

Application of vygotskys learning theories in early years



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1. 0 Introduction

In any classroom situation where children are in the midst of learning there are a number of different learning theories occurring and being utilised in practice. Children are constantly learning and as teachers in a classroom it is our prerogative and responsibility to ensure children benefit from developmentally appropriate learning opportunities derived from the wisdom of certain learning theories.

In this work I intend to show how Vygotsky's Social Development Theory is utilised as a basis for teaching and learning within my classroom. I will analyse and demonstrate how this theory's three major themes; social interaction; the more knowledgeable other (MKO); and the zone of proximal development (ZPD) and subsequently scaffolding and contingent teaching methods, are utilised in specific ways within early years classroom activities.

2. 0 Social Learning

The Russian psychologist Lev Vygotsky (1896-1934) viewed human cognitive development and behaviour as a complex dynamic of interaction between the self and the socio-historical-cultural environment in which the child is immersed (Vygotsky 1986)

As suggested by Vygotsky (1986), social interaction is at the core of cognitive development and speech. It is through the intrinsic need to communicate with another that both speech and thought develop and, according to Vygotsky, lay the foundations that eventually form inner-personal psychological functions. This subsequently leads to egocentric speech which in turn transforms into 'inner speech' (Vygotsky 1986).

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The social element in Vygotsky's social learning theory is central to all other processes. This is in contrast with Piaget's view of development (Piaget 1954) which posits that the primary motivation for human development comes from inside the individual. Vygotsky perceived the human child as a 'little apprentice' (Vygotsky 1986) who receives support and help from his peers and teachers, whereas Piaget's metaphor for the child's developing cognitive process and behaviour is that of a 'lone scientist' (Piaget 1954).

In an early years classroom, both theories of the 'little apprentice' and the 'lone scientist' are relevant and applicable. However, I will demonstrate through an example of a classroom activity in an early years reception class how I believe Vygotsky's concept of social learning can enable a wider degree of learning opportunities than Piaget's view of learning.

2. 1 Discovering sound creation: The 'lone scientist' vs. the 'little apprentice'

In this classroom activity, I created and produced activities specifically designed to take advantage of the benefits derived from Vygotsky's learning theories. The objective of this activity is for the students to progressively come to understand how and why sounds of various pitch are made, and to subsequently recreate a range of sounds. We can observe the 'lone scientist' in action when a child is using liquids, bottles and a funnel. The child is using the funnel and water to fill two bottles and transfer liquids, whilst doing so, the child is given a hard metallic object and asked to hit the bottle. When the child does so, a certain pitched sound emanates from the bottle. The child enjoys the sound, his curiosity is peaked, and he proceeds

to purposely knock, to experiment with, the two bottles he has, to create varied pitch from the two bottles.

This same experiment by the 'lone scientist' now leads to a situation where the child now becomes a 'little apprentice'. The child's friend is interested in the first child's discovery and joins him. The first child, Child A, relates to the other his discovery. Child A doesn't have the language and conceptual understanding to describe what is occurring beyond only being able to explain that he has made a noise using the tools (water, bottles and the metal funnel). The friend, Child B, observes and starts to use 'talk' to describe the steps and the process happening in much more detail than Child A. Child B, having a greater level of language and cognitive ability, is able to better accurately describe the experiment to his friend. They both then, through shared experimentation-play, discover how to make several different sounds in several bottles. The children further their learning by discussing their ideas about how hard to hit, what to use to hit the bottle with and their general excitement about it. Child A responds to Child B by copying the same language, modelled by Child B, and then progressing through the experiment with his friend using the new language acquired. Albert Bandura described the dynamics of such interaction: "Most human behavior is learned observationally through modelling: from observing others, one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action." (Bandura 1977).

It is observable that both Piaget's and Vygotsky's concepts of child learning are relevant in an early years classroom setting. However, if we hold to the <https://assignbuster.com/application-of-vygotskys-learning-theories-in-early-years/>

Vygotskyan notion that language lays the pathways to inner thought, and that social learning leads to greater learning opportunities, we can safely say from the evidence, that Child A optimized and increased his learning opportunities and learning potential, by taking part in a peer learning situation. This was apparent by the level of thought and communication that was engendered: hypothesising, acquisition of new language patterns, vocabulary and an increase in higher cognitive function through Child B's conceptual paraphrasing of their combined experimentation. Child A learned more as a Vygotskyan 'little apprentice' than as a Piagetian 'lone scientist'. Findings from Palincsar (1986) presented a similar conclusion. This said, the significance of being a 'lone scientist' is not diminished; it still has its own place as an important form of learning for a child, but it does not generate as many learning opportunities and also does not enable the higher cognitive functions to blossom as quickly and as they did, 'domino-style' with peer learning.

3.0 The More Knowledgeable Other

The More Knowledgeable Other (MKO), the second major theme in Vygotsky's social learning theory, refers to another individual who is, as its title implies, an individual who is more knowledgeable and has a higher ability than another. This individual serves as a guide or teacher who helps the learner to achieve and know more through their assistance than that individual would be able to achieve alone. In school, the expert in this collaboration has traditionally been the teacher, although, according to Vygotsky (1978), this role can be played equally well by more abled peers.

This ' More Knowledgeable Other' principle can be observed using the same scenario presented in the preceding section.

In this example, Child A has just discovered that he can create varying pitch of sound by hitting two bottles with different amounts of liquid. The MKO, the teacher in this case, comes in and suggests to the student to make many more different sounds, the teacher poses several leading questions: First asking the child what he thinks he could do to make more different sounds. Second, what he thinks the water has to do with the sounds. And lastly, what is different about the two bottles. The child first answers that he could fill more bottles with water. He struggles with the second question but answers that the water makes the sound. And for the third question, he answers that the water level is different in each bottle. The teacher suggests the child to fill seven bottles each with a different amount of water. The child does this and then proceeds to hit the bottles, discovering that a whole range of sounds can be produced.

Through a process of carefully constructed, carefully controlled, questions and thought provoking statements, which Wood calls ' contingent teaching' (Wood 1988), the teacher is able to guide the student to further his reasoning and cognitive skills. The MKO has served as the guide for the learner to gain more ground in his learning experience and enabled the learner to achieve a more concrete and tangible understanding of the concept. We can observe that the MKO was instrumental in the child achieving a higher level of attainment. Moreover, we can observe that the teacher assessed where the student was at in his level of understanding and started to increase the level of difficulty and challenge, widening the

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potential of learning opportunities of the student. This leads us right into Vygotsky's third theme of social development; the zone of proximal development.

4.0 The Zone of Proximal Development

The Zone of Proximal Development (ZPD) is described by Vygotsky as the difference between what a learner can do by himself and what he can accomplish with an adult or more competent peer (Vygotsky 1978).

Therefore, working within the ZPD, the teacher is assisting learners to work just beyond their capacity to do something on their own. We can demonstrate this principle once again using our original scenario of the child having accomplished making two different pitch sounds with two different bottles.

The teacher has observed that the child has reached the top end of what he can accomplish on his own and joins the child, the bottom end of the ZPD. To verify his assumption, the teacher asks two specific questions: First, why the sounds are different in each bottle, and second, can the child make new sounds, sounds that are higher. The child cannot fully comprehend why the bottles are making different sounds, but he answers that the water is making the sound. In regards to the second question, the child confirms that he can make new sounds using new bottles and water, but he doesn't comprehend how a higher sound can be made. The teacher must now prepare to use Wood's (1988) five levels of assistance in contingent teaching to incrementally guide the student to a full understanding of the concept and task.

From this the teacher has now extrapolated the point where the child's zone of proximity begins. The teacher then begins assisting the child contingently, as Wood (1988) describes "making any help given conditional upon the child's understanding of the previous levels of instruction". Wood furthers this by explaining that the teacher ensures 'the child is not left alone when overwhelmed by the task and also guarantees him greater scope for initiative when he showed signs of success'. In other words, the teacher gives exactly the amount of help as is needed and nothing more, based on the child's 'moment to moment understanding' (Wood 1988).

The teacher asks open ended and leading questions, helping the child as little as possible so as to enable him to figure things out for himself, such as, how much water he should put in the next bottle and why he might want to put less or more water; taking 'baby steps' into the ZPD. Following this, the teacher suggests the child tries to create a high pitched sound with a new bottle. The child doesn't fill enough water in the bottle and hits it; a low pitch sound is created. The teacher then again asks a leading question and moves further into the zone of proximal development, hoping to lead the child upwards in reasoning and cognition: What sound do you have now, a high or a low sound?", the child answers, "A low sound." Teacher asks: What do you think you can do with the water in the bottle to change the sound?" The child is stumped and cannot answer. The teacher uses the next level of contingent teaching, giving a higher degree of help than only speaking to the child, and points to the level of water in the bottle and again asks the same question. This uses the same oral prompt as before, but adds the additional help of focussing the child's attention on the level of water which is bringing him

slowly nearer to understanding the role that the water plays in making a sound and helping him understand the answer to the original verbal prompt. The child thinks and answers that he can put more water in the bottle. The teacher again asks “ How do you think the sound will be once you’ve added some more water?” The child reasons that the sound will be higher. The teacher asks the student to first test his hypothesis by hitting the other bottles, listening for the sound and commenting on the level of water that accompanies the sound coming from each bottle; thus allowing the child to make a correlation between the pitch and the amount of water in the bottle. The child is now far into the ZPD and reaching towards its limit; this is observed by the child hesitating more and taking longer to respond to the steps of the task. Finally the child adds some water and hits the bottle, creating a higher pitched sound as expected.

We can see that the teacher brought the child beyond the limit of what he can achieve on his own, into the ZPD, and continued to raise the level of challenge and level of reasoning required by increasing the complexity of the task. The child was thus able to reason at a higher level and able to express his thought process orally well into the higher areas of his ZPD.

The reasoning behind ZPD is the belief that children can do more, with assistance, than by themselves and additionally, what they can do with help today, they will hopefully be able to do alone tomorrow (Vygotsky 1986). Wood (1988) described the roles of the teacher and learner as that of expert and novice. The teacher aims to create situations where the learner may slowly, over time, transform to become an expert himself.

Vygotsky (1978) suggested this:

The child is firstly a spectator as the expert (parent or teacher) does the majority of the cognitive work. He then becomes a novice as he starts to take over some of the work under close supervision of the expert. As the child grows in experience and capability of performing the task, the expert passes over greater and greater responsibility but still acts as a guide, assisting the child at problematic points. Eventually, the child assumes full responsibility for the task with the expert present still in the role of a supportive audience.

(Vygotsky 1978 cited in Wray & Medwell 2001, p. 11)

5. 0 Scaffolding

The term “ scaffolding” is often linked with the theories of Vygotsky.

However, although Vygotsky’s writings were a large influence in the creation of the learning metaphor, he never actually used the term himself. The first comprehensive use of the term scaffolding appeared in a paper by Wood, Bruner & Ross (1976).

Wood et al. described scaffolding as a form of adult assistance “ that enables a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts” (Wood et al. 1976, p. 90).

Scaffolding, as is implied in its name, is the process of adding information to a child’s instructions and tasks bit by bit. Once the child has acquired some mastery or expertise in one part of the task, additional parts may then be stacked onto the original, incrementally, as the child grasps each part of the concept. This means, a real change in the child’s cognitive development
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should take place during the scaffolding process if the scaffolding is to be considered successful.

Using the same preceding scenario presented above, we can see the teacher broke down the task of learning to make a range of different sounds and of comprehending the concept, into manageable pieces, presenting only as much information as the child could take at one time.

The concepts of the ZPD and scaffolding are important tenets behind modern sociocultural theory that sees learning as a “ fundamentally social act, embedded in a specific cultural environment” (De Guerrero & Villamil 2000 p. 2-3).

6. 0 Conclusion

Through my examination of the processes involved in learning and teaching within the classroom scenarios presented, I am able to conclude that utilising Vygotskian theories and subsequently derived methodologies and related theories of instruction, have enabled my students to learn more effectively, raising and widening their maximum potentials when learning.

The influence of Vygotskian constructivist theory has opened the door to many other theorists to further the basic tenets of Vygotsky’s proposed theories and to find deeper explanations of phenomena occurring in educational learning situations. The breadth of originality and concepts coming from theorists rooted in the Vygotskian style are most likely due to the fact that much of Vygotsky’s theories remained incomplete due to his early death in 1934; thus leaving much room for further interpretation and

much opportunity to take Vygotsky's theories beyond its original scope of focus.

Much of the interest for Vygotskyian theory is due to its ease, relevance and applicability in educational practice. It is widely relevant to the practitioners and educationalists hoping to improve teaching methodologies and teacher's understanding of what is actually happening when a child is growing and learning within a classroom setting.

Utilising Vygotskyan theories in my daily teaching practice seems like second nature and is easy to incorporate into my practice. The applicability and contextual relevance of the theories in class, makes for more productive and enjoyable lesson for both the learner and the teacher alike. The knowledge gained from the social learning theory, the more knowledgeable other, the zone of proximal development, scaffolding and contingent teaching methods, enables me to design and implement activities correctly, in regards to optimal cognitive development situations, so as to better promote the learning dynamics occurring within my classroom.