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Without Creating ZPDs There is No Creativity

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When discussing the essential role of play in early child development, Vygotsky remarked, “In play a child always behaves beyond his average age, above his daily behavior; in play it is as though he were a head taller than himself” (1978, p. 102). In this chapter I will explore that marvelous metaphor “a head taller” in the context of investigating the mundane creativity that is and produces human development and learning. In other words, my focus here is on the *collective activity of creating*. I am interested in how social units create environments in which they qualitatively transform themselves and their environments. I propose an understanding of creativity as socially imitative and complete activity. I have come to this understanding from immersion in a quarter-century of intervention research that actualizes the “head taller” experience for people across the life span by allowing, inviting and guiding them to create zones of proximal development (ZPDs). This research, serving only as a backdrop for the present discussion, is discussed in other writings, the most recent being *Vygotsky at Work and Play* (Holzman, 2009).

A ZPD is a ZPD — or is it?

Even though Vygotsky's ZPD is essential to his understanding of *the relationship between development and learning and play*, it has become, in our time, more narrowly associated with learning and the school-like acquisition of knowledge and skills. Part of what I want to do in this discussion is restore the complexity, radicalness and practicality of Vygotsky's discovery of the ZPD.

The ZPD is important in Vygotsky's rejection of the popular belief that learning follows and is dependent upon development, and in his related criticism of traditional teaching: "Instruction would be completely unnecessary if it merely utilized what had already matured in the developmental process, if it were not itself a source of development" (Vygotsky, 1987, p. 212).¹ Rejecting the view that learning depends on and follows development, Vygotsky put forth a new relationship between these two activities: "The only instruction which is useful in childhood is that which moves ahead of development, that which leads it" (p. 211)... "pushing it further and eliciting new formations" (p. 198). In other words, for Vygotsky *learning leads development*. In previous works, I refer to this discovery as not merely a new relationship but as a new *kind* of relationship (at least for psychology) — the dialectical unity learning-leading-development. I do this to capture the way Vygotsky sees learning and development as a totality, and change as qualitative transformation of the whole (Newman and Holzman, 1993; Holzman, 1997).

The question of how learning leads development depends, at least in part, on how we understand what the ZPD is. As the most popularized concept stemming from Vygotsky's writings, the ZPD has been given multiple interpretations by educational researchers, psychologists and others. Different meanings can be traced, in part, to

different translations of his writings (Glick, 2004) and from the numerous contexts in which Vygotsky wrote about the ZPD. In briefly reviewing some of these contexts, understandings and implications that follow from them, I will bring together Vygotsky's comments from diverse sources and provide the backdrop for the view I am putting forth.

Individual. A common understanding of the ZPD is that it is a characteristic or property of an individual child. This understanding stems from passages like the following:

The psychologist must not limit his analysis to functions that have matured. He must consider those that are in the process of maturing. If he is to fully evaluate the state of the child's development, the psychologist must consider not only the actual level of development but *the zone of proximal development*. (Vygotsky, 1987, pp. 208-9)

To some educational researchers this translates into the ZPD being—or producing—a measure of a child's potential, and they have devised alternative means of measuring and evaluating individual children (for example, Allal and Pelgrims, 2000; Lantolf, 2000; Lidz and Gindis, 2003; Newman, Griffin and Cole, 1989; Tharp and Gallimore, 1988).

Dyadic. In other passages, however, the ZPD plays a key role in Vygotsky's argument that learning and development are fundamentally social and form a unity. Joint activity and collaboration in children's daily life are also implicated, as in the following passage:

What we call the Zone of Proximal Development ...is the distance between the actual developmental level as determined by independent problem solving, and the level of potential development as determined through problem solving under guidance or in collaboration with more capable peers. (Vygotsky, 1978, p. 86)

Perhaps it was the phrase “more capable” that led to the conceptualization of the ZPD as a form of aid—termed prosthesis by Shoter, (1989 and Wertsch (1991) and scaffolding by Wood, Bruner and Ross (1976).² This conceptualization has become so popular that the typical college textbook equates the ZPD with scaffolding and (incorrectly) attributes both terms to Vygotsky (for example, Berk and Winsler, 1995; MacNaughton and Williams, 1998; Rodgers and Rodgers, 2004). Moreover, despite Vygotsky’s mention of “peers” in the passage above, most empirical research with this perspective takes “the aid” to be a single, more capable individual, most often an adult (termed “expert” in contrast to the “novice” child).

In keeping with this dyadic interpretation of the ZPD, it is common for “social level” and “interpsychological” to be reduced to a two-person unit in the following oft-quoted passage:

Every function in the child’s cultural development appears twice: first on the social level and later, on the individual level; first *between* people (*interpsychological*), and then *inside* the child (*intrapsychological*). This applies equally to all voluntary attention, to logical memory, and to the formation of concepts. All the higher mental functions originate as actual relations between people. (Vygotsky, 1978, p. 57)

Collective. At other times Vygotsky emphasized more clearly that the socialness of learning-leading-development is collective, that the ZPD is not exclusively or even primarily a dyadic relationship, and that what is key to the ZPD is that people are doing something together. For example, “Learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers” (Vygotsky, 1978, p. 90).

The necessity of collective activity that Vygotsky attributes to the learning-development relationship is at the forefront of his approach to special education. His writings on this subject (collected and published in English as *Fundamentals of Defectology*, 1997) argue that children with abnormalities such as retardation, blindness or deafness can indeed develop. They should not be written off or remediated, nor should these children be segregated and placed in schools with only children like themselves. Vygotsky made the point that qualitative transformation (as opposed to rote learning) is a collective accomplishment - a “collective form of ‘working together’” he called it in an essay entitled, “The Collective as a Factor in the Development of the Abnormal Child” (Vygotsky, 2004, p. 202). In this same essay he characterized the social, or interpsychological, level of development (in the quote above, p. 4) as “a function of collective behavior, as a form of cooperation or cooperative activity” (p. 202).

I like that phrase, “a collective form of working together.” It seems a good fit with my experience as researcher, teacher and trainer. I read Vygotsky here as saying that the *ZPD is actively and socially created*. This is beyond and perhaps other than the popular conception of the ZPD as an entity existing in psychological-cultural-social space and time. For me, the ZPD is more usefully understood as a process rather than as a spatio-

temporal entity, and as an activity rather than a zone, space or distance. Furthermore, I offer the *ZPD activity* as the simultaneous creating of the zone (environment) and what is created (learning-leading-development).

Creativity

The concept of ZPD activity provides a new way to understand human development that puts creativity center stage. Not creativity as typically understood, however. For in both everyday and psychological discourse creativity is taken to be an attribute of individuals. Further, creative individuals are understood to produce special things — original, novel, unique, and perhaps extraordinary or extraordinarily significant—relative to others who are “not creative.” The kind of creativity I am talking about in relation to ZPD activity is not an attribute of individuals but of social units (e.g., dyads, groups, collectives, and so on), and it is not special or extraordinary, but ordinary and everyday. (Yet, while mundane, it is also magical!).

How do social units create ZPDs? For one thing, we must be capable of doing what we do not know how to do, either individually or collectively. Human beings learn and develop without knowing how or that we know. In other words, *we become epistemologists without employing epistemology*. Vygotsky recognized this seeming paradox of human life, at least in its early childhood version. He understood that developmental activity does not require knowing how, as when he identified “the child’s potential to move from what he is able to do to what he is not” (Vygotsky, 1987, p. 212) as the central characteristic and creative activity of learning leading development.

Further, he understood that for young children, knowing how to do a particular thing does not require knowing that they are doing this particular thing. As he put it,

“...before a child has acquired grammatical and written language, he knows how to do things but does not know that he knows.... In play a child spontaneously makes use of his ability to separate meaning from an object without knowing that he is doing it, just as he does not know he is speaking in prose but talks without paying attention to the words “ (Vygotsky, 1978, p. 99). This thread of Vygotsky’s thought has, to my way of thinking, been neglected, not only in the study of early childhood but also in its implications for understanding and fostering development throughout the life span. If children do not need to know, why do the rest of us? (Holzman, 1997; Newman and Holzman, 1997). This question has been debated vigorously by postmodernists, of course, but very little by cultural historical activity theorists—a situation I have tried to remedy (see, for example, Holzman, 2006).

Inspired by Vygotsky’s insights on how very young children and children with disabilities go beyond themselves qua selves and participate in ZPD activity (creating environments for learning-leading development and simultaneously learning-leading-development), my work has been to expand this creative methodology through collaboration with others in building “ZPD-creating-head taller” therapeutic, educational and organizational practices and simultaneously studying the practices we have built. Development, from this perspective, is the practice of a *methodology of becoming* — in which people shape and reshape their relationships to themselves, each other and to the material and psychological tools and objects of their world.

Imitation

Thus far, I have suggested that from a developmental and educational perspective it is useful to understand ZPDs as actively created, that the creators are social units rather than

individuals, and that the creative ZPD activity is a non-epistemological methodology of becoming. What is this methodology? In other words, what does being a head taller look like?

The answer requires taking a new look at imitation. Along with not knowing, imitation has been overlooked by socio-cultural researchers, in my opinion. And as with not knowing, I suggest that imitation is necessary for creativity in general and for creating ZPDs in particular. In relation to ZPDs, I take my cue from Vygotsky: “A full understanding of the concept of the zone of proximal development must result in a reevaluation of the role of imitation in learning” (1978, p. 87).

As part of his reevaluation, Vygotsky discounted an essentially mechanistic view of imitation that was “rooted in traditional psychology, as well as in everyday consciousness” (Vygotsky, 1987, p. 209). He was also wary of the individualistically biased inferences drawn from such a view, as for example, that “the child can imitate anything” and that “what I can do by imitating says nothing about my own mind” (1987, p. 209). In its stead, Vygotsky posited that imitation is a social-relational activity essential to development: “Development based on collaboration and imitation is the source of all specifically human characteristics of consciousness that develop in a child” (Vygotsky, 1987, p. 210).

Children do not imitate anything and everything as a parrot does, but rather what is “beyond them” developmentally speaking and yet present in their environment and relationships. In other words, imitation is fundamentally creative, by which I mean that it helps to create the ZPD. The kind of language play that typifies conversations between very young children and their caregivers can perhaps provide clarity on this point. Here is

one of Vygotsky's many descriptions of early childhood language development. It is a difficult passage, one that I have to re-discover the meaning of each time I read it.

We have a child who has only just begun to speak and he pronounces single words... But is fully developed speech, which the child is only able to master at the end of this period of development, already present in the child's environment? It is, indeed. The child speaks in one word phrases, but his mother talks to him in language which is already grammatically and syntactically formed and which has a large vocabulary... Let us agree to call this developed form, which is supposed to make its appearance at the end of the child's development, the final or ideal form And let us call the child's form of speech the primary or rudimentary form. The greatest characteristic feature of child development is that this development is achieved under particular conditions of interaction with the environment, where this ...form which is going to appear only at the end of the process of development is not only already there in the environment ... but actually interacts and exerts a real influence on the primary form, on the first steps of the child's development. *Something which is only supposed to take shape at the very end of development, somehow influences the very first steps in this development.* (Vygotsky, 1994, p. 348)

Both developed and rudimentary language are present in the environment, Vygotsky tells us. In that case, what is environment? If both forms of language are present, then

environment cannot be something fixed in space and time, nor separate from child and mother. Rather, it seems that environment must be both what is—the specific socio-cultural-historical conditions in which child and mother are located—and what is coming into existence—the changed environment being created by their language activity. In other words, this environment is as much activity as it is context. In their speaking together, very young children and their caregivers are continuously reshaping the “rudimentary” and “developed” forms of language. It is this activity, I suggest, that is and creates the ZPD—and through which the child develops as a speaker, meaning maker and language user.

Completion

Along with imitation there is another activity taking place in the creating of the language-learning ZPD—completion. This idea is based in Vygotsky’s understanding of the relationship between thinking and speaking, in which he challenged the expressionist view of language (that our language expresses our thoughts and feelings). Speaking, he said, is not the outward expression of thinking, but part of a unified, transformative process. Two passages from *Thinking and Speech* are especially clear in characterizing his alternative understanding:

The relationship of thought to word is not a thing but a process, a movement from thought to word and from word to thought ... Thought is not expressed but completed in the word. We can, therefore, speak of the establishment (i.e., the unity of being and nonbeing) of thought in the word. Any thought

strives to unify, to establish a relationship between one thing and another.

Any thought has movement. It unfolds. (Vygotsky, 1987, p. 250)

The structure of speech is not simply the mirror image of the structure of thought. It cannot, therefore, be placed on thought like clothes off a rack.

Speech does not merely serve as the expression of developed thought.

Thought is restructured as it is transformed into speech. It is not expressed but completed in the word. (Vygotsky, 1987, p.251)

Instead of positing a separation into two realms—the private one of thinking and the social one of speaking—there is just one: speaking/thinking, a dialectical unity in which speaking *completes* thinking. Vygotsky was delineating the thinking-speaking process for individuals, but his conceptualization can be expanded in the following way. If speaking is the completing of thinking, if the process is continuously creative in socio-cultural space, then the “completer” does not have to be the one who is doing the thinking. Others can complete for us (Newman and Holzman, 1993; Holzman, 2009). Think about it. Would children be able to engage in language play/conversation before they knew language if thinking/speaking were not a continuously socially complete activity in which others were completing for them?

The ongoing activity of completion can be seen in the conversations that very young children and their speaking caregivers create, as in caregivers’ typical responses to the single words and phrases of toddlers (e.g., Child: “Cookie!” Adult: Want a cookie? [getting cookie and giving it to child] Child: “Mama cookie.” Adult: “Yes, Mommy’s

giving you a cookie.”). Like the child’s imitations, completion is also a dominant activity of creating the language-learning ZPD.³ Together, imitation and completion comprise much of the language play that transforms the total environment, a process out of which a new speaker emerges.

The current culture too often loses sight of what I have presented—not its detail but its general common sense notions. Children do not learn language nor are they taught language in the structured, systematic, cognitive, acquisitional and transmittal sense typical of later institutionalized learning and teaching. They develop as speakers, language makers and language users as an inseparable part of joining and transforming the social life of their family, community and culture. When babies begin to babble they are speaking before they know how to speak or that they speak, by virtue of the speakers around them accepting them into the community of speakers and creating conversation with them. Mothers, fathers, grandparents, siblings and others do not have a curriculum, give them a grammar book and dictionary to study, nor remain silent around them. Rather, they relate to infants and babies as capable of doing things that are beyond them. They relate to them as fellow speakers, feelers, thinkers and makers of meaning—in other words, as fellow creators. This is what makes it possible for very young children to be as though a head taller.

Play

It is time to return to play, the activity to which Vygotsky attributed the “head taller” experience. His writing on play concerned young children’s free play of fantasy and pretense, and the more structured and rule-governed playing of games that becomes frequent in later childhood.

All play, Vygotsky believed, creates an imaginary situation and all imaginary situations contain rules. It is the relationship between the two that changes with different kinds of play. In the game play of later childhood, rules are overt, often formulated in advance, and dominate over the imaginary situation. The elements of pretend are very much in the background and rules are instrumentally necessary to the playing (Vygotsky, 1978). Think of basketball, video games, and board games.

In the earlier play of very young children—the rich meaning-making environment of free and pretend play—the imaginary situation dominates over rules. The rules don't even exist until the playing begins, because they come into existence at the same time and through the creation of the imaginary situation. In Vygotsky's words, they are "not rules that are formulated in advance and that change during the course of the game but ones that stem from an imaginary situation" (1978, p. 95). That is, they are rules created *in the activity of playing*.

When a young child takes a pencil and makes horse-like movements with it, in creating this imaginary situation s/he is simultaneously creating the "rules" (keep jumping, make whinnying sounds, don't write on the paper) of the play. When children are playing Mommy and baby, the new meaning that the imaginary situation creates also creates the "rules" of the play (for example, how Mommy and baby relate to each other "in character"). In these examples, at the same time as new meaning is being created with pencil, self and peer, the "old" meanings of horse, pencil, Mommy and baby are suspended from these objects and people. Both the old and the new meanings are present in the environment. This is analogous to creating language-learning ZPDs just discussed, in which environment is both the specific socio-cultural-historical conditions under which

children play, and the changed environment being created by their play activity. Here, as in that case, environment is as much activity as it is context.

It is these elements of free or pretend play that, for Vygotsky, distinguish the play ZPD from that of learning-instruction ZPD:

Though the play-development relationship can be compared to the instruction-development relationship, play provides a much wider background for changes in needs and consciousness. Action in the imaginative sphere, in an imaginary situation, the creation of voluntary intentions, and the formation of real-life plans and volitional motives - all appear in play and make it the highest level of preschool development.

(Vygotsky, 1978, pp. 102-3).

In making this distinction, to my way of thinking Vygotsky makes too sharp a break between playing and learning-instruction. Can't play be the highest level of preschool development and still be developmentally important cross the life span? I think so. I think that Vygotsky overlooked some continuity between the two ZPDs, in part because he was so concerned with learning in formalized school contexts. This continuity, which I have come to believe have significance for later childhood and beyond, relates to the characteristics of creativity in ZPD activity that I have been discussing.

Learning Playfully Outside of School

It is a feature of our western culture (and most other cultures) that we relate to very young children as creative. I mean that both in the sense of creativity I have introduced

here—their participation in creating ZPDs—and in the more conventional sense of appreciating their individual products (scribbles, phrases, songs, dances, and so on). And we gradually stop doing so as they get older. We bifurcate learning and playing, trivializing play in the process, and have created institutionalized structures to maintain that bifurcation and trivialization. We introduce the concept of work. In nearly all schools the elements of ZPD-creating—freedom from knowing, creative imitation, and completion— are absent.

We also relate to the imitative activity of very young children as creative in both the mundane and the appreciative senses. And we gradually stop doing that as they get older. Imitating becomes copying. What once gave delight is to be avoided. A child of three or four years is likely to be told she is clever or smart (or at least cute) for creatively imitating. In nearly all schools, a child of seven or eight is likely to be told she is cheating and shouldn't copy.

In the extreme, schooling transforms not knowing into a deficit; creative imitation into individualized accomplishments, rote learning and testing; and completion into correction and competition.

This is the current situation. This is what schools do and don't do. I am as concerned as the next person about it, but I am equally concerned with bringing outside of school learning to the forefront of dialogue and debate among educators, researchers, policy makers and the public. This is because that is where creativity still lives. Putting on a play or concert and playing basketball as a team require the members to create a collective form of working together. Unfortunately, doing well in school does not. My reading of the literature on outside of school programs, along with my own intervention

research, shows that outside of school programs (in particular, those involving the arts or sports) are more often than not learning-leading-development environments, methodologically analogous to early childhood ZPDs in a manner appropriate to school-aged children and adolescents.⁴ Whether deliberately or not, they continue to relate to young people as creative, in both mundane and appreciative senses.

These kinds of cultural outside of school programs share important features, most notably, those that foster activities that create ZPDs: freedom from knowing and socially imitative and competitive activity. First, kids come to them to learn how to do something they do not know how to do. Maybe they want to perform in a play, make music videos, play the flute, dance, or play basketball. They bring with them some expectation that they *will* learn. They are related to by skilled outside of school instructors, often practitioners themselves, as capable of learning, regardless of how much they know coming in to the program. Thus, while there are of course differences in skills and experience that young people bring to outside of school programs, the playing field is more level than in school. Really good programs, in fact, use such heterogeneity for everyone's advantage (Gordon, Bowman, and Mejia, 2003; Holzman, 2006, 2009).

Second, in these programs it's OK to imitate and complete. In fact, it's essential. The presumption is that how one becomes an actor, music producer, musician, dancer and athlete is by doing what others do and building on it. From the fundamentals through advanced techniques and forms, creatively imitating instructors and peers — and being completed by them— is what is expected and reinforced.

I have come to view outside of school programs that have these features as learning environments created by, and allowing for, *learning playfully*. They are, in this sense, a

synthesis of Vygotsky's ZPDs of learning-instruction and of play, not as spatio-temporal zones but as mundane creative activity. For, as in the free or pretend play of early childhood, the players (both students and instructors) are more directly the producers of their environment-activity, in charge of generating and coordinating the perceptual, cognitive and emotional elements of their learning and playing. Most psychologists and educators value play for how it facilitates the learning of social roles, with socio-cultural researchers taking play to be an instrumental tool that mediates between the individual and the culture and, thereby, a particular culture is appropriated (as in the work of Nicolopoulou and Cole, 1993; Rogoff, 1990; Rogoff and Lave, 1984; Wertsch, 1985). Through acting out roles (play-acting), children try out the roles they will soon take on in "real life." I am sympathetic to this understanding and yet I think there is more that play contributes to development than this. Being a head taller is an ensemble performance, not "an act." After all, we don't say the babbling baby is acting out a role.

I see play as both appropriating culture and creating culture, a performing of who we are becoming (Newman and Holzman, 1993; Holzman, 1997, 2009). I see creative imitation as a type of performance. When they are playing with language very young children are simultaneously performing - *becoming* - themselves. In the theatrical sense of the word, performing is a way of taking "who we are" and creating something new - in this case a newly emerging speaker, on the stage a newly emerging character, in an outside of school program a skilled dancer or athlete - through incorporating "the other."

In his essay on the development of personality and world view in children, Vygotsky wrote that the preschool child "can be somebody else just as easily as he can be himself" (Vygotsky, 1997, p. 249). Vygotsky attributed this to the child's lack of

recognition that s/he is an “I” and went on to discuss how personality and play transform through later childhood. I take Vygotsky to be saying that performing as someone else is an essential source of development, at the time of life before “I.”

Early childhood is the time before “I” and the time before “I know.” We can never completely replicate the type of lived activity out of which learning-leading-development occurs and “I” and “I know” are created. Nor should we want to. But outside of school programs, to the extent that they are spaces and stages for creativity (mundane and otherwise), appear to support young people’s learning-leading-development through revitalizing play and performance. Such programs are precisely the kind of support schools need, for as long as schools continue to discourage creativity.

References

- Allal, L. and Pelgrims, A. (2000). Assessment of or in the zone of proximal development. *Learning and Instruction, 10,2*, 137-152.
- Arts Education Partnership (1999). *Champions of change: The impact of the arts on Learning*. Washington, DC: Arts Education Partnership.
- Berk, L. E. and Winsler, A. (1995). *Scaffolding children's learning: Vygotsky and early childhood education*. Washington, DC: National Association for the Education of Young Children.
- Carnegie Council on Adolescent Development (1992). *A matter of time: Risk and opportunity in the nonschool hours*. Carnegie Council Monograph.
<http://www.carnegie.org/ccadpubs.htm>, accessed December, 2007.
- Childress, H. (1998). Seventeen reasons why football is better than high school. *Phi Delta Kappan. (79) 8*, 616-620.
- Glick J. (2004). The history of the development of higher mental function. In R.W. Rieber and D. K. Robinson (Eds.), *The essential Vygotsky*. NY: Kluwer Academic/Plenum Publishers.
- Gordon, E. W., Bowman, C.B. and Mejia, B. X. (2003). *Changing the script for youth development: An evaluation of the All Stars Talent Show Network and the Joseph A. Forgiione Development School for Youth*. Institute for Urban and Minority Education, Teachers College, Columbia University.

- Gordon, E.W., Bridglall, B.L. and Meroe, A.S. (2005). *Supplementary education: The hidden curriculum of high academic achievement*. Latham MD: Rowan and Littlefield.
- Heath, S. B. (2000). Making learning work. *Afterschool Matters: Dialogues in Philosophy, Practice and Evaluation*, 1(1), 33-45.
- Heath, S. B., Soep, E. and Roach, A. (1998). Living the arts through language and learning: A report on community-based youth organizations. *Americans for the Arts Monographs* 2.7:1-20.
- Holzman, L. (1997). *Schools for growth: Radical alternatives to current educational models*. Mahwah NJ: Erlbaum.
- Holzman, L. (2002). *Young people learn by studying themselves: The All Stars Talent Show in action*. NY: East Side Institute for Short Term Psychotherapy. DVD.
- Holzman, L. (2006). Activating postmodernism. *Theory & Psychology*, 16(1), 109-123.
- Holzman, L. (2009). *Vygotsky at work and play*. Routledge: New York and London.
- Lantoff, J. P. (Ed.) (2000). *Sociocultural theory and second language learning*. Oxford: Oxford University Press.
- Lidz, C.S. and Gindis, B. (2003). Dynamic assessment of the evolving cognitive functions in children. In A. Kozulin, B. Gindis, V.S. Ageyev, and S.M. Miller (Eds.), *Vygotsky's Educational Theory In Cultural Context*, (pp. 99-116). New York: Cambridge University Press.
- MacNaughton, G. and Williams, G. (1998). *Techniques for teaching young children: Choices in theory and practice*. French Forests, Australia: Longman.
- Mahoney, J.L., Larson, R.W. and Eccles, J.S. (2005). (Eds.), *Organized activities as*

- contexts of development: Extracurricular activities, after school and community programs.* Mahwah: NJ: Erlbaum.
- Newman, F. and Holzman, L. (1993). *Lev Vygotsky: Revolutionary scientist.* London: Routledge.
- Newman, F. and Holzman, L. (1997). *The end of knowing: A new developmental way of learning.* London: Routledge.
- Newman, D. Griffin, P. and Cole, M. (1989). *The construction zone: Working for cognitive change in school.* Cambridge: Cambridge University Press.
- Nicolopoulou, A., & Cole, M. (1993). The generation and transmission of shared knowledge in the culture of collaborative learning: The Fifth Dimension, its play world, and its institutional contexts. In E. A. Forman, N. Minick, and C. A. Stone (Eds.), *Contexts for Learning: Sociocultural Dynamics in Children's Development* (pp. 283-314). New York: Oxford University Press.
- Rodgers, A. and Rodgers, E. M. (2004). *Scaffolding literacy instruction. Strategies for K-4 classrooms.* Portsmouth NH: Heinemann.
- Rogoff, B. (1990). *Apprenticeship in thinking: cognitive development in social context.* New York, NY: Oxford University Press.
- Rogoff, B. and Lave, J. (1984). (Eds.), *Everyday cognition: Development in social context* (pp. 95-117). Boston: Harvard University Press.
- Shotter, J. (1989). Vygotsky's psychology: Joint activity in the zone of proximal development. *New Ideas in Psychology*, 7, 185-204.
- Tharp, R. G. and Gallimore, R. (1988). *Rousing minds to life: Teaching, learning and schooling in social context.* Cambridge: Cambridge University Press.
- Vygotsky, L.S. (1978). *Mind in society.* Cambridge, MA: Harvard University Press.

- Vygotsky, L. S. (1987). *The collected works of L. S. Vygotsky. Vol. 1.* New York: Plenum.
- Vygotsky, L.S. (1994). The problem of the environment. In R. van der Veer and J. Valsiner (Eds.), *The Vygotsky reader* (pp. 338-354). Oxford: Blackwell.
- Vygotsky, L.S. (1997). The historical meaning of the crisis in psychology: A methodological investigation. In *The collected works of L.S.Vygotsky, Volume 3* (pp. 233-343). NY: Plenum.
- Vygotsky, L.S. (2004). The collective as a factor in the development of the abnormal child. In R.W. Rieber and D. K. Robinson (Eds.), *The essential Vygotsky* (pp. 201-219). NY: Kluwer Academic/Plenum Publishers.
- Wertsch, J. V. (1985). *Vygotsky and the social construction of mind.* Cambridge, MA: Harvard University Press.
- Wertsch, J.V. (1991). *Voices of the mind: A sociocultural approach to mediated action.* Cambridge MA: Harvard University Press.
- Wood, D., Bruner, J. and Ross, G. (1976). The role of tutoring in problem-solving. *Journal of Child Psychology and Psychiatry, 17*, 89-100.

Notes

¹ Vygotsky used the Russian word “obuchenie,” which refer to both teaching and learning. It is usually translated as “learning.”

² Lantolf and Thorne (2006) note this misunderstanding and make a worthwhile distinction between scaffolding and development in the ZPD.

³ What I am describing as completion would be identified in language acquisition and linguistics literature by other terms, such as expansion or contingency, which are located within a cognitive framework. My expansion/liberal interpretation of Vygotsky’s terms is not.

⁴ Reports on the advantages of culturally-based outside of school programs, including arguments that they can help close “the achievement gap” are many. See for example, Arts Education Partnership, 1999; Bodilly and Beckett, 2005; Childress, 1998; Heath, 2000; Heath, Soep and Roach, 1998; Carnegie Council on Adolescent Development, 1992; Gordon, Bridglall and Meroe, 2005; and Mahoney, Larson and Eccles, 2005.