Zone of Proximal Development and Scaffolding

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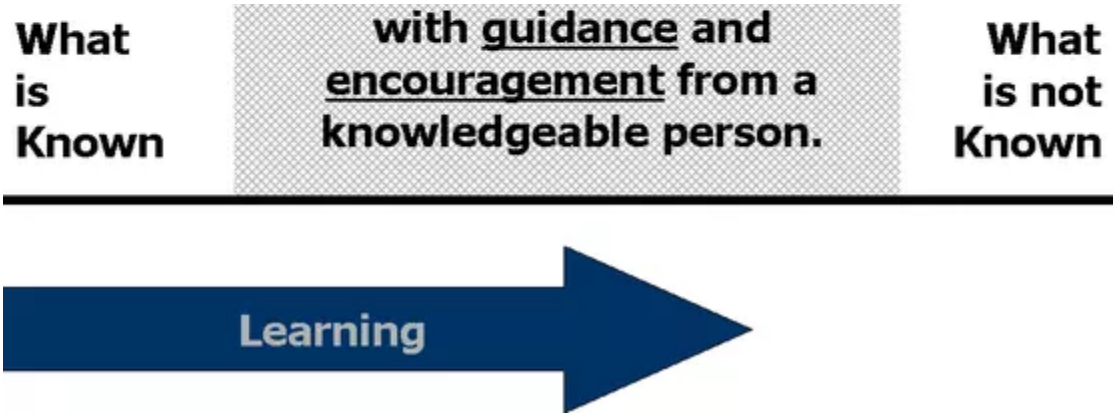
The Zone of Proximal Development and Scaffolding

By Saul McLeod, updated 2019

The zone of proximal development refers to the difference between what a learner can do without help and what he or she can achieve with guidance and encouragement from a skilled partner.

Thus, the term “proximal” refers to those skills that the learner is “close” to mastering.



Vygotsky's Definition of ZPD

The concept, zone of proximal development was developed by Soviet psychologist and social constructivist Lev Vygotsky (1896 – 1934).

The zone of proximal development (ZPD) has been defined 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" (Vygotsky, 1978, p. 86).

Vygotsky believed that when a student is in the zone of proximal development for a particular task, providing the appropriate assistance will give the student enough of a "boost" to achieve the task.

To assist a person to move through the zone of proximal development, educators are encouraged to focus on three important components which aid the learning process:

- The presence of someone with knowledge and skills beyond that of the learner (a more knowledgeable other).

- Social interactions with a skillful tutor that allow the learner to observe and practice their skills.
- Scaffolding, or supportive activities provided by the educator, or more competent peer, to support the student as he or she is led through the ZPD.

More Knowledgeable Other

The more knowledgeable other (MKO) is somewhat self-explanatory; it refers to someone who has a better understanding or a higher ability level than the learner, with respect to a particular task, process, or concept.

Although the implication is that the MKO is a teacher or an older adult, this is not necessarily the case. Many times, a child's peers or an adult's children may be the individuals with more knowledge or experience.

Social Interaction

According to Vygotsky (1978), much important learning by the child occurs through social interaction with a skillful tutor. The tutor may model behaviors and/or provide verbal instructions for the child. Vygotsky refers to this as cooperative or collaborative dialogue.

The child seeks to understand the actions or instructions provided by the tutor (often the parent or teacher) then internalizes the information, using it to guide or regulate their own

performance.

What is the Theory of Scaffolding?

The ZPD has become synonymous in the literature with the term scaffolding. However, it is important to note that Vygotsky never used this term in his writing, and it was introduced by Wood, Bruner and Ross (1976).

Scaffolding consists of the activities provided by the educator, or more competent peer, to support the student as he or she is led through the zone of proximal development.

Support is tapered off (i.e. withdrawn) as it becomes unnecessary, much as a scaffold is removed from a building during construction. The student will then be able to complete the task again on his own.

> Wood et al. (1976, p. 90) define scaffolding as a process "that enables a child or novice to solve a task or achieve a goal that would be beyond his unassisted efforts."
> As they note, scaffolds require the adult's "controlling those elements of the task that are initially beyond the learner's capability, thus permitting him to concentrate upon and complete only those elements that are within his range of competence" (p. 90).

It is important to note that the terms cooperative learning, scaffolding and guided learning all have the same meaning within the literature.

The following study provides empirical support both the concept of scaffolding and the ZPD.

Wood and Middleton (1975)

Procedure: 4-year-old children had to use a set of blocks and pegs to build a 3D model shown in a picture. Building the model was too difficult a task for a 4-year-old child to complete alone.

Wood and Middleton (1975) observed how mothers interacted with their children to build the 3D model. The type of support included:

- General encouragement e.g., 'now you have a go.'
- Specific instructions e.g., 'get four big blocks.'
- Direct demonstration, e.g., showing the child how to place one block on another.

The **results** of the study showed that no single strategy was best for helping the child to progress. Mothers whose assistance was most effective were those who varied their strategy according to how the child was doing.

When the child was doing well, they became less specific with their help. When the child started to struggle, they gave increasingly specific instructions until the child started to make progress again.

The study illustrates scaffolding and Vygotsky's concept of the ZPD. Scaffolding (i.e., assistance) is most effective when the support is matched to the needs of the learner. This puts them in

a position to achieve success in an activity that they would previously not have been able to do alone.

Wood et al. (1976) named certain processes that aid effective scaffolding:

Scaffolding vs. Discovery Learning

Freund (1990) wanted to investigate if children learn more effectively via Piaget's concept of discovery learning or by guided learning via the ZPD.

She asked a group of children between the ages of three and five years to help a puppet to decide which furniture should be placed in the various rooms of a dolls house. First Freund assessed what each child already understood about the placement of furniture (as a baseline measure).

Next, each child worked on a similar task, either alone (re: discovery based learning) or with their mother (re: scaffolding / guided learning). To assess what each child had learned they were each given a more complex, furniture sorting task.

The results of the study showed that children assisted by their mother performed better at the furniture sorting than the children who worked independently.

Educational Applications

Vygotsky believes the role of education to provide children with experiences which are in their ZPD, thereby encouraging and advancing their individual learning. (Berk, & Winsler, (1995).

> 'From a Vygotskian perspective, the teacher's role is mediating the child's learning activity as they share knowledge through social interaction' (Dixon-Krauss, 1996, p. 18).

Lev Vygotsky views interaction with peers as an effective way of developing skills and strategies. He suggests that teachers use cooperative learning exercises where less competent children develop with help from more skillful peers - within the zone of proximal development.

Scaffolding is a key feature of effective teaching, where the adult continually adjusts the level of his or her help in response to the learner's level of performance. In the classroom, scaffolding can include modeling a skill, providing hints or cues, and adapting material or activity (Copple & Bredekamp, 2009).

Consider these guidelines for scaffolding instruction (Silver, 2011).

Scaffolding not only produces immediate results, but also instills the skills necessary for independent problem solving in the future.

A contemporary application of Vygotsky's theories is "reciprocal teaching," used to improve students' ability to learn from text. In this method, teacher and students collaborate in learning and practicing four key skills: summarizing, questioning, clarifying, and predicting. The teacher's role in the process is reduced over time.

Vygotsky's theories also feed into current interest in collaborative learning, suggesting that group members should have different

levels of ability so more advanced peers can help less advanced members operate within their zone of proximal development.

Example of the Zone of Proximal Development

Maria just entered college this semester and decided to take an introductory tennis course. Her class spends each week learning and practicing a different shot. Weeks go by, and they learn how to properly serve and hit a backhand.

During the week of learning the forehand, the instructor notices that Maria is very frustrated because she keeps hitting her forehand shots either into the net or far past the baseline. He examines her preparation and swing. He notices that her stance is perfect, she prepares early, she turns her torso appropriately, and she hits the ball at precisely the right height.

However, he notices that she is still gripping her racquet the same way she hits her backhand, so he goes over to her and shows her how to reposition her hand to hit a proper forehand, stressing that she should keep her index finger parallel to the racquet. He models a good forehand for her, and then assists her in changing her grip. With a little practice, Maria's forehand turns into a formidable weapon for her!

In this case, Maria was in the zone of proximal development for successfully hitting a forehand shot. She was doing everything else correctly, but just needed a little coaching and scaffolding from a "More Knowledgeable Other" to help her succeed in this task.

When that assistance was given, she became able to achieve her goal. Provided with appropriate support at the right moments, so too will students in classrooms be able to achieve tasks that would otherwise be too difficult for them.

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