipulatives, and learn how to solve problems through abstract thinking, writing, or calculator use.

Thus, a student's development cannot be understood by a study of the individual; we must also examine the *external social world* in which that individual's life developed. In the social world, Vygotsky notes that cognitive and linguistic skill appear twice on two planes; first, it appears on the social plane, and then on the psychological plane. Initially, it appears between people as an interpsychological category, and then within the individual as an intrapsychological category. In Vygotsky's notion of *social* he asserts that the *social* is instrumental towards understanding and teaching children. The *social* consists of the rules and norms of society that adults and more competent peers teach their younger initiates. Like a rite of passage, in the school setting, students learn via un-educative and educative experiences as to what society deems as appropriate behavior. Along with learning what is appropriate, students must actively participate in the classroom as a primer in learning how to contribute democratically in policy and voting.

The classroom, then should be an egalitarian setting, rather than a teacher-centered setting where authority solely determines curricula. Therefore, the curricula should reflect both parties' interests so as to facilitate the connection between curricula and students. When this does not occur in the classroom situation and up throughout the institutions of society, then, the social structure will breakdown, because non-participants will feel disempowered. All participants must feel they are playing a fair game on a level field where the rules are

synonymous. Ultimately, when the rules become external to the very participants of society, an oligarchy tends to make policy for the disenfranchised. To counter this phenomenon's deleterious presence, Vygotsky would encourage students to participate in the classroom with the instructor as rule makers and curricula planners. To develop curricula, teachers must find middle ground between their decisions towards curricula development and individual student interests. Vygotsky implicitly corroborates this concept since he espouses that enculturation requires active social participation in and out of school. Moreover, Vygotsky's notion of Marxist theory with an Engel praxis similarly supports the need for a level egalitarian playing field. In addition to the importance of active socialistic participation during the learning process, Vygotsky emphasizes experiential learning.

Vygotsky wrote extensively about learning by doing. In his theory of experience, he notes that meaning is gleaned from experience. Nevertheless, not all experiences foster appropriate learning; there are normative and deviant experiences. *Normative* experiences are those that connect with an individual's growth whereas *deviant* ones do the converse. A student who copies his answers from another student's exam commits a deviant experience, because his act does not enable him to meaningfully learn concepts now or in the future. Thus, his continued act of plagiarism would not connect with what society deems as acceptable behavior, so it is only a matter of time before he is caught and thereby disconnected from future normative experiences. Although Vygotsky does not explicitly use these words to distinguish experiences, his use of the term *social*, with its corresponding notion that society with its institution of schooling establishes mores and taboos, reveals this dichotomy. Moreover this dichotomy of normative and deviant experiences corresponds with the conceptual parameters of Vygotsky's notion that society

perpetuates and promotes social conformity. As is evident, Vygotsky would concur that deviant acts, such as plagiarism, tend to stem future growth. To counter these disjointed mis-educative experiences, Vygotsky would say that teachers need to devise curricula that directs students along a continuity of experience.

Vygotsky's stress upon experiential learning is further evident in the role of the teacher as a facilitator of this phenomena. The nature of the adult role is reflected in his *zone of proximal development*. Thus, teachers of the Vygotsky mold must foster learning among students that combines internal and external experiences. This experience is an interplay of cognitive, emotional and external interactions. The teacher's role in designing this interplay is manifested in Vygotsky's notion of the *zone of proximal development* which delineates a child's learning environment as not solely in advance of children but all around them. The surrounding social nature of learning encompasses the student's interactions with other peers and the instructor. As Vygotsky ([1933] 1978) writes, "the mind extends beyond the skin and is inseparably joined with other minds" (cited in Wertsch, 1991, p. 90). It is teachers and more competent peers who guide each student's social and cultural experiences.

To facilitate continual learning among students, Vygotsky posited that a teacher can teach any subject effectively to any child at any level of development. To do this, the teacher employs modeling and scaffolding techniques at a level that parallels the learner's *zone of proximal development*. Teachers activate this zone when they teach students concepts that are just above their current skills and knowledge level, which motivates them to excel beyond their current skills level. To prompt students to attain the additional skills needed to reach this zone, teachers encourage them to learn by doing an activity. That is, students learn concepts by using manipulatives (concrete objects) in a realistic-authentic context to construct meaning

from their interpretative experiences. This is exemplified when students use these *manipulatives* to *problem solve* and consequently develop an understanding of the theme of a subject such as math (see Kohl, 1976). Under the guidance of an instructor, students handle and visualize these manipulatives in small group-cooperative learning settings where they learn how to associate these tangible objects with abstract-mathematical concepts.

To learn higher forms of mental activity with the help of adults and more skilled peers, necessitates that this experience interweave with future ones which corresponds with the notion of a continuity prerequisite. To ensure that a student's learning experience is continuous, teachers must act as guides and set the conditions for students to successfully interact with their learning setting. To do this, educators must devise curricula that consists of adult knowledge and wisdom and lead the child to understand the former and latter's meaning in relation to the processes by which they were developed. To impart knowledge to their children, adults use the communication system of language to enculturate their children. Moreover, Vygotsky emphasized that adults use language to inculcate their culture's social values and beliefs to children.

Vygotsky described language as a tool that humans use to share social meanings among one another and to explain how we advance developmentally from natural processes to higher mental processes (Tudge, 1990). For example, as adults teachers use their abstract knowledge of the language they learned via others throughout their lives to direct lessons that will facilitate their students' understanding of new concepts. As new initiates of a culture, the learning process for young students begins at the concrete level where teachers and more competent peers use language to describe the objects and subjects in their setting to the former. After these new initiates learn how to associate concrete objects, such as a *table*, with

abstract language symbols (words), such as the word "table," teachers direct them to solely learn abstract concepts, such as *thinking* which does not have a concrete association.³ Upon achieving this competence, students can converse about abstract concept, such as philosophy, which enables them to ponder and invent new abstraction to describe themselves, others, and their interactions.

As students engage in dialogues with more competent partners and adults, they internalize the language of these interactions and use it to organize their individual endeavors in the same manner (Berk, 1994). Language thus plays an essential part in socially shaping the minds of students, because it is their major vehicle of communication with one another. It also functions as the principal means by which social experience is represented psychologically, and is therefore a necessary tool of communication in virtually every social situation (Vygotsky [1934] 1978). In the learning setting, the teacher's goal is to convey his interpretation of his pre-existing social world (personal cosmology) to his students to enculturate them into their culture.

Although Vygotsky stressed the need to have adults guide students into adulthood, he also recognized the influence that peers have on one another as they construct meaning. This influence is evident in Vygotsky's *zone of proximal development*. Vygotsky acknowledges that children come to learn adult meanings and actions through peer collaboration. He would likewise advocate that teachers should recognize the potential contributions that students can make when designing curricula and class activities to serve student needs. This is evident in Vygotsky's *zone of proximal development*, which is not limited to a one-way teacher-centered approach towards teaching and curricula development. For example, studies completed by researchers, such as Rogoff (1989), who used the Vygotsky approach indicated that young children not only influence one another

er but influence the adults who are in turn attempting to socialize them (Tudge, 1990). Vygotsky says peers comprise those who are equally competent and those who are more competent. Vygotsky recommended a social context where a more competent child would be paired with a less competent one, so that the former can elevate the latter's competence. This social context promotes sustained achievement for less competent students and thereby produces cognitive growth. Vygotsky's domain of peer interactions acknowledged the importance of *problem solving* towards cognitive growth.

Vygotsky believed that peers arrive at a common understanding by socially negotiating meaning via *problem-solving* activities. At the micro classroom level, peers interact with each other and adults to satisfy these needs. Vygotsky uses the problem-solving notion to distinguish between a student's actual development level and *immediate potential for development* within that domain. When a peer collaborates with a more competent peer or adult, he states that the distance between a student's actual development level of problem-solving and the level of this potential for development through problem solving determines his *zone of proximal development*.

Social interactions between peers elicit different perspectives about a problem. In this cooperative, small group-format, students work in collective groups to solve problems. Teachers guide students to collectively devise methods to solve problems, while each child explains his thinking and simultaneously builds on the thinking of others. Students also develop interdependence by holding each student in a group responsible for the others. This occurs when students work together on a single worksheet and then sign it when they are done to show that they both agree with and understand all the work on it. After handing in their work, teachers ask students to explain their groups' thinking or each of them to represent the group

in a novel group composed of students who developed new ideas. Students benefit by working in small groups with peers which means they can exchange feedback, ask each other queries, and explain their strategies. Students likewise benefit because they can clarify their thinking, discuss misconceptions, and are rarely remain sitting and waiting for an instructor. Students develop better skills of cooperation, communication, exploration, and conceptual development.

Conclusion

This analysis of revealed a connection between Vygotsky's sociocultural theory and constructivism's current teaching strategies and curricula. Conceptual parallels were evident in the following components: holism or networking, pragmatism or socially negotiated meaning making, experientialism, collectivism, adults and more competent peers as learning facilitators, the social and historical dimensions of learning, problem solving, and active learning participation.

Vygotsky addresses the main query as to how students learn, by asking how do students construct meaning. Intrinsic to Vygotsky's sociocultural theory is the notion that social experiences shape the ways that students think and interpret their world. This individual student cognition occurs in a social situation, and is inseparable which corresponds with the integrated nature of holism and the focus of sociocultural theory. To guide student learning, Vygotsky employed the Gestalt concept of networking which is equivalent to the holistic concept of the thematic web. To conduct this activity, teachers should seek to determine how students as individuals describe and identify themselves and their world through their own learning experiences. To do this, Vygotsky noted that individuals interact with one another in social situations to socially negotiate meaning. To learn, he emphasized the importance of problem solving in this process,

which was reflected in his notion of learning by doing. Secondly, Vygotsky believed that peers achieve common understanding by socially negotiating meaning via problem solving activities. Vygotsky's stress upon experiential learning was further expressed in the role of a teacher as a facilitator of this phenomena. The nature of the adult role is evident in his zone of proximal development. Vygotsky discussed how adults use language to inculcate their culture's social values and beliefs to children, he stressed that this tool is vital toward enculturation. Although he emphasized the need to have adults guide students into adulthood, he also acknowledged the influence that peers have one on another as they construct meaning.

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Footnotes

- ¹According to Dr. Kausy, (who is a German Multicultural Educator) the most accurate translations of Vygotsky's works were translated from Russian to German (personal Observation, May 11, 1995). *It is a shame I can't read German or Russian!*
- ²Some neo-cognitivists classify constructivism as a modern extension of cognitivist theory, while some neo-behaviorists (such as Freeman, 1994) classify constructivism as a separate theory of learning. In addition to borrowing from Piaget's theory, I believe that constructivism borrows from the theories of Gestaltism and symbolism.
- ³An association with a physical tangible object as opposed to an abstract intangible concept.