

## Learning Theory: Vygotsky

### Lev Vygotsky's Social Development Theory

Lev Vygotsky, born in the U.S.S.R. in 1896, is responsible for the social development theory of learning. He proposed that social interaction profoundly influences cognitive development. Central to Vygotsky's theory is his belief that biological and cultural development do not occur in isolation (Driscoll, 1994).

Vygotsky approached development differently from Piaget. Piaget believed that cognitive development consists of four main periods of cognitive growth: sensorimotor, preoperational, concrete operations, and formal operations (Saettler, 331). Piaget's theory suggests that development has an endpoint in goal. Vygotsky, in contrast, believed that development is a process that should be analyzed, instead of a product to be obtained. According to Vygotsky, the development process that begins at birth and continues until death is too complex to be defined by stages (Driscoll, 1994; Hausfather, 1996).

Vygotsky believed that this life long process of development was dependent on social interaction and that social learning actually leads to cognitive development. This phenomena is called the Zone of Proximal Development . Vygotsky describes it as "the distance between the actual development 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" (Vygotsky, 1978). In other words, a student can perform a task under adult guidance or with peer collaboration that could not be achieved alone. The Zone of Proximal Development bridges that gap between what is known and what can be known. Vygotsky claimed that learning occurred in this zone.

Therefore, Vygotsky focused on the connections between people and the cultural context in which they act and interact in shared experiences (Crawford, 1996). According to Vygotsky, humans use tools that develop from a culture, such as speech and writing, to mediate their social environments. Initially children develop these tools to serve solely as social functions, ways to communicate needs. Vygotsky believed that the internalization of these tools led to higher thinking skills. When Piaget observed young children participating in egocentric speech in their preoperational stage, he believed it was a phase that disappeared once the child reached the stage of concrete operations. In contrast, Vygotsky viewed this egocentric speech as a transition from social speech to internalized thoughts (Driscoll, 1994). Thus, Vygotsky believed that thought and language could not exist without each other.

### Application of the Social Development Theory to Instructional Design

Traditionally, schools have not promoted environments in which the students play an active role in their own education as well as their peers'. Vygotsky's theory, however, requires the teacher and students to play untraditional roles as they collaborate with each other. Instead of a teacher dictating her meaning to students for future recitation, a teacher should collaborate with her students in order to create meaning in ways that students can make their own (Hausfather, 1996). Learning becomes a reciprocal experience for the students and teacher.

The physical classroom, based on Vygotsky's theory, would provide clustered desks or tables and work space for peer instruction, collaboration, and small group instruction. Like the environment, the instructional design of material to be learned would be structured to promote and encourage student interaction and collaboration. Thus the classroom becomes a community of learning.

Because Vygotsky asserts that cognitive change occurs within the zone of proximal development, instruction would be designed to reach a developmental level that is just above the student's current developmental level. Vygotsky proclaims, "learning which is oriented toward developmental levels that have already been reached is ineffective from the view point of the child's overall development. It does not aim for a new stage of the developmental process but rather lags behind this process" (Vygotsky, 1978).

Appropriation is necessary for cognitive development within the zone of proximal development. Individuals participating in peer collaboration or guided teacher instruction must share the same focus in order to access the zone of proximal development. "Joint attention and shared problem solving is needed to create a process of cognitive, social, and emotional interchange" (Hausfather, 1996). Furthermore, it is essential that the partners be on different developmental levels and the higher level partner be aware of the lower's level. If this does not occur, or if one partner dominates, the interaction is less successful (Driscoll, 1994; Hausfather, 1996).

### Instructional Strategies and Their Implementation in Instruction

Scaffolding and reciprocal teaching are effective strategies to access the zone of proximal development. Scaffolding requires the teacher to provide students the opportunity to extend their current skills and knowledge. The teacher must engage students' interest, simplify tasks so they are manageable, and motivate students to pursue the instructional goal. In addition, the teacher must look for discrepancies between students' efforts and the solution, control for frustration and risk, and model an idealized version of the act (Hausfather, 1996).

Reciprocal teaching allows for the creation of a dialogue between students and teachers. This two way communication becomes an instructional strategy by encouraging students to go beyond answering questions and engage in the discourse (Driscoll, 1994; Hausfather, 1996). A study conducted by Brown and Palincsar (1989), demonstrated the Vygotskian approach with reciprocal teaching methods in their successful program to teach reading strategies. The teacher and students alternated turns leading small group discussions on a reading. After modeling four reading strategies, students began to assume the teaching role. Results of this study showed significant gains over other instructional strategies (Driscoll, 1994; Hausfather, 1996). Cognitively Guided Instruction is another strategy to implement Vygotsky's theory. This strategy involves the teacher and students exploring math problems and then sharing their different problem solving strategies in an open dialogue (Hausfather, 1996).

## The Effectiveness of the Social Development Theory in Achieving Its Goals

Vygotsky's social development theory challenges traditional teaching methods. Historically, schools have been organized around recitation teaching. The teacher disseminates knowledge to be memorized by the students, who in turn recite the information back to the teacher (Hausfather, 1996). However, the studies described above offer empirical evidence that learning based on the social development theory facilitates cognitive development over other instructional strategies.

The structure of our schools does not reflect the rapid changes our society is experiencing. The introduction and integration of computer technology in society has tremendously increased the opportunities for social interaction. Therefore, the social context for learning is transforming as well. Whereas collaboration and peer instruction was once only possible in shared physical space, learning relationships can now be formed from distances through cyberspace. Computer technology is a cultural tool that students can use to mediate and internalize their learning. Recent research suggests changing the learning contexts with technology is a powerful learning activity (Crawford, 1996). If schools continue to resist structural change, students will be ill prepared for the world they will live.

### Conclusion

Lev Vygotsky lived during the Russian Revolution, a time of great change in his culture. If Vygotsky's assertion that biological and cognitive developmental do not occur in isolation, then his environment of change greatly influenced his own cognitive processes. Presently our society is also going through a culture of change due to the infusion of computer technology. Perhaps this lends some insight to why Vygotsky's theory of social development is receiving increasing attention, seventy years after it's conception.

### References

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