The teaching/learning relationship in the first years of school: Some revolutionary implications of Vygotsky's theory

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Abstract:

During the last twenty years, Vygotsky's theory has increasingly been cited when considering aspects of early education. Most commonly, however, a single concept (the zone of proximal development) has been used to represent the theory, and treated as synonymous with the view that a teacher's job is to scaffold the children's learning. By contrast, in this paper we stress the fact that Vygotsky's theory is one that requires attending to what individuals bring to interactions, what goes on during those interactions, and the cultural contexts (as they have developed over historical time) of the individuals involved. Equally important, we stress that Vygotsky's view of interactions between teachers and children involves the concept of *obuchenie*, a Russian term meaning both teaching and learning, rather than scaffolded instruction. To take this position seriously involves making dramatic changes in the process of education as typically practiced. For this reason Vygotsky's theory has revolutionary implications, examples of which we discuss in the final section.

Keywords: *obuchenie* | Vygotsky | early education | learning | teaching

Article:

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The challenge for today's educator to make schooling a meaningful experience for children is increasingly complex. Children of diverse backgrounds and abilities come to our classrooms to continue their learning and make joyful discoveries. To engage children in the processes of learning and development, we must know who they are and where they come from (Delpit, 1995).

Theorists in the contextualist traditions have contributed to our understanding of how children develop, becoming cultural citizens in the process. One of the enduring dialogues in our history is a conversation between Lev Vygotsky (1896–1934) and his colleagues concerning the relationship of learning and development—and the transforming experiences of schooling. We argue that Vygotsky's theory is one that requires us to pay attention to the historically formed cultural contexts in which children are situated, to interactions between children and those who are more competent in the skills, customs, and practices valued by the culture, and to what the children themselves (as well as those who are more competent) bring to bear during the interactions. Such a prescription evidently involves some degree of complexity, and we will argue that it has revolutionary implications. The reason is that if we take this theory seriously we have to re-think our approach to education. It means that, as teachers, we have to pay particular attention to the ways in which we deal with children from different cultural groups that we have in our classrooms, whether these groups differ from us ethnically or socioeconomically. We have to understand the historically derived differences in backgrounds and the implications for interactions between our students and ourselves. We also have to learn to learn from our students, changing the traditional teaching mode (i.e., one that focuses primarily on a unidirectional transmission of skills and concepts) that many of us use in our classrooms to one that allows a more collaborative learning process to develop, one in which we as teachers learn as our children are learning.

Still more is required of us. First, our classrooms are likely to be culturally varied. Second, there will certainly be children who bring different interests, motivations, and past experiences to any situation even if the classroom is culturally homogeneous. Taking Vygotsky's theory seriously implies that we try to learn from our children while teaching them, as well as having the children teach teachers while learning. Classrooms must therefore be designed, both physically and conceptually, to allow this to happen. These are the revolutionary implications of the theory that will be elucidated in the course of this article.

In this explication of teaching and learning during primary school, we will highlight defining aspects of the culture of education. For purposes of our discussion, culture may be understood as "the product of man's social life and his public activity" (Vygotsky, 1928/1993, p. 164); for children, this means that they appropriate or internalize, through signs and symbols, the culture in which they are situated. From the perspective of Vygotsky's theory, we will elaborate the interrelation of the individual, interpersonal, and cultural-historical aspects of learning and development. We will show that Vygotsky's cultural-historical theory has revolutionary implications for current educational practices because of its emphasis on the pivotal role of schooling in development, and its empowering interpretation of teaching/learning relationships. In the last part of the paper we will discuss some of the implications for the ways in which relationships between teachers and children might be constructed.

A Revolutionary Understanding of Culture and History

In his cultural-historical theory, Vygotsky attempted to sketch how cultural man might overcome *stikhia*, the elemental chaos of nature, through the creation of cultural instruments that would usher in a new human society (van der Veer & Valsiner, 1991). Unlike the "vulgar materialist" position in which humans were viewed as a product of their history and environment, Vygotsky's position developed concurrently with Lenin's emphasis on a dialectical materialist perspective on individual-environment interconnections (Elhammoumi, 2001, 2002; Tudge, 1973). Vygotsky's view was that development could only be understood by focusing on individual, interpersonal, and cultural-historical factors as they mutually influenced one another (Tudge & Scrimsher, 2003). This cultural-historical theory was thus not one in which history or culture plays a deterministic role in human development. Instead, in his lectures and in his writing, Lev Vygotsky developed an elegant theory that focused not only on the ways in which history and culture shape communication and thought but also on the communicative spheres of activity where humans, through the use of tools and symbols, collectively produce something new (Tudge, Putnam, & Valsiner, 1996; Wertsch, Rio, & Alvarez, 1995).

A Cultural-Historical Understanding of Learning and Development

> From the very first days of the child's development his activities acquire a meaning of their own in a system of social behavior and, being directed towards a definite purpose, are refracted through the prism of the child's environment. The path from object to child and from child to object passes through another person. This complex human structure is the product of a developmental process deeply rooted in the links between individual and social history. (Vygotsky, 1930/1978, p. 30)

The essence of cultural-historical development is that "through others, we become ourselves" (Vygotsky, 1931/1997, p. 105). In Vygotsky's theory, development is a process of internalizing or appropriating the tools and symbols of the surrounding culture, as these tools and symbols have been developed over historical time. However, the process of appropriation occurs through the mediation of others, while at the same time being dependent on individual characteristics, such as prior experiences, motivation, and so on. Even for infants, gesturing and pointing (unsuccessful grasping movements) draw attention from a caregiver, the caregiver ascribes meaning to the motion, and the child gets a toy in response to her action. After repeated successes, the child incorporates the process as a strategy for getting what she wants (Vygotsky, 1931/1997).

Cultural-historical theory contends that every function is primarily social and passes through similar processes in the course of development. Every individual and the history of each higher mental function are governed by this law or rule of human development—everything internal was at first external (Vygotsky 1931/1997). However, because the individual necessarily transforms what is appropriated, it is at the same time both socially derived and individually unique.

Vygotsky's radical understanding of culture transformed perspectives on developmental processes. Development does not *precede* learning (as Vygotsky interpreted Piaget) or occur

simultaneously with learning (Vygotsky's view of James' position). Neither does learning stimulate maturation and *push* development forward. Rather, learning goes in advance of development and *awakens* a whole series of developmental processes (Vygotsky, 1934/1987). In other words, learning and development occur in dialectical synthesis. When Vygotsky wrote that learning is a social process before it is an individual function, he did not mean that development is brought about by the world outside the individual. Instead, he meant that the individual is a necessary part of that social world, and is helped to develop by a dynamic combination of his or her own motivations, interests, prior skills or knowledge in conjunction with those of other people.

It is thus important to note that Vygotsky's understanding of interpersonal relationships was bi-directional, dynamic, and contextualist; in this sense it foreshadowed the work of current cultural psychologists such as Cole (1996), Rogoff (1990), and Shweder (1990). "From a bi-directional perspective on the relation between individuals and the context and cultures in which they develop, active developing people construct their own selves using cultural means and in the process construct their cultures anew" (Tudge et al., 1996, p. 194). Cultural development is not chaotic; it does not create anything over and above that which potentially exists in the natural development of the child. (Here, "potential" refers to what the child can learn with assistance within a particular sociocultural context). Cultural development consists of inner changes and transformations of the context to suit the goals of the individual child (Vygotsky, 1935/1994).

"In the process of historical development, social man changes the methods and devices of his behavior, transforms natural instincts and functions, and develops and creates new forms of behavior—specifically cultural" (Vygotsky, 1931/1997, p. 18). The culture of education surrounds a child at birth as everyday experiences invite children to participate in a world of cultural tools that prepare them for lifelong learning. The psychological tools which children use (for example gestures, knots in handkerchiefs, and mathematical symbols) draw them into the cultural world where they internalize (and externalize) cultural lessons. These activities utterly transform mental functioning (Newman, Griffin & Cole, 1989; Tudge & Scrimsher, 2003). Through education, the child accomplishes what humanity has accomplished "in the course of the long history of labor" (Vygostky, 1930/1997, p. 88). This argument does not come from a recapitulationist view of history where the activities of the child simply rehearse cultural lessons and blindly carry on traditions. Rather, the child is engaged in a cultural community where participants engage in cultural practices, are helped by others to reflect on what they are doing and seeing, and together come to imagine future possibilities.

In Vygotsky's theory, the cultural development of the child is represented as a "special type of development [that] cannot be equated, on the one hand, with the process of organic maturation and on the other hand, it cannot be reduced to a simple mechanical assimilation of certain external habits" (Vygotsky, 1931/1997, p. 231). On the contrary, Vygotsky asserted that cultural development is *revolutionary*, not evolutionary, influenced by "driving forces" that create leaps and fluctuations, leading to sharp and sometimes "explosive" changes (Vygotsky, 1931/1997, p. 110).

It is Vygotsky's theoretical position on the social origins of knowledge that distinguishes his conceptual framework from that of cognitive scientists who declare that the unit of analysis, in

cognitive studies, is the individual. In Vygotsky's theory, the unit of analysis is the collaborative relationship, a *functional* system where individual and social learning becomes integrated and appropriated (Newman et al., 1989). Vygotsky asserted that everything a child needs to know is already present in the culture. There is, however, no simple mapping of adult systems of knowing onto child systems of knowing. Rather, the child argues, interprets, and internalizes knowledge in ways that are uniquely meaningful. Through a process of dialogue and discovery, the child may change what the adult knows as well. We have argued that Vygotsky's theory could have a transforming effect on educational practice because of its revolutionary understanding of cultural influences on development and its understanding of the dynamic interaction of learning and development. The second part of our argument centers on schooling—a pivotal time in a child's life for the development of higher mental processes.

The Pivotal Role of Schooling in Vygotsky's Theory

School learning had special significance in Vygotsky's understanding of the influences of learning and development. School learning offered a *new* aspect of learning for the child—systematic learning. In Vygotsky's perspective, preschoolers engage in non-systematic learning. For example, they resolve conflicts through imaginative, dramatic play. In nonsystematic learning, there is a fusion between words and objects (a stick horse is a horse and teddy bears are very real)! In schooled learning, children face external problems, see models of resolutions, discover the meaning and instrumental function of words and interpret signs that are of a different type from those learned outside of school (Vygotsky, 1934/1987). It is here that they develop an understanding of "scientific" (or school-related) concepts.

The Development of Scientific Concepts

The novelty of schooled learning, in cultural-historical theory, emerges as children begin to think in new ways. The purpose of Vygotsky's writing on the development of scientific (schooled) concepts was to clarify the basic laws of concept formation and to create a bridge to the study of children's thinking processes. In Vygotsky's writing, spontaneous (everyday) concepts refer to those that develop through common, practical activity and immediate social interaction (e.g., "house," "dog," "ball"). By contrast, scientific concepts develop in the course of being exposed to, and coming to acquire, a system of knowledge that may include categories for words ("toys"), ideas ("synthesis"), or political concerns such as "exploitation" (Tharp & Gallimore, 1988; van der Veer & Valsiner, 1991; Vygotsky, 1934/1987).

Vygotsky cited an important difference in the function of scientific and spontaneous concepts. In schooling, a child learns the concept and its application concurrently. For example, mastering the concept of "exploitation" will involve children in a discussion of history and the social world so that they can contextualize the concept and begin to use it to capture human experiences. On the other hand, the spontaneous concept, "brother," begins in the everyday context and is already saturated with experience (Vygotsky, 1934/1987). Children learn the application first and only later master the abstraction when they understand that their mother can also have a brother. Similarly, in word-object relations, a thing may first be something to sit on, later a "chair," and much later an element in the conceptual category, "furniture." Abstractions thus build on concrete realities: to understand the concept of "history," a child has to know "before" and

"now." Simply put, a child "cannot gain conscious awareness of what he does not have" (Vygotsky, 1934/1987, p. 216):

> Thus, while scientific and everyday concepts move in opposite directions in development, these processes are internally and profoundly connected with one another. The development of everyday concepts must reach a certain level for the child to learn scientific concepts and gain conscious awareness of them. The child must reach a threshold in the development of spontaneous concepts, a threshold beyond which conscious awareness becomes possible. (Vygotsky, 1934/1987, p. 220)

The development of scientific concepts through conscious awareness comes to fruition in teaching/learning relationships, in which what is already present in the child's everyday world is brought into dialectical contact with cultural meanings. The dialectical nature of this relationship means that cultural-historical theory has a revolutionary impact on the culture of education, one that is empowering for both teacher and children.

An Empowering Interpretation of Teacher-Child Relationships

At the heart of our argument about the revolutionary nature of Vygotsky's theory stands the Russian word *obuchenie.* This word has been translated as either instruction or learning, sometimes in different translations of exactly the same passage in the original Russian text. As we pointed out elsewhere (Tudge & Scrimsher, 2003), the Plenum version of *Thinking and Speech* (Vygotsky, 1987) translated *obuchenie* as "instruction" throughout (see for example p. 212), whereas the *Mind in Society* (Vygotsky, 1978) translation of the same word in the same context is consistently "learning" (a totally different perspective on what Vygotsky meant). By contrast, the meaning of "teaching/learning" is subtly, but clearly, different from either of the words used alone. This means that those who have relied either on *Thinking and Speech* (Vygotsky, 1987) or on the older, less complete, versions of *Thought and Language* (Vygotsky, 1962 or Vygotsky, 1986) have been led to think of the concept as one that relates only to a teacher who provides the instruction to a child who learns. In fact, the word connotes both teaching *and* learning (Bodrova & Leong, 1996; van der Veer & Valsiner, 1991). The more accurate interpretation of the word as teaching/learning connotes highly interactive relations involving all participants in creative activity and growth. "Such a position nicely captures the view, beloved among many teachers that one learns best when teaching!" (Tudge & Scrimsher, 2003, p. 212). Here, we would add that teachers may teach best while learning.

The Development of Conscious Awareness

The reciprocity of the teaching/learning relationship is exemplified in cultural-historical perspectives on the development and realization of conscious awareness. In Vygotsky's theory, collaboration between teachers and children facilitates the re-organization of mental structures. Children co-construct higher psychological structures through mechanisms of *internalization* and *externalization*. Through internalization, the child imitates (but does not copy) what he sees a teacher doing in the context of collaborative relationships. Working with the child to encourage externalization, the "teacher explains, informs, inquires, corrects, and forces the child himself to explain" (Vygotsky 1934/1987, p. 215-216). This collaboration continues even when the teacher

is no longer present to the child. Through imitation, the child carries with him a solution to the problem (now invisible) that he acquired with assistance. When the child applies the solution to a new problem (externalization), it looks from the outside as if he is acting *independently*, but the genesis of his learning occurred in *collaborative* relationships with more competent others (Vygotsky 1934/1987). In collaborative problem-solving, the child and teacher see things in a new way, acquire new skills and, hopefully, learn how to work together more competently. Development can thus be understood as processes of internalization and externalization that reorganize mental structures in relation to one another (Vygotsky, 1935/1994).

Cultural-historical theory asserts that schooling in scientific concepts brings everyday concepts to a higher level and creates (novel) systems of conceptualization. The school-aged child, engaging in reciprocal relationships with more competent others, experiences a transition to verbal introspection that represents the beginning of generalizations or abstractions of mental processes. Through this important transition, a child gains mastery of concepts and new structures of generalization. Thus, "conscious awareness enters through the gate opened up by the scientific concept" (Vygotsky, 1934/1987, p. 191). This transforming process occurs in the midst of collaborative teacher-child relationships, particularly those in which a zone of proximal development is created.

Teaching/Learning in the Zone of Proximal Development

Vygotsky asserted that teaching/learning "is useful only when it moves ahead of development (and thereby impels) or wakens a whole series of functions that are in a stage of maturation lying in the zone of proximal development" (Vygotsky, 1934/1987, p. 212). He called these functions the "buds" or "flowers" of development, rather than its "fruit." Vygotsky's conceptualization of this "sensitive period" in ontogenetic development paralleled that of Montessori and other educators of his day. However, Vygotsky and his colleagues went further in trying to identify a child's optimal period of growth experimentally and theoretically. Whereas other educators relied on direct biological analogies for understanding sensitive periods, Vygotsky's contended that "sensitive periods were associated with the social processes involved in the development of higher mental functions [and] have their source in collaboration and [teaching/learning]" (Vygotsky, 1934/1987, p. 213).

Development based on teaching/learning, collaboration, and imitation "is the source of all the specifically human characteristics of consciousness that develop in the child" (Vygotsky, 1934/1987, p. 210). The child imitates, internalizes, and externalizes all that he is seeing, hearing, and doing with others, within limits imposed by his actual and potential levels of development. He learns to do, with assistance and volition, what he cannot yet do.

> He receives [teaching/learning] in what is accessible to him in collaboration with, or under the guidance of, a teacher. This is a fundamental characteristic of [teaching/learning]. Therefore, the zone of proximal development—which determines the domain of transitions that are accessible to the child—is a defining feature of the relationship between [teaching/learning] and development. (Vygotsky, 1934/1987, p. 211)

In this passage, as in others in which Vygotsky uses the term *obuchenie*, it is clear that he is talking about something far more collaborative than is implied by translating the concept as either learning or instruction. The process of teaching/learning is one governed by a mutuality of purpose. From the teacher's side, this not only involves guidance and careful discernment of what a child knows and needs to know, but also the necessity to learn from the child. From the child's side, there is a history of making sense of the world in a particular way and being motivated to trying to understand it better. Teaching/learning that leads to development thus occurs not through transmission of knowledge (as is implied when the word *obuchenie* is translated as "instruction") but through a collaborative relationship. It is hardly surprising that Vygotsky criticized Thorndike's depiction of the teacher as "the highest authority, the prime mover of the pedagogical mechanism, the source of light and sermon" (Vygotsky, 1925/1987, p. 150).

The non-instructional quality of interactions within the zone of proximal development is even more clearly seen in Vygotsky's discourse on play. "Play creates a zone of proximal development of the child. In play a child always behaves beyond his average age, above his daily behavior" (Vygotsky, 1933/1978, p. 102). Vygotsky was not saying that a child could accomplish anything. Productive teaching/learning occurs only within the limits of thresholds of actual and potential development. In collaboration or in play, those functions that are just beginning to mature are given the support they need for development.

As we have argued elsewhere (Hogan & Tudge, 1999; Tudge & Scrimsher, 2003), it would be a mistake to view the concept of the zone of proximal development either as occupying center stage or divorced from cultural-historical or individual aspects of Vygotsky's theory. For the purposes of this paper, it is important to stress the fact that even when the concept is discussed separately from its cultural-historical underpinnings, its essential bidirectionality should not be ignored. The zone is not some clear-cut space that exists independently of the process of joint activity itself, despite the fact that many authors write as though the teacher's role is to identify the space between what the child currently knows and what the teacher can help him to know. Rather, the zone or proximal development is *created* in the course of collaboration as an emergent property of teacher-child or peer interaction:

> We propose that an essential feature of [teaching/learning] is that it creates the zone of proximal development; that is, [teaching/learning] awakens a variety of developmental processes that are able to operate only when the child is interacting with people in his environment and in collaboration with his peers. (Vygotsky, 1935/1978, p. 90)

Unidirectional interpretations such as those inherent in the construct of scaffolding have little to do with Vygotsky's theory (Tharp & Gallimore, 1988; Tudge & Scrimsher, 2003) and suggest that the main variant is the degree of adult participation (e.g., how high to make the scaffold or how long to keep it in place). As defined initially by Wood, Bruner, and Ross (1976), the term scaffolding was used to capture the way in which an expert helped a novice to perform some task or skill in a more competent way than the novice could achieve without such assistance. Thus "a child or novice [is enabled] to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts" (1976, p. 90). This apparently Vygotskian definition is belied by the following sentence: "This scaffolding consists essentially of the adult 'controlling' those

elements of the task that are initially beyond the learner's capacity, thus permitting him to concentrate upon and complete only those elements that are within his range of competence" (p. 90). This position is quite widely found in the literature. Charlesworth, for example, focusing on the early learning of mathematics, stated:

> According to Vygotsky good teaching is presenting material that is a little ahead of development. Children might not fully understand at first but they will understand with appropriate scaffolding provided by more mature learners…The teachers' responsibility is to identify each students' ZPD and provide developmentally appropriate instruction. (1997, p. 55)

Similar accounts, focusing on child improvement as a function of teacher or parent assistance, are found in many other discussions (Brown & Ferrara, 1985; Wood, 1999). It is interesting to note that in Mallory and New's (1994) widely cited book entitled *Diversity and developmentally appropriate practices*, only one chapter mentions the zone of proximal development, which is defined as a situation in which "more skilled partners provide the child with opportunities to experience and practice more advanced performance" (McCollum & Blair, 1994, p. 86). McCollum and Blair link this concept to their discussion of scaffolding, but approvingly cite Wood et al.'s (1976) focus on the more experienced person's role as controller and simplifier of the task, until the child has been able to master it. This practice may well be what many good teachers try to do, and it is certainly helpful and effective, but it is far too much of a teacher-oriented unidirectional approach to teaching and learning than was meant by Vygotsky.

Such interpretations miss entirely what the child brings to the interaction and the metaphor has nothing to say about the broader cultural-historical setting in which teacher-child interactions occur. Further, the metaphor of scaffolding seriously limits our understanding of what the more competent person can gain from the interaction:

> Whether the image that comes to mind is the scaffold that goes up to support a building being constructed or the scaffold from which someone is going to be hung, the image is that the person who provides the scaffold has clear control of the situation and is not expected to change in the process. (Tudge & Scrimsher, 2003, pp. 219-220)

We do not wish to argue that all scholars ignore the reciprocal nature of interactions within the zone of proximal development; that is far from the case. For example, Berk and Winsler (1995) affirmed that interactions within the zone of proximal development are bidirectional. However, in describing work within the zone, they stress the teacher's role in "[keeping] children working on their tasks…structuring the task and the surrounding environment…and constantly adjusting the amount of adult intervention" (p. 29). The adult is urged to "relinquish control and assistance as soon as the child can work independently" (p. 30).

In the early education literature, the teacher's role is almost always described as having to do with providing the appropriate assistance, and the child's role as using that assistance in appropriate ways. What is missing is a sense of the child having anything to teach the teacher, or the teacher as needing to learn from the child. In contrast, Vygotsky's theoretical perspective requires an understanding that both teacher *and* child are involved in teaching and learning.

Indeed, attempts to understand what one person is doing without examining the activities of the other leads to a misinterpretation of the nature of the interaction. The language that is used to describe the concept of the zone of proximal development, unlike scaffolding, needs to indicate clearly the reciprocal nature of the teaching/learning that must occur from both sides, teacher and child, if teachers are to be encouraged to apply Vygotsky's theory appropriately. For example, co-constructing the task and communication between teacher and child about what they are discovering together is an essential part of the teaching-learning relationship. At the very least, the teacher has never seen an activity or event in the way he or she will see it through the eyes of a particular child, which is in itself a learning experience, one that has the potential to make the teacher understand not only the child better but also the material that is being taught. Further, as we will describe later, good teaching requires learning about the cultural background of the children being taught.

Perhaps, one caveat is in order. In our eagerness to talk about the teacher needing to learn from the child and to eschew an essentially instructional approach to teaching, we must be mindful of what children will need for future endeavors, namely, culturally relevant skills and concepts. These skills and concepts are the essence of what the *teacher* brings to teaching/learning relationships. One of the most important gifts a teacher can have is her or his passion for learning. It is a gift to be freely offered to children. A teacher's enthusiasm is, hopefully, contagious (Jones & Nimmo, 1994). Wanting to teach young children something a teacher has discovered and is excited about is certainly a vital component of pedagogy. Curriculum planning should not be restricted only to what the teacher observes children already doing. A teacher's creativity and enthusiasm may take the children on exciting new adventures where they *together* see the possibilities for what is yet to be. Teaching, in other words, is not a matter of simply providing opportunities to learn and assessing outcomes, nor is it a question of simply following children's leads. Teaching also means "rousing minds to life" (Tharp & Gallimore, 1988).

In the preceding pages, our argument has focused on teaching and learning in a rather narrow sense, and is perhaps not so far removed from what other scholars (Berk & Winsler, 1995; Bodrova & Leong, 1996) have stated. However, any discussion of Vygotsky's theory must extend outside the classroom to the cultural and historical realities in which those classrooms, and the children and teachers within, are situated. In this way, we can draw the connections among the interpersonal aspect of teaching/learning within the zone of proximal development, what each individual (teacher and children) brings to those interactions, and the historically formed cultural realities that often distinguish teachers and children in classrooms that are ethnically and socioeconomically diverse. Specifically, we wish to focus on the mismatches that are often found between the social and ethnic backgrounds of teachers and those of the children who are being taught.

Teaching/Learning Relationships in Cultural-Historical Context

What seems to be missing in the conversations of those who have been influenced by Vygotsky's theory is a thorough analysis of the ways in which the institutional structures of our schools are infused with middle-class European American values. There is certainly an awareness that the incongruence between school structures and natal cultures may well be a precipitating factor in the lower achievement scores for many children of color (Tharp & Gallimore, 1988). Indeed,

children of color, children of working class backgrounds, and children growing up in poverty may experience cultural dissonance, a lack of synchronization with school culture, that negatively affects their school performance and their social well being (Boutte & DeFlorimonte, 1998; Heath, 1983). Reform in early childhood education in part will be helped by recruiting teachers who want to learn from, as well as teach, children of diverse backgrounds and teachers who bring to their work a commitment to, and experience in, teaching for diversity (Ladson-Billings, 2001).

However, this by itself may be insufficient. The application of Vygotsky's theory may well be necessary to encourage all teachers to engage in teaching/learning relationships with the diverse children in their classrooms in ways that link the zone of proximal development to its cultural and historical aspects. From this theoretical perspective, to learn from children is to do more than try to judge their level of understanding of some skill or concept in order to provide the most helpful assistance. For example, the early cultural experiences of Black, Hispanic, and Native-American children in their homes and communities are not the same of those of White children. Good teaching requires learning not only the children's backgrounds but also the specific approaches to learning and communicating with others that children bring with them to school (Tharp, 1989). These approaches are unlikely to be the same as those of most of the teachers they will encounter. The same argument can be made for children growing up in poverty or in working-class families, compared to those growing up in middle-class families. That is the case regardless of ethnic background, although clearly there are important ethnic and class interactions (Graue, 1999; Heath, 1983; Rimm-Kaufman & Pianta, 2000). Mismatches between the backgrounds of teachers and children will be found for all teachers who deal with an ethnically or socioeconomically heterogeneous group of children.

To take just a single example of the effects of this mismatch, the types of early literacy experiences encountered by middle- and working-class White children and working-class Black children have profound implications once the children reach school (Heath, 1983). It is not the case that early schooling mirrors what goes on in White middle-class homes (middleclass children do not engage in "show and tell" at home, and rarely have to practice the type of instructional discourse that is such a peculiar feature of classroom teaching). However, the mainstream cultural expectations of the teachers that children meet once they go to school are such that middle-class White children have a much easier time making the adjustment than do children from different types of backgrounds (Entwisle & Alexander, 1993, 1999; Heath, 1983).

Learning from the children thus involves much more than learning about specific skills or concepts that children might or might not possess; learning, as part of the teaching process, must involve finding out about the cultural backgrounds of the children. In the case of Heath's study, for example, the teachers would have discovered not only that the working-class Black children who entered their classrooms had had little exposure to books but also that they had had a rich exposure to and involvement in story-telling, of using analogies and metaphors, and of playing complex word games. Rather than treating the children as only having deficits that needed to be overcome, *learning* about the children would have helped the teachers build on their strengths. Similarly, knowing that the working-class White children had had plenty of exposure to books and words, but as self-contained activities—tasks to be learned rather than as ways of linking the child to the broader world—would have allowed the teachers to have helped these children

succeed from their strengths while, at the same time, ensuring that they started learning skills that they would also need. By contrast, many of the White middle-class children studied by Heath (1983) came to school prepared for the types of experiences that they subsequently encountered. However, they too would have benefited from the teachers taking into account their cultural backgrounds. Their early reading experiences could have been enriched both by reading to children who had not had much exposure to books and by learning the complex language uses of the Black working-class children. Children, like adults, can learn by teaching.

Learning from the children, however, is not simply a matter of knowing about the children's prior cognitive experiences. Members of different cultural groups (whether immigrants, from varied ethnic groups, or of different social classes) have different values, beliefs, and practices (Harkness & Super, 1996; Tudge et al., 1999). What parents want and expect for their children entering school is more than a good start to their educational experiences. Whereas professional parents might want their children to learn to be relatively independent and self-directing, traditional working-class parents might prefer that their children learn the rules and conform to them (Kohn, 1977). Again, for teachers to be able to teach effectively, it is incumbent on them to learn about the home backgrounds of the children in their class.

How then are classrooms to be set up, if this cultural-historical approach to teaching and learning is to be applied appropriately? Classrooms would certainly look quite different from those we are accustomed to seeing. Whole-group instruction is obviously inadequate for most purposes, but so is the type of small-group work that is found in many early childhood classrooms. In cases in which small-group work is based on perceived cognitive or skill deficits, with assistance being carefully provided so as to remedy those deficits, we would argue that Vygotsky's theory is not being applied appropriately. Instead, classrooms must be places in which all children, as well as their teachers, are actively engaged in the teaching/learning process. Children of various learning levels might be clustered in small groups and encouraged to bring their experiences to the texts they are reading (Tharp & Gallimore, 1988). These shared experiences create zones of proximal development for all those involved, teachers as well as children. In the process, the children are likely to attain conscious awareness…and so are the teachers, who are learning about their children, about what they can do, and how they can grow in collaboration with others.

There are other exciting and revolutionary implications of Vygotsky's theory for those of us who are engaged in the education of teachers themselves. We have to learn from our students, just as we expect them to learn from their eventual young students. If we want to encourage them to apply Vygotsky's theory appropriately, we have to actively participate (as the more competent others) in the very practices that we want them to use. We have to learn from our students as a way of showing them how zones of proximal development are created for them and for us.

To what extent are we helping beginning teachers to apply Vygotsky's theory to the education of young children? Scrimsher (2002) conducted research designed specifically to examine the ways in which preservice teachers conceptualized and put into practice teaching and learning with students from diverse backgrounds. Students were interviewed in the final year of their preservice education, and then again during their first year of teaching in early childhood education settings. Without exception, they believed that their teacher education program had helped them to become skilled practitioners, they felt confident about their preparation for

teaching, and they all exhibited a passion for teaching. On the other hand, although they had all had classes devoted to issues of cultural diversity and all had been exposed to Vygotsky's theory, many of the students were far less confident of the ways in which culture is relevant to teaching. Although they recognized the importance of learning something about the children's backgrounds, they focused almost exclusively on the social and cognitive deficits that they would need to try to remedy. Perhaps, in an attempt not to be apparently discriminatory in their relationships with young children, they insisted that children were individuals and that teachers should focus on children's individual needs and strengths, rather than children as members of different cultural groups. Trying to learn about the cultural strengths of the children with whom they were dealing did not appear to be something that they were well prepared to attempt. In this admittedly small-scale example, we thus find little reason to be optimistic that teacher education programs, even those that try to stress cultural issues that are key to teaching and learning, are producing large numbers of teachers who are prepared to take on the revolutionary implications of Vygotsky's theory. Perhaps, as professors, we need to move further from both a didactic mode of instructing and attempts to scaffold our students, and adopt a mode in which we can learn from the students in the course of teaching them.

We do not wish to argue that Vygotsky's is the only theory that has revolutionary implications for the processes of teaching and learning. There is also a generation of African American scholars who have made similar types of arguments, although from a critical-race perspective. Here the ideas of scholars such as Wilson (1972), Delpit (1988, 1995) and Ladson-Billings (1994, 2001) are central. As Wilson (1972) argued more than three decades ago, African American principles of education are founded on the notion that existence is historically "rooted in an African context that constantly reflected the 'cultural ways' to be learned" (p. 378). Writing about the Nairobi Day School, Wilson noted that a primary responsibility of the educators was to help Black children feel proud of their cultural heritage, particularly through peer collaboration that focuses on self-identification. One of the main tenets of this school was that educators had to "strive to sensitize children to their responsibilities as constructive actors and contributors…rather than passive recipients of favors from adults" (1972, p. 384). Cultural-historical theory delivers the same message.

From a cultural-historical perspective, the affirmation of children's cultural experiences is critical to teaching for diversity (Delpit, 1995; Heath, 1983; Ladson-Billings, 1994). Unfortunately, many teachers and children of color are being left out of conversations that could transform our schools. Frustrations of children and teachers of color are further exacerbated by a lack of knowledge that White teachers have about families of cultures different than their own. To counteract stereotypical thinking and bring more balanced and realistic perspectives, researchers and theorists must recognize the variability and strengths of families within and across cultural groups (Boutte & DeFlorimonte, 1998; Heath, 1989). For example, studies on the language development of children of color must recognize that literacy is more than the result of an exposure to books and opportunities to write. It is part of an extensive and historically derived process of socialization affected by culture, economics, demands of the workplace, marital patterns, and a host of other factors (Heath, 1989). In oral traditions, literacy develops in community gatherings; older adults pass along songs, folklore, and stories of resistance to oppression (Heath, 1989; Levine, 1977). A lack of knowledge of the communicative styles of

diverse cultures groups contributes to the cultural dissonance many children of color experience in our schools.

> The school has seemed unable to recognize and take up the potentially positive interactive and adaptive verbal and interpretive habits learned by Black American children (as well as other non-mainstream groups), rural and urban, within their families and on the streets. These uses of language—spoken and written—are wide ranging, and many represent skills that would benefit all youngsters: keen listening and observational skills, quick recognition of nuanced roles, rapid-fire dialogue, hard-driving argumentation, succinct recapitulation of an event, striking metaphors, and comparative analyses based on unexpected analogies. (Heath, 1989, p. 370)

Cultural-historical theory forces us to acknowledge that different groups in any society, and certainly groups in different societies, have different cultural backgrounds, different values and beliefs, etc. Cultural-historical theory is revolutionary because it attends to the cultural development of children (and adults). We are not all the same. We have unique histories. We make unique contributions. Therefore, cultural historical theory asks radically different questions. What do children and their teachers bring to the schooling experience? How does their individual and collective history of learning affect their interactions? What do they learn from one another? How will they create the future?

As well as these linkages with critical-race scholars, there are compelling connections between Vygotsky's ideas and the thinking of more recent critical theorists in Brazil (Freitas, 1988; Souza Lima, 1995), particularly in regard to the understanding of teacher-child relationships. Paulo Freire contends that pedagogy, particularly within the context of oppression, must be a revolutionary pedagogy that, through dialogue, establishes a relationship between the former oppressor and oppressed. In a discussion of pedagogy that nicely fits the Russian concept of *obuchenie,* Freire (1972) asserted that teachers, as revolutionary leaders, should practice co-intentionality in the classroom. Together with their students, teachers create knowledge of reality through common reflection and action. Freire's critique is of a "banking" system of education in which teachers narrate knowledge (instruction) and deposit facts into students' memory banks.

> The teacher presents himself to his students as their necessary opposite; by considering their ignorance absolute, he justifies his own existence. The students, alienated like the slave in the Hegelian dialectic, accept their ignorance as justifying the teachers' existence—but, unlike the slave, they never discover that they educate the teacher. (Freire, 1972, p. 46)

Unlike this approach to education, one that creates a "production of ignorance" (Freitas, 1988), liberating education is one in which

> the teacher-of-the-students and the students-of-the-teacher cease to exist and a new term emerges: teacher-student with students-teachers. The teacher is no longer merely the-one-who-teaches, but one who is himself taught in dialogue with the students, who in their turn while being taught also teach. (Freire, 1972, p. 53)

Whereas Freire's ideas are acknowledged to have revolutionary implications, Vygotsky's views, when interpreted by North American educators, have been stripped of some of the very meanings that give them their power (Duarte, 2000; Elhammoumi, 2001).

Implications of Vygotsky's Theory for Current Educational Practices

In this final section, we wish to provide some examples of what schools might look like if they incorporated Vygotsky's theory in ways that we consider appropriate. In so doing, we want to make clear that changing the classroom to make it a place in which teaching/learning relationships can be fostered involves more than organizing children into small collaborative groups (although that helps), more than encouraging the teacher to provide sensitive scaffolding to help children learn (although that is also helpful), and more than acknowledging diversity by having a photo of Martin Luther King on the wall, a week devoted to African American history, or opportunities for parents to bring foods or clothing from their cultures of background.

One example of how a cultural-historical perspective can be applied in early education settings is that of the Kamehameha Elementary Education Program (KEEP, Tharp & Gallimore, 1988). In this program it is essential that the teachers learn from their children while teaching, and that children teach their teachers (and their peers) while they are learning. For example, children are encouraged to bring their own experiences into instructional conversations focused on reading and comprehension. An underlying conviction of KEEP is that children bring something critical to any activity, because teachers do not know all that a child knows; they must inquire about it— and listen enthusiastically (Tharp & Gallimore, 1988).

The KEEP model designs lessons in comprehension based on the research of Au (as cited in Tharp & Gallimore, 1988). Teachers follow thematic routines, labeled Experience-Text-Relationship (E-T-R) sequences. At Center One, in KEEP model classrooms, teachers and children work collaboratively in twenty-minute sessions. Lessons focus on reading, thinking, listening, and speaking. The teacher first invites the children to relate the selected book to their own experiences (E). Next, attention focuses on the text material (T) and, finally, on the relationship between the children's experience and the text (R). Beginning teachers work with mentors who encourage them to listen to what the children are saying. Mentors also urge teachers to think about how their own experiences impact their relationship with the text and facilitate or inhibit their interactions with the children. From responsive interactions, new narratives emerge.

Tharp's (1989) discussion of the different communication styles of Navajo, Hawaiian, and Anglo children and teachers provides another glimpse of the types of changes needed within schools. The traditional (Anglo) teacher's approach to encouraging conversation with the children was ineffective with both the Navajo and Hawaiian children because of the teacher's lack of knowledge of cultural differences in communication styles. Until teachers have learned that Navajo children are used to long silences for reflecting on questions and want to make sure that one person has said all that is to be said, teachers may interpret silence as either ignorance or indifference. Until teachers have learned that the Hawaiian "talk-story" involves plenty of overlapping conversation and communication, teachers may interpret the children's willingness to talk at the same time as other children as rudeness.

To use Vygotsky's theory appropriately in early education settings we thus need to create classrooms in which real communication between teachers and children is valued and fostered. Such communication is not unidirectional, directed at children by teachers. Lest we think that such one-sided communication is rare in early education, it is worth noting that Vernon-Feagans (1996), in her compelling ethnographic account of language in Headstart classes that catered predominantly to poor Black children, discovered that 90% of the language use was directed at children by their teachers. She saw a striking contrast between the essential poverty of the language used in school and the richness of the language in and around the home.

Discussion between children and between children and teachers is essential if teachers are to learn about the children. It is only via the process of learning that teachers can hope to teach effectively. The children, too, will learn better if they are able to teach other children and their teachers about themselves, about their past experiences, and about their interests and motivations. For teachers, it is particularly valuable to learn about students who come from backgrounds different (ethnically or socioeconomically) from their own, thus linking the cultural-historical, interpersonal, and individual levels. It is only in this way that teachers can know both the strengths and the weaknesses that the students bring with them to the classroom, so that the latter can be overcome and the former can be built upon. Teachers can only gain from this process of learning, but so can the children, who will find that their voices are listened to, their experiences valued. As one of the African American preservice teachers interviewed by Delpit (1995) put it, teachers listening to their students is "really the only way to teach" (Delpit, 1995, p. 20). In the telling (and the listening), students and teachers learn from one another. From this perspective, children from backgrounds different from those of the teachers cannot be thought of as having "deficits" that need to be fixed; rather, teachers should think of themselves as having a limited knowledge base that needs to be expanded. In order to teach children from a different background, teachers have to learn from their children and allow the children to serve as their teachers.

If we, as teacher educators, are to foster this type of interactive teaching/learning relationship in early childhood classrooms, what is it that we need to do? Many of us will need to change the ways in which we try to teach our students, in order to put into practice the very type of interactive approach that we wish our students to employ with the children that they will go on to teach. Many of us are probably used to presenting information to our students and asking them questions to which we already know the answers. We do so effectively, for the most part, trying hard to provide assistance just in advance of their current levels of thinking. We aim, in other words, at being good scaffolders of our students, rather than at fostering teaching/learning. It is not surprising, then, that Scrimsher (2002) found so little evidence of beginning teachers employing teaching/learning strategies with their children, teaching fairly effectively but not learning from the children and not giving them the opportunity to teach.

Sometimes students are encouraged to present their own ideas to the rest of the class and to the professor, which is, from this perspective, a step in the right direction. Alternative strategies, however, include the use of more small-group work, in which students would be encouraged to bring their own perspectives to the ideas and concepts under discussion, and for the ideas stemming from the group to be discussed by the entire class and professor. The latter occupies

the position of more competent person, and he or she will bring experience, background, and understanding that will help the students learn. However, the professor will also learn from the students' insights, broadening or deepening his or her ways of making sense of the material, in a dialectical process in which the richer understanding is a product neither of professor alone nor students alone but something that emerges from the interactive processes themselves. In other words, zones of proximal development are being created. And this, of course, is precisely what we are arguing needs to occur when teachers are working with young children. Preservice teachers cannot simply be *taught* this approach in a relatively didactic manner; they need to experience teaching/learning relationships in their own education if they are to be able to apply it after becoming teachers themselves.

From the perspective of Vygotsky's theory, therefore, teaching/learning relationships are critical to the development of young children in school. When scholars invoke the concept of the zone of proximal development, we believe that they should link the concept to this teaching/learning relationship, rather than just to the idea of scaffolding. To reiterate, the image of the scaffold too often carries with it the sense that the teacher's role is to control and guide their children's learning, a role that does not fit well within Vygotsky's theory.

The teaching/learning relationship is vital, and revolutionary, because it serves as a link between the zone of proximal development (an interpersonal factor in development), individual factors, and the cultural-historical part of Vygotsky's theory. Teachers, particularly those dealing with children from diverse backgrounds, can most effectively teach their children when they are willing to learn about what these children bring with them to their classrooms. In this way individual factors, such as the interests, past experiences, and motivations for learning of teachers and children are interwoven with interpersonal factors that emerge when teachers and children together create zones of proximal development. These individual and interpersonal factors are then interwoven in a broader context as the historically-derived cultures represented in the classroom come together to effect healthy development for teachers and children alike. In a revolutionary classroom, all learn best while teaching and teach best when having learned!

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