Looking Outward:

Exploring the Intersections of Sociocultural Theory and Gifted Education

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As scholars in the field of gifted education continue to explore ways of improving the educational services provided to gifted and talented students, attention must be paid to the infinite amount of potential that an interdisciplinary theory offers. To this end, the following essay explores the intersections of sociocultural theory and gifted education. More specifically, it extends sociocultural theory to the field of gifted education by proposing a new lens for not only expanding the responsibilities of the field in terms of its ability to properly identify gifted students, but also for educating new teachers of the gifted.

Since its inception, the notably fickle masses have been largely uncomfortable with the concept of "gifted education." To some extent, this discomfort has its roots in a deep-seated resentment and jealousy. After all, why should children already shown favor by nature be furthered advantaged by society? These critics are infamous for voicing their lack of appreciation with questions like, "Don't we all have gifts?" Undoubtedly, a portion of this anxiety is caused by a lack of knowledge on the nature of the academically gifted, and more specifically, the nature of their needs (Clark, 2002). A portion of this uneasiness, however, has perhaps arisen due to the fact that the field of gifted education lacks a single, clearly articulated, widely accepted theoretical framework that works to posit the vital role it plays in schooling (Cross, 2005). To this end, the following essay explores the intersections of sociocultural theory and gifted education. More specifically, it attempts to extend sociocultural theory to the field of gifted education by proposing a more focused lens for not only expanding the responsibilities of the field in terms of its ability to

properly identify gifted students, but also for educating new teachers of the gifted.

The following literature review begins with an examination of the brief life of Lev S. Vygotsky, the man considered by most to be the father of sociocultural theory and thought. From there, the study moves into a discussion of what sociocultural theory offers the field of gifted education, in terms of improving the quality of schooling it presents to the students it is designed to serve. Next, one of Vygotsky's better known educational concepts will be defined, that of the Zone of Proximal Development (ZPD). Finally, the essay will explore the preparation of teachers new to the field of gifted education; more specifically, the nature of the education that a sociocultural approach suggests that such teachers must have in order to be considered well equipped.

Despite the fact that individuals familiar with the field of gifted education are always searching for innovative ways of improving the quality of education that gifted students receive, an inadequate amount of attention has been paid in the past to discovering what sociocultural theory can offer to such scholarship. Consequently, this essay will

work to build upon a much-needed connection between theory and the field of gifted education. More specifically, it will work to better identify two things; first, the gaps in research between sociocultural theory and gifted student identification/assessment, and second, the promising relationship between sociocultural theory and the education of teachers new to the field of gifted education. Hopefully, future research efforts will continue to highlight the vast possibilities for refining work within the field by connecting it with discussions of theory.

Lev S. Vygotsky and His Contribution to Human Thought

Lev Vygotsky, a Russian-born psychologist, is undoubtedly one of the many ghosts within the field of education who, long after his death, continues to influence our ways of knowing the world. Born in 1896 in northern Russia to Jewish parents, Vygotsky's earliest understandings of the world were filtered through the lens of a middle-class home. Despite the discrimination that they endured in pre-Revolution Russia, the Vygotsky family placed a strong emphasis on knowledge, and consequently always found new ways of exposing their eight children to books and ideas. Young Vygotsky was afforded private tutors, a series of individuals who were able to both oversee and constantly mark his development and ability. To this end, he was considered by most to be of above-average intelligence, showing off his exceptionalities in his ease with language acquisition (fluent in several languages) and knowledge of the classics in literature and the arts.

As a result of his academic prowess, Vygotsky received admission into Russia's university system, despite efforts made by the institution to severely limit Jewish enrollment (Wink & Putney, 2002). Once enrolled in a curriculum that allowed him to explore his fascination with the law, Vygotsky pushed himself further by dually registering in a program that allowed him to also study the humanities. During this period he published his first pieces (literary criticisms), and honed his writing skills. His hard work and insatiable appetite for learning worked to his advantage, for he was able to matriculate from both universities in 1917.

In order to fully value the contribution of Vygotsky, it is vital to note the social context of the time in which he lived and worked. Once this is accounted for, observers of his life can better appreciate the nature of Vygotsky's spirit and vision. Consider, for example, that at this point in Russian history the country was being ripped apart by the Russian Revolution. Everyone was undoubtedly feeling the hardships of war, and none more so than those Russians of Jewish descent. Back home in Gomel, his family endured German occupation and illness, while the world around him was also crumbling.

At this junction in his early life, Vygotsky decided to pursue a career in the field of education. Only able to gain employment at a vocational school, he began teaching literature and philosophy. While teaching he organized a psychology laboratory, wrote his first book, completed his dissertation, and began presenting his work to the world. His work began to shift towards educational psychology as he studied the difficulties faced by mentally challenged learners. Vygotsky, despite his own "genius" status, willingly committed himself to studying how this unique learner could be helped, a notion that only works to reinforce his brilliance.

In looking back on the transitions that Vygotsky's thought took, it is important to note that, "Theoretically, Vygotsky gradually moved from a Pavlov-based conditioning view of psychology (focusing on reflexes and reactions) to a cultural-historical theory that placed more significance on language, social interaction, and culture" (Zimmerman & Schunk, 2003, p. 209). As he came to better understand the lived experience, Vygotsky came to the conclusion that there were other things at work inside of humans besides biological instinct. He asserted that a new psychology was necessary to truly understand what humans needed in order to reach full development, an idea that was in complete opposition to those asserted by his contemporaries (Wink & Putney, 2002). To this end, he spent the rest of his life dedicated to pursuing an explanation of learning processes and development, and humbly sharing his luminosity with the world.

Sociocultural Theory Defined

To begin with, it must be stated that Vygotsky's theory (when placed in a larger theoretical framework), is considered a cultural-historical theory, and although it acknowledges the individual, it places its emphasis on that which is social. Moreover, in order to grasp hold of Vygotsky's sociocultural theory, it must first be defined and dissected. The word *social* is a term that takes on unique characteristics from a sociocultural perspective. In terms of schooling, social implies an interaction with others. For example, if a teacher were to see students chatting in the hallway, he or she might assume that they are being social. The teacher would observe their body language, listen for context clues, and then pre-

sume that they are sharing personal information. From a sociocultural perspective, that kind of social (the conversation observed taking place between students) is absolutely necessary for individual development, regardless of the nature of the exchange. According to contemporary scholars of Vygotsky's theory, people come to know the world and learn how to navigate it, based on their social understanding of it. To this end, we come to know how to exist and grow, as a result of our interactions with others. Renshaw (1992) has posited that "The sociocultural perspective suggests that learning is a process of appropriating 'tools for thinking,' that are made available by social agents who initially act as interpreters and guides in the individual's cultural apprenticeship" (p. 2). In going straight to the source, Vygotsky defined the word social as everything cultural, which is perhaps the broadest sense of the word. More specifically he asserted that "Culture is the product of man's social life and his public activity" (Vygotsky, 1993, p. 15). Clearly, Vygotsky saw that which is social as a concept that intersected with the concept of *culture*, our next term. Culture is a difficult concept to define, hence the various definitions that the word has been given. To this end, it has been largely accepted that even in the most general of terms, culture (on a micro-level) consists of an individual's way of being in the world, which is of course based on that which he or she has observed. More specifically, it is the way a person acts, the way he or she dresses, the things he or she eats. Spindler and Spindler (1992) defined culture as it applies to an educational setting:

> For each social setting (i.e., classroom) in which various scenes (e.g., reading, "meddlin," going to the bathroom) are studied, there is the prior (native) cultural knowledge held by each of the various actors, the action itself, and the emerging, stabilising rules, expectations, and some understandings that are tacit. Together these constitute a "classroom" or "school" culture. (p. 84)

Hence, Spindler and Spindler (1992) have suggested that culture can be seen as a way of being that is indexed to the environment. In this sense, an individual's culture can vary as his or her surroundings change. It can be argued that Vygotsky would readily agree with these definitions of the word. In his view, social and cultural forces influence, but do not completely explain our development. He therefore used his sociocultural theory as a way of explaining the effect of these influences.

Linking Sociocultural Theory to the Field of Gifted Education: ZPD, Identification, and Teacher Education

Practical Applications of the Zone of Proximal Development

As we come to better understand Vygotsky's definitions of the words social and cultural, it is important that educators look to theory as a way of critically probing their choices. In the field of gifted education, that investigation should come by way of exploring the various ways in which Vygotsky's sociocultural theory can function to inform it. One clear connection arises in an assessment of Vygotsky's sociocultural concept of the Zone of Proximal Development (ZPD). This construct, which centers on its applicability relative to effective assessment, was defined by Vygotsky (1978) as "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 adult guidance or in collaboration with more capable peers" (p. 86). In essence, the zone is defined by the difference between a child's performance with aid and without aid. Morelock (2003) effectively translated Vygotsky's intention in suggesting that effective instruction targets the area lying just beyond the skills already mastered by the child. Thus, "the zone of proximal development is an analytical tool necessary to plan instruction and to explain its results" (Hedegaard, 1996, p. 172). It can therefore be described as all-encompassing and flexible.

Furthermore, through an analysis of the ZPD, one can readily see that it offers profound guidance to the field of gifted education in terms of assessment, individualizing learning, monitoring progress, and addressing the social and emotional needs of gifted children. Fortunately, "Vygotsky approached the study of special education using the same method he used to examine all phenomena—matter, mind, or society—as processes marked by qualitative transformations" (Mahn, 1999, p. 341). Teachers of the gifted are unique within the field of education, in that, if properly trained, they can recognize how quickly exceptionally bright students receive and conquer new educational material. Although some attention has been given to the value of Vygotsky's theory in the field (Kanevsky, 1995; Kanevsky & Sheppard, 1999), current best practice lacks a widely accepted and implemented framework to provide educators of the gifted with a curriculum that allows them to quickly and effectively assess their learners in meaningful ways. Vygotsky's notion of the ZPD posits the need for

such assessment, and provides scholarly support for both teaching models and means of assessment that work to this end. We can therefore integrate the concept of the ZPD into gifted classrooms, confident that it is applicable to our field and to the children that we serve.

How exactly can this charge be led? If we accept Vygotsky's notion that children can only solve a certain level of problems with assistance from others as accurate, if follows that in order to truly properly place students, we must determine their zone of proximal development. Somehow, we must discover that space in which we are no longer simply gauging past learning, but actually predicting future potential. Vygotsky (1987) speaks to this notion directly when he asserts that each teacher must orient his or her work on future rather than past development. Without this information, we will not only continue to overlook some of our brightest students, but we will fail to properly assist those that we do unearth in reaching their intellectual boundaries.

Thus, the fear from both within and outside the field of education should not necessarily be centered on what is to be gained by implementing Vygotsky's notion of ZPD into the gifted classroom, but instead what may be lost if we do not. Gifted students are identified as such because it has been determined (based on their actual level of learning) that their potential for independent learning greatly surpasses that of the average student. Naturally, educated adults confidently assume that these remarkably bright students represent one of the world's greatest resources in that they are to become our future leaders, inventors, and problem solvers. Ultimately then, what educators and advocates owe the brightest students is a path to assisting them in not only meeting their determined potential, but in exceeding it. Therefore, educators must allow them opportunities to showcase their potential and to work collaboratively with others who both meet and exceed their own capabilities in the classroom, in addition to supporting independent study. These opportunities are central to Vygotsky's notion of where the true acknowledgement and fulfillment of intellectual potential lies.

Exploring the Effects of Traditional Identification Processes in Gifted Education

Customarily in gifted education, intelligence and ability are determined through written assessments and visual reasoning, both of which require students to prove their level of knowledge. This conclusion is supported by the work of Johnsen (1997) who noted that "Norm-referenced tests and quantified descriptions are the most widely used in identifying exceptional students in practical settings"

(p. 139). To this end, students whose parents, teachers, or counselors believe may be above average in intelligence are given a battery of tests, on which they are told to respond to prompts and analyze information. These instruments can assess a wide variety of capabilities, aptitudes, or scholastic abilities, including abstract thinking skills, academic skills, artistic ability, creative thinking/creativity, general acquired knowledge, intellectual ability, leadership, motivation, nonverbal/verbal reasoning, and problem-solving ability. Examples of specific tests include the Cognitive Abilities Test (CoGAT), Gifted and Talented Evaluation Scales (GATES), the Iowa Tests of Basic Skills (ITBS), Scales for Rating the Behavioral Characteristics of Superior Students, the Kaufman Assessment Battery for Children (K-ABC), and the Stanford-Binet Intelligence Scales. Most of these tests are considered IQ tests and none of them can fully determine a students learning potential (Johnsen, 1997; Kanevsky, 1995) Moreover, individual states and school districts have a wide variety of policies that dictate to whom each assessment can be given, and which screening mechanism is most appropriate. Therefore, each state, and in some cases each school district, establishes the criteria for identification of students as gifted. This practice of giving states and school districts complete freedom over testing measures, when coupled with tests that do not necessarily accurately assess learning potential, has resulted in what can only be estimated as thousands of unidentified and improperly placed gifted students (Evans, 1996).

In recent years, much research has been done that has explored the degree of oversight that has occurred in gifted education due to the current application of traditional identification measures (Ford, 2003; Masten, 1981; Vanderslice, 1999). In fact, the research suggests that few of these measures examine gifted and talented students' strategies in responding to tasks (Johnsen, 1997). More specifically, the most widely used assessments fail to simulate an actual educational activity. They are typically administered inside a classroom setting, but without any of the components central to classroom learning/assessment, such as teacher assistance, peer feedback, and so forth. Thus, they inherently fail to provide the practitioner with important information about the learner's typical and/or strongest abilities.

On another note, "One of the most pressing and controversial topics in the field of gifted education is the underrepresentation of culturally and linguistically diverse students in gifted education" (Ford, 2003, p. 143). Ford posited that this phenomenon is caused by the fact that given any definition of giftedness, the construct is still determined by society's present definition. This definition has changed over time and is relative to the people

who are responsible for creating it. Further, students possess strengths and weaknesses in varying degrees, and the weight given to these talents will depend on the social and cultural setting from which they are being examined. Thus, despite the fact that students in one locale may all receive the same assessment measure; their sociocultural backgrounds will inform their individual success on it. To this end, historically, gifted programs have failed to identify gifted students from culturally and linguistically diverse backgrounds, simply because of the nature of the identification measures.

From a Vygotskian sociocultural theoretical perspective, children's cognitive development is seen as inseparable for them from the cultural and historical aspects of their young lives. Thus, students from culturally diverse backgrounds will never be identified correctly as long as the tools for identification are biased to a cultural and historical background that is not their own. Kitano (2003) has posited that "what may be missing from current approaches to identifying and serving gifted students from diverse backgrounds is specific, sustained, and systematic attention to the social and cultural contexts of the school and the classroom" (p. 160). As a former teacher of gifted students, her observation is rooted in reality, for not only are the cultural and historical backgrounds of culturally diverse students absent typically from the gifted classroom, but they are also overlooked in gifted identification measures.

Thus, instead of remaining consistent with the American tradition of grouping students with their age-level peers, a shift must be made to a system that allows schools to best place their gifted students within their individual zones of proximal development. In order for this to occur, there must be a major overhauling in the nature of assessment for identification within the field of gifted education.

Preparing Teachers of the Gifted:
A Sociocultural Approach

Without doubt, the time will soon come when it is widely accepted within the field of gifted education that the measures of assessment utilized must be geared towards the ZPD. Once this era is born, it will be necessary to restructure the teaching methodologies within the gifted classroom, and the institutions primarily responsible for this reeducation will be those of higher education. Eventually, colleges and universities will be charged with the task of altering their notion of gifted curriculum in order to meet the shifting cultural needs of educators. As new teachers prepare to become teachers of the gifted, their concept of

classroom culture will be transformed, and at some point they must be made aware of the impending change. "The teachers' role is to direct action within school activity in a manner appropriate to the child's present level of development, the cultural and social context, and the teacher's theories of what the central subject matter is" (Hedegaard, 1996, p. 175). Here, Hedegaard contends that according to the Vygotskian line of thought, the role of the teacher is not only to aid in the internalization of new academic material, but almost more importantly, to subtly or overtly translate new social and cultural information. According to a Vygotskian framework, it is acknowledged that in order for humans to develop intellectually, we must be exposed to new cultural "tools." Specifically, these tools are things that aid us in reading and comprehending the world around us.

Thus, one role of the teacher is to be familiar with this knowledge and to be able to assist others in making sense of it. In the case of the gifted classroom, there is a definite set of predetermined cultural rules, such as how to participate in dialogues, how to demonstrate your intelligence, how to gain acceptance, and so forth that students (particularly those who have been recently identified) should be taught. To this end, novice teachers who are placed in a gifted educational setting also must be exposed to the sociocultural climate established in this distinctive environment. It is argued here, therefore, that when exposing teachers who are new to the gifted classroom to the needs and nature of gifted students, that they also should be educated to recognize the needs and nature of the social and cultural setting into which they are venturing.

As is the case with all children, students who have been identified as being gifted also come to school with knowledge. Vygotsky (1978) was a strong proponent of the notion that "Any learning a child encounters in school always has a previous history" (p. 84). However, it is quite often the case that gifted children come to school having already been exposed to advanced language, literature, mathematics, and science study. Due to exposure of this nature, they have been educated well beyond their years, and they have unique ways of communicating their understanding. Therefore, the language and skills they possess should not be all together new to their teachers. Daniels (2004) has strongly suggested that teachers, in addition to promoting an academic curriculum, must also create a culture within the classroom. How can teachers do what Daniels suggests is their primary duty if they are never informed of the social and cultural context into which they must venture? Despite the fact that a significant amount of scholarly research has been done that probes the personality qualities and professional attributes that success-

ful teachers of the gifted should possess (Aspy & Roebuck, 1972; Kathnelson & Colley, 1982; Lindsey, 1980), essentially nothing has been done in order to determine what theory has to say about this laundry list of "traits" and why they might be vital to the sustenance of gifted classroom culture. This clarification should be made if they are to be provided those things central to commanding and communicating cultural standards.

Recommendations for Current Practice

Applying Vygotsky's Notion of the ZPD to the Field of Gifted Education

In 1976, Wood, Bruner, and Ross invented the term *scaffolding* to describe tutorial interaction between an adult and a child. The term was used to explore the nature of aid provided by an adult for children learning how to carry out a task they could not perform alone. This is a solid example of a framework for curriculum design that would be especially useful to the gifted classroom. It recognizes the importance that Vygotsky places on the role of social interaction and allows for the teacher to directly monitor student progress. The use of scaffolding also accepts the notion that students' current learning should be geared towards potential learning. Moreover, it can be applied to both classroom instruction and assessment. In addition to scaffolding, teachers of the gifted could also turn to Shlomo and Sharan's (as cited in Maker & Nielsen, 1995) model of group investigations or Adams and Wallace's (as cited in Maker & Nielsen) model of thinking actively in a social context. Each of these models support Vygotsky's belief that the development of the higher levels of thinking is based on social transaction, and that learning is conceptualized as a dynamic, reciprocal process embedded in social, cultural, physical, and psychological environments (Sharan & Sharan, 1976). Sharan and Sharan's model of group investigations was designed such that "Mutually beneficial activities are emphasized, self-efficacy promoted, and students' unique abilities and learning goals are respected" (p. 132). Models such as these can be applied to classroom curriculum with ease, and if implemented in conjunction with a solid system of recording student success, they can be readily integrated into the gifted education setting.

Identification of Gifted Learners

Clearly, two things that research suggests have been missing from the field of gifted education are a means of assessing gifted students for learning potential and a means

of identifying culturally diverse gifted learners. In speaking of learning potential, the field should perhaps turn to experimenting with methods of dynamic assessment (Johnsen, 1997). This assessment is termed "dynamic" because it works to isolate the interaction between the learner and a given task. Such tests can be used to determine an infinite number of factors, and if given in a proper setting, such as one that resembles the traditional classroom setting, they can shed light upon what a student knows and what he or she can learn. More importantly, such assessments can incorporate several of Vygotsky's notions including the encouragement of interaction with more capable others, the use of new strategies, and the activation of prior knowledge. All of these factors inform how we can determine where a student's zone of proximal development lies.

As to the identification of culturally diverse students, two measures that have been administered and met with widespread success are those of the Naglieri Nonverbal Ability Test and the Universal Nonverbal Test (Naglieri & Ford, 2003). Both of these evaluations are performance-based IQ tests that still measure a student's cognitive ability. Therefore, the use of these tests undoubtedly must come after either their modification so that they can be considered dynamic, or the coupling of them with dynamic assessment measures. Clearly, the challenge here is that of creating a system for identifying culturally diverse students that takes in account the fact that culture is relative and that standardized tests are often culturally biased (Baldwin, 1978). The goal is not to introduce yet another bias into gifted student identification, but to acknowledge that we cannot accept mainstream culture as being representative of all culture. Hence, practitioners must restructure methods of identification to reflect our willingness to recognize cultural diversity as differences, not deficiencies. To this end, institutions that teach the gifted should instead turn to more varied and authentic assessment measures. Scholars on the underrepresentation of diverse students argue that "The use of multiple criteria and non-traditional measures is widely advocated" (Passow & Frasier, 1996, p. 202). If this is the case, teachers and coordinators may choose to observe students in a classroom setting using checklists, or work with students on activities that require the application of problem-solving skills and/or creativity. Such modifications would undoubtedly provide an excellent tool for ensuring that biased or simply poorly designed traditional evaluation methods do not prevent the identification of clear intellectual potential in those students who are typically overlooked.

Teacher Training in Gifted Education

In reviewing the literature, little research has been done that explores the nature of culture in a self-contained gifted classroom. Perhaps future studies could use a grounded theory methodological approach to examine this construct. In an effort to prepare novice teachers of the gifted for careers in the self-contained classroom, attention must be paid to determining what makes this particular setting what it is. Surely, there are many discernible elements that make the environment/culture of the gifted classroom different from that of a regular education classroom, or on the other extreme, a traditional special education classroom. As we begin this discourse, we must be sure that preparation of teachers of the gifted centers on both observations of self-contained gifted classroom environments, as well as focused social interactions with gifted children and their teachers. Moreover, we must intentionally provide them with the social and cultural capital they will need in order to contribute to the complete development of their pupils.

Conclusion

In looking back on the contribution that Lev Vygotsky made to the world, it is difficult to determine where his gift begins and ends. Consequently, much can be said about his educational philosophy, as well as his theoretical framework. Surely, the power of his ideology is able to extend past psychology, into the study of child development, the study of creativity, and the study of gifted education. When reflecting on the field of gifted education and the direction scholars hope to see it move, it is important that we consider the insight provided by theory. When it comes to ideas that have a wealth of practical applications, few psychologists or theorists are able to offer forth as much as Vygotsky. More specifically, what his sociocultural theory presents is a framework essential to the longevity of gifted education programs nationwide. His theory thereby is completely worthy of consideration and application across the country.

References

Aspy, D., & Roebuck, F. (1972). An investigation of the relationship between student levels of cognitive functioning and the teacher's classroom behavior. *Journal of Educational Research, 65*, 365–368.

Baldwin, A. Y. (Ed.). (1978). *Educational planning for the gifted. Overcoming cultural, geographic, and socioeconomic barriers*. Arlington, VA: ERIC Clearinghouse on Disabilities and Gifted Education. (ERIC Document Reproduction Service No. EC111413)

Clark, B. (2002) *Growing up gifted* (6th Ed.). Upper Saddle River, NJ: Merrill Prentice Hall.

Cross, T. (2005). An evolving field. *Roeper Review*, *28*, 5–8.

Daniels, H. (2004). *Vygotsky and pedagogy.* New York: Routledge/Falmer.

Evans, K. (1996) Policy for the identification of students for gifted programs. *Journal of Secondary Gifted Education*, *8*, 74–87.

Ford, D. (2003). Desegregating gifted education: Seeking equity for culturally diverse students. In J. H. Borland (Ed.), *Rethinking gifted education* (pp. 143–158). New York: Teachers College Press.

Hedegaard, M. (1996). The zone of proximal development as zone of basic for instruction. In Harry Daniels (Ed.), *Introduction to Vygotsky* (pp. 171–195). New York: Routledge.

Johnsen, S. K. (1997). Assessment beyond definitions. *Peabody Journal of Education*, *72*, 136–152.

Kanevsky, L. S. (1995). Learning potentials of gifted students. *Roeper Review*, *17*(3), 157–164.

Kanevsky, L. S., & Sheppard, S. (1999). Nurturing gifted students' metacognitive awareness: Effects of training in homogenous and heterogeneous classes. *Roeper Review, 21*, 266–273.

Kathnelson, A., & Colley, L. (1982). *Personal and professional characteristics valued in teachers of the gifted*. Paper presented at California State University, Los Angeles.

Kitano, M. (2003). What's missing in gifted education reform. In J. H. Borland (Ed.), *Rethinking gifted education* (pp. 159–170). New York: Teachers College Press.

Lindsey, M. (1980) *Training teachers of the gifted and talented*. New York: Teachers College Press.

Mahn, H. (1999). Vygotsky's methodological contribution to sociocultural theory. *Remedial and Special Education*, *20*, 341–250.

Maker, C. J. & Nielsen, A. B. (1995) *Teaching models in the education of the gifted*. Austin, TX: Pro-Ed Publishers.

Masten, W. G. (1981). *Approaches to identification of gifted minority students*. Jackson, MS: ERIC Clearinghouse on Disabilities and Gifted Education. (ERIC Document Reproduction Service No. EC160451)

Morelock, M. J. (2003). Pretend play and maternal scaffolding: Comparisons of toddlers with advanced

development, typical development, and hearing impairment. *Roeper Review*, *26*, 41–51.

Naglieri, J. A., & Ford, D.Y. (2003). Addressing under-representation of gifted minority children using the Naglieri Nonverbal Ability Test (NNAT). *Gifted Child Quarterly, 47*, 155–160.

Passow, H., & Frasier, M. (1996) Toward improving identification of talent potential among minority and disadvantaged students. *Roeper Review*, *18*, 193–202.

Renshaw, P. (1992, November) *The sociocultural theory of teaching learning: Implications for the curriculum in the Australian context.* Paper presented at the 22nd annual conference of Australian Association for Research in Education, Geelong, Victoria.

Sharan, Y., & Sharan, S. (1976). *Small-group teaching*. Englewood Cliffs, NJ: Educational Technology Publishing.

Spindler, G., & Spindler, L. (1992). Cultural process and ethnography: An anthropological perspective. In M. LeCompte, W. Millroy, & J. Preissle (Eds.), *The handbook of qualitative research in education* (pp. 53–92). New York: Academic Press.

Vanderslice (1999, March). *Rural Hispanic children and giftedness: Why the difficulty in identification?* Paper presented at 19th annual meeting of the American Council on Rural Special Education, Albuquerque, NM.

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. Problems of general psychology.* New York: Plenum.

Vygotsky, L. S. (1993). *The collected works of L. S. Vygotsky: Vol. 2. The fundamentals of defectology.* New York: Plenum.

Wink, J., & Putney, L. (2002). A *vision of Vygotsky.* Boston: Allyn & Bacon.

Wood, D. J., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry*, *17*, 89–100.

Zimmerman, B., & Schunk, D. (Eds.). (2003) *Educational psychology: A century of contributions.* Mahwah, NJ: Lawrence, Erlbaum Associates.