# Learning Theories

* The goal here
  + The goal of this talk is to provide people with context and develop interest
  + This is not a full lecture about different theorists and their ideas, but instead an overview that I hope will be useful and help give insights into the difference in teaching styles and style choice opportunities
  + Want to read more? This free textbook is good: <https://oer.galileo.usg.edu/cgi/viewcontent.cgi?article=1000&context=education-textbooks>
* Why talk about learning theories?
  + They are interesting!
  + They can help to frame how we think about teaching and learning
  + They can help suggest assignment/activity ideas
  + They can help deal with the frustration of teaching
  + They can help us understand and communicate with other instructors who see learning differently from the way we do
* We have information about several learning theories and related concepts online at <https://wichita.edu/theory> or directly: <https://www.wichita.edu/services/mrc/OIR/Pedagogy/Theories/theory.php>
* Today we are going to talk about 4 different learning theories and how they can be used to think about instruction. You’ll notice that we will be talking about both psychology and education, and that is because educational theory is often developed in psychology.

1. **Behaviorism**: “The Sage on the Stage”: Early to mid 20-th century thinkers, B.F. Skinner and J.B. Watson developed Behaviorism in part as a response to an earlier focus in psychology on introspection. How could psychology advance as a discipline if each mind is an individual thing with secrets that are difficult or impossible to measure? Behaviorism’s influence on education is profound and has been since the mid 20th century. Most or all people in this session were likely taught using Behaviorist techniques in their childhood. Behaviorism holds:
   1. Learning is a behavior.
   2. People learn through interaction with their environment
   3. Learners are passive recipients of information; instructors are active transmitters
   4. To be effective, teaching should be repetitive with regular feedback from the instructor to the student
   5. Students learn through positive and negative reinforcement
   6. Students’ inner thoughts are not included
2. Classroom activities/methods that are consistent with behaviorism could include
   1. Drills: repetition of content (multiplication tables for example). “Say it again” (memorization)
   2. Regular skill practice: Repeated skills with teacher guidance (musical practice, for example). “Do it again”
   3. Objective Question/Answer: “Who is the President of France?”
   4. Positive reinforcement: Praise, small rewards
   5. Negative reinforcement: If you have an A, you don’t have to take the final
3. Very useful in content fields that have a large amount of factual information that must be memorized and quickly recalled.
4. **(Social) Constructivism**: “The Guide on the Side”: Rose to popularity in the 1980s, although its intellectual roots go back to the early 20th century and are based on the work of Jean Piaget and Lev Vygotsky. Vygotsky is especially influential as he developed the idea of “social constructivism,” (which is what we are talking about here) the idea that people learn through interactions with others. Vigotsky also developed the concept of “Zone of Proximal Development,” which describes the space between “developed skill or knowledge” and “failure”. These would be what we might call “reach” assignments. These ideas led to Jerome Bruner’s development of a concept called “instructional scaffolding,” where an instructor provides supports for learning that are gradually removed as the learner becomes self-sufficient. Imagine teaching a kid to ride a bike as an example. Constructivism believes:
   1. Knowledge is constructed, and the process is individual to every learner
   2. New information has to be incorporated into a learner’s experiences and contextualized by their worldviews.
   3. Learners learn how to learn by … learning. They have to go through the process to improve.
   4. Learning is inherently active and requires learner participation. Passively receiving information is NOT learning.
   5. Learning is inherently social but also inherently intrinsically motivated
   6. Knowledge is personal
   7. Failure is a key to learning
   8. Learning is something that happens in the mind. Yes, repetition can lead to a kind of mental muscle memory for facts, but to be able to make those facts actual knowledge, they have to be incorporated into the learner’s own experience and understanding.
5. Classroom activities/methods that are consistent with constructivism include:
   1. Group work and other collaborative and interactive assignments
   2. Negotiated assignments (shared authority between learner and the instructor)
   3. High value on student “storytelling” and sharing of point of view
6. **Connectivism**: The new kid in town: This is a brand-new theory under active development. It was first posited by George Siemens in 2004 and then Stephen Downes in 2005. Connectivism is a radical departure from how we have typically thought of learning:
   1. Learning transcends individual knowledge construction. Individual learners are only participants in the learning process, not ultimate judges or owners of knowledge.
   2. Learning takes place across a network of people and other resources (think: webpages, databases, etc). Each of these repositories of facts are called “nodes” in the theory. So, each student is a node. Each website or database is also a node. There is no distinction among different nodes beyond their usefulness to the connected knowledge.
   3. Knowledge is made as nodes are connected, and the process of connecting nodes is the real value. Knowledge is important, but it’s secondary to the connection itself.
   4. Decision making is a learning process, and a big part of good decision making is learning how to choose the correct nodes to connect to.
   5. The more diversity in the nodes, the better. Learning can’t take place when nodes are not diverse.
   6. The goal of learning is to have access to accurate and timely knowledge
   7. Learn more here: <https://web-p-ebscohost-com.proxy.wichita.edu/ehost/detail/detail?vid=0&sid=732c622c-f18f-4903-85bf-0cd4eb507717%40redis&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#AN=508180290&db=eft> and here: <https://eric.ed.gov/?id=EJ1245809>
7. Classroom activities that can leverage connectivism could include:
   1. Using Twitter or other social media to reach out and draw in others to your conversation (Tweeting @ great minds in the field, eg)
   2. Using guest lecturers
   3. Encouraging information literacy (node choosing) and decision making in assignments
8. **Transformative Learning: Transformative** Learning Theory has its modern roots in the 1970s in the work of Jack Mezirow, one of the founders of Adult Education as a sub-field of Education. Transformative Learning holds that true learning is more than simply “knowing more” over time. Instead, learning relies on a concept called “perspective transformation”: a shift that changes how the learner understands the facts and experiences they already hand and allows them to see things differently going forward. Examples of perspective transformation can be small like suddenly “getting” a concept that eluded the learner before, or they can be large like the transformations associated with various stages of life. From this perspective, the goal of the instructor is to provide opportunities and “space” for transformation and the discomfort it can bring with it. Mezirow describes this process in a 10-phase model that begins with a “disorienting dilemma” and ends with the learner incorporating their mental changes into their lives.
   1. The covid retreat is a good example of a disorienting dilemma
9. Classroom activities that can encourage and support perspective transformation include:
   1. Recognize and be open about the fact that learning can feel dangerous to learners, and this danger is highly personal
   2. Give space for personal reflection of concepts and ideas
   3. Encourage peer-to-peer interaction