Psychology of Music Education Overview

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Dr. Edward Gordon’s Music Learning Theory (MLT) is just that – a theory rather than a method in music education (Gordon, 2012). The theory describes how students learn and how they progress in understanding of what they learn through all stages of music learning development. MLT outlines two main categories of learning in order to describe how students learn music. These two categories are based on audiation research: discrimination learning and inference learning. Discrimination learning is the ability to determine through comparison if elements are the same or different. According to Gordon, there are five levels of discrimination learning described by MLT, including aural or oral; verbal connection; partial synthesis; symbolic association; and composite synthesis. Inference learning is when students take an active role in their own learning. Students learn to identify, create, and improvise unfamiliar musical patterns. MLT specifies separate categories of inference learning that students will naturally follow as they progress in their music learning, just as in discrimination learning. These categories are: generalization of musical elements and concepts; creativity/improvisation of music and musical ideas; and theoretical understanding of music in general.

Explaining how people know what they know is basic constructivism (Lamon, 2017).  Problem solving is at the center of learning.  Reflecting on experiences and the consequences of experiences grows understanding.  Change must occur in the person in order for learning to take place.  Deep understanding comes from what the learner has constructed.  Constructivism is an alternative to objectivism.  In objectivism, knowledge is a passive reflection of the eternal, objective reality.  Through this we can assume that there must be some degree of instruction to be certain the learner is receiving the correct information.

Jean Piaget, proponent of cognitive constructivism, believes that learning is transformative rather than cumulative in process (Lamon, 2017).  Learning takes place when there is understanding. Understanding changes or transforms as new knowledge is gained, especially knowledge that challenges what the learner already knows. Lev Vygotsky, proponent of social constructivism, believes that children internalize external and social activities when they are with people more competent.  Social speech is seen as having a collaborative nature even in children.  He studied and compared children working independently to children working with a more competent person.  He compared the children's levels of reasoning and found that environments for learning should involve guided interactions.  These guided interactions allow children to reflect and then change their conceptions through communication.  John Dewey seemed to combine constructivism and social constructivism.  He believed education depended on action-knowledge.  Learners have to draw from experiences that have meaning to them. From this reflection, learners recognize problems and can then form their own hypotheses.  These experiences take place in social settings where learners can work together to test their hypotheses and study outcomes.  Places of learning need to incorporate real world problems into the curriculum.

In constructivism, prior knowledge is crucial to ongoing learning and development (Lamon, 2017).  Learners must be able to connect a current problem to something they already know. If there is information that cannot be connected with prior experiences, it will be forgotten quickly because it is not meaningful to the learner.  So often children are unable to connect their school subjects to their real world situations and understanding.  What they are learning in school holds no present value in their everyday life at the time, thus they tend to forget the information because it is never connected to something meaningful.

A constructivist curriculum should be focused on the negotiation of meaning (Lamon, 2017).  It should be a process that seeks to dig deeper into 'big ideas' rather than supplying a wide content. Conflict sparks learning and determines the organization of what is learned.  The process of learning includes discussion, listening, understanding other view points and comparing individual learner understanding to the understanding of other individual learners as well as the group of learners.  Assessment is in the form of formative assessment and summative assessment.  Formative takes place throughout learning and provides feedback.  Summative assessment takes place in the form of tests and learner writing at the end of the unit.  Formative is much more useful in constructivist learning since it provides the learner building blocks and connections to what the learner already knows.  Summative offers very little, if any, feedback but meets the national need to have black and white scores in learning. The teacher's role is to guide students in learning.  Students are responsible for their own questions, experiments, analogies and conclusions.  The teacher should organize information around big ideas.  These ideas should be of interest to the students.  The teacher should also help students connect to previous learning.

Jean Piaget was a leader in developmental psychology (Huitt, 2013).  He believed that the difference between humans and animals is that humans have the ability to do symbolic reasoning.  Piaget began to notice distinct characteristics in how children learn.  He realized that younger children were not more ignorant than the older children, but rather they simply thought differently based on their experiences.  Two aspects of his theory involve the process of coming to know and the stages we move through as we gradually acquire this ability. According to Piaget, intelligence is how an organism adapts to environment.  Behavior is the adaptation to the environment and is controlled through mental processes or schemes.  A natural drive seeks balance between the schemes and the environment.  This balance is called equalization.  The process of equalization is done through assimilation and accommodation.  Both of these are done throughout life. Transforming the environment is assimilation.  The process needed to accept something from the environment is accommodation.  Assimilation and accommodation are used simultaneously.

Dr. Benjamin Bloom's idea of cognitive development is commonly recognized as diagrammed in a pyramid (Armstrong, 2017).  Knowledge is the base and is defined as remembering previously learned material.  It is the recalling of learned things.  Comprehension is the second level and is the ability to understand the meaning of what is known.  Application is the third level and is the ability to use or apply what is learned to real situations.  The analysis level is next and is the ability to break down learned material into its components in order to understand its organization.  Synthesis is next and is the ability to form a new whole with the parts of what was previously known.  Evaluation is the final level and is centered in the ability to determine the value of material in relation to a specific purpose.

Proximal generally means the *middle* or *in between* two points of measurement. Introduced by Lev Vygotsky, the Zone of Proximal Development, or ZPD, is the difference between what the learner already knows and can do independently and what the learner does not know and is unable to do without help (Marsh & Ketterer 2005). The learner can draw from past experiences to promote learning in the future while receiving assistance on occasion. This encourages the student to seek new opportunities for learning. The teacher scaffolds learning carefully so that in time the learner can teach themselves. Learning occurs through student exploration and social interaction.

Gestalt is a term that means *form* or *pattern* (Davey, 2015). The basic idea of the Gestalt theory is whole – part – whole (Ellis, 1938). The whole is greater than all the parts together and learning is beyond simple mechanical responses from the learner. The whole is broken down into individual elements and then reassembled to form the whole in order to understand how the whole functions. While the whole is broken into small elements, the elements are carefully studied and the relationships among them are determined before they are put back together to form the whole. Gestalt theory focuses on the big picture, but in order to understand the big picture, the small details and parts of the big picture must be studied and understood.  Gestalt theory does not settle for unanswered questions but seeks to know reasons for everything, thus helping to pave the way for future questions and exploration.

Behaviorism is the study of individuals, not of social or cultural groups (Graham, 2017). Behaviorism is an attitude. According to B.F. Skinner, reinforced behavior usually is repeated; whereas behavior that is not reinforced will become weakened (McLeod 2015). Skinner believed that operant conditioning could change behavior. Operant conditioning is the use of reinforcement to influence behavior. Reinforcement can be positive or negative. Ivan Pavlov studied the automatic reflexes or behaviors that are caused by some form of stimulus from the environment. According to Pavlov, the automatic reflex can be changed through a conditioning process. Believing that reflexes can be altered similarly between humans and animals, Pavlov used animals to conduct his conditioning experiments.

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