

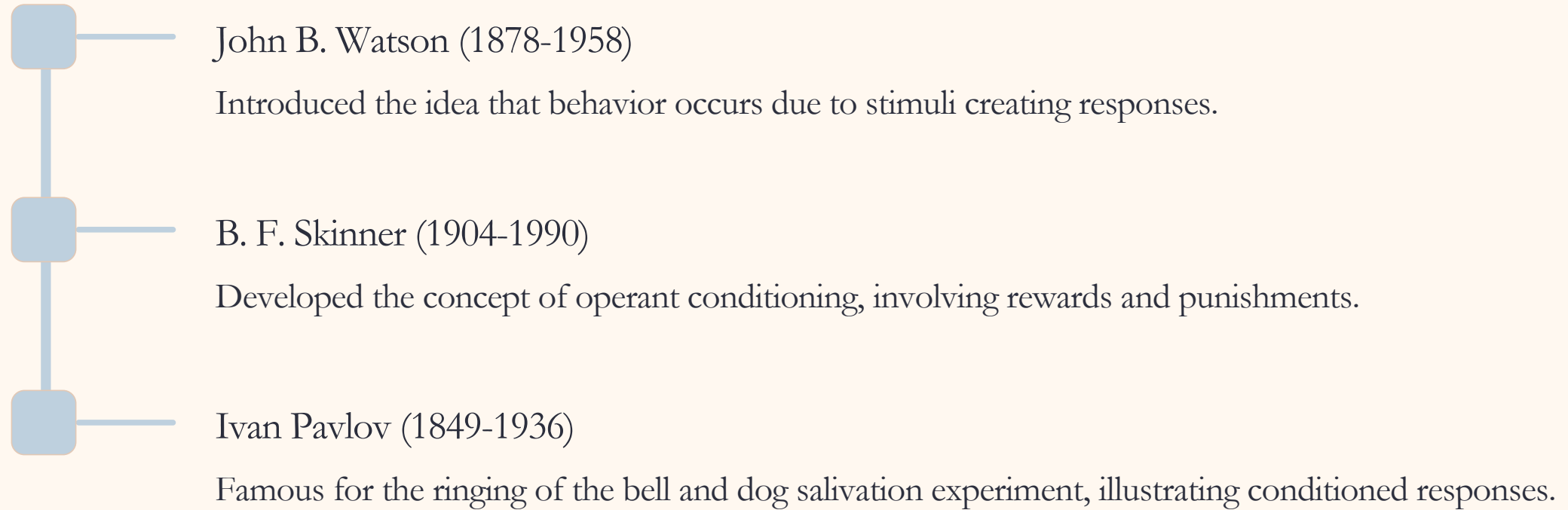


# EDUCATIONAL LEARNING THEORIES

This document provides a comprehensive overview of various educational learning theories, detailing their key concepts, major theorists, practical applications, limitations, and resources. Each theory offers a unique perspective on the learning process, contributing to the diverse educational practices observed in classrooms. Included are specific examples in practice of each learning theory that occurs in either my school, classroom, or life as a graduate student.

Mallory Scanlon

# Behaviorism



Behaviorism is a psychological theory that focuses on the observable and measurable aspects of human behavior. At its core, behaviorism emphasizes changes in behavior resulting from stimulus-response associations made by the learner through different experiences. Behaviorists assert that behaviors can be learned through conditioning and therefore can also be unlearned and replaced by new behaviors. This key element of behaviorism relies heavily on rewarded responses; desired behaviors must be reinforced for learning to occur. However, behaviorism has been criticized because it oversimplifies human behavior and ignores factors beyond stimulus-response relationships.

Reference:

Zhou, Molly and Brown, David, *Educational Learning Theories: 2nd Edition* (2015). Education Open Textbooks. 1. <https://oer.galileo.usg.edu/education-textbooks/1>

# Behaviorism: Examples in Practice

At our elementary school, we have implemented a school-wide "signal" to effectively capture everyone's attention and promote quiet behavior. When adults say the phrase "time-out," all students pause their activities and raise a "t" sign with both hands. To initiate this practice, we relied heavily on positive reinforcement and encouragement, consistently praising students for their compliance with the signal. By offering specific compliments like "Thank you, Johnny!" or "Sarah, you did an excellent job," we successfully conditioned students to respond appropriately and demonstrate the signal consistently. Through a gradual reduction of these positive reinforcements, the signal has now become ingrained in the behavior of all students across our school building. In my own classroom, a similar approach is employed during the initial stages of our spelling lessons at the beginning of the school year. To ensure active engagement in our "pounding and spelling" activities, I reward participating students with Starbursts. This positive stimulus serves as motivation for other students to follow suit and follow the given directions. Initially implemented for a brief period during the first few weeks of school, this practice effectively encourages active participation and establishes clear expectations. Over time, as students internalize the routine and expectations, the need for external rewards diminishes, and all students actively engage in the "pounding and spelling" exercises without the need for additional incentives.

# Cognitivism



Jean Piaget (1896-1980)

Introduced stages of cognitive development and complex cognitive processes.

Atkinson & Shiffrin (1968)

Proposed the multi-store model of memory called the Information Processing Model which provides a framework for understanding the different stages of memory and processes involved in memory functioning.

Philip Gough (1972)

Developed cognitive models of reading, including the "bottom-up" Information-Processing Models deciphering information from lower-order to higher-order stages of cognitive processing.

Cognitivism is a psychological theory that focuses on how people acquire, process, and store information. It emphasizes the role of mental processes such as perception, memory, and problem-solving in learning and understanding human behavior. It's exemplified in educational practices when building on prior knowledge through the use of a KWL chart and scaffolding. Limitations include a lack of consideration for environmental conditions affecting learning and memory such as social, emotional, or motivational aspects and overlooking individual learner diversity.

## References:

Ertmer, P. A., & Newby, T. J. (2013). Behaviorism, Cognitivism, Constructivism: Comparing Critical Features From an Instructional Design Perspective.

*Performance Improvement Quarterly*, 26(2), 43–71. <https://doi.org/10.1002/piq.21143>

Tracey, D. H., & Morrow, L. M. (2017). *Lenses on Reading: An Introduction to Theories and Models* (3rd ed.). The Guilford Press.

# Cognitivism: Examples in Practice

In our second-grade classroom, we implement a structured approach to start our instruction on penguins by creating a KWL chart. This chart serves as a valuable tool to assess students' existing knowledge about these fascinating birds and to stimulate their curiosity by posing questions for further exploration. By gauging students' prior understanding and identifying areas of interest, I am better equipped to tailor the instruction to meet their needs effectively.

This penguin unit sets the stage for our upcoming animal research projects, where students have the opportunity to select their preferred animal for further study. To facilitate the writing process, I provide a scaffolded example, drawing upon our collective learning about penguins. By collaboratively engaging in writing activities centered on familiar topics, students solidify their foundational skills, laying the groundwork for independent writing endeavors. This collaborative approach fosters a supportive learning environment and empowers students to use their knowledge on their own.

# Constructivism



Jean Piaget

Proposed children progress through distinct stages of development and viewed learning as an active process of building knowledge through exploration, social interactions, and student centeredness.



John Dewey

Emphasized the importance of experiential learning, "learning by doing", where students actively engage with their environment and reflect on their experiences.



Lev Vygotsky

Provided a framework for understanding how social interactions, cultural context, and language shape cognitive development and learning. He also introduced the concept of zone of proximal development (ZPD) which highlights what students can achieve independently and what they can achieve with guidance and support.

Constructivism is a psychological theory that focuses on stages of cognitive development and learning through experiences. It emphasizes the active role of learners in constructing knowledge through exploration, experiments, and social interactions. Limitations include an overemphasis on discovery-based learning and the need for extensive time and effort from teachers.

Reference:

Tracey, D. H., & Morrow, L. M. (2017). *Lenses on Reading: An Introduction to Theories and Models* (3rd ed.). The Guilford Press.

# Constructivism: Examples in Practice

In our second-grade curriculum, we've been exploring the world of penguins and are now transitioning into the realms of animal classifications and habitats. Recognizing previous challenges students have faced in grasping the concept of habitats, I'm devising a constructivist approach to teaching this topic. This method involves the creation of interactive learning stations representing diverse habitats such as forests, deserts, oceans, and grasslands. Each station will be equipped with props and visual aids depicting the unique features of the habitat and its inhabitants, allowing students to explore freely under my guidance as they construct their understanding.

Furthermore, students will engage in the creation of narratives about animals within each habitat, fostering creativity while highlighting key characteristics and adaptations. To deepen comprehension, we will collaboratively construct miniature habitats and discuss the specific needs of animals within them. Role-playing activities will further enhance understanding as students embody various animal roles and interact with their respective habitats, thereby fostering firsthand experiences and promoting constructivist learning.

The constructivist learning theory underscores the significance of social interaction, the authenticity of learning experiences, and the centrality of student engagement in the learning process. Additionally, I have integrated breakout/escape style activities, such as Breakout EDU, into our curriculum to challenge students' thinking. These activities promote collaborative problem-solving and critical thinking skills, encouraging students to apply their existing knowledge to real-world scenarios.

Drawing inspiration from contemporary educator and researcher Nell K. Duke, I have also incorporated project-based learning into our classroom environment. Aligned with research and aimed at fostering a deeper understanding of key concepts, Project PLACE (Project-Approach to Literacy and Civic Engagement) offers units designed specifically for second-grade students. For example, this year we implemented the Economics unit, where students had the opportunity to create and sell their own goods, gaining valuable insights into fundamental economics principles. More information about Project PLACE units can be found at: <https://www.nellkduke.org/project-place-units>.

# Humanism

Abraham Maslow (1908-1970)	Theorized humans have inborn needs and developed the hierarchy of needs.
Physiological Needs	These are the most basic needs driving all others, such as food and water.
Safety Needs	These include the need for structure, order, and predictability.
Affiliation Needs	These encompass the need for love, belongingness, and social relationships.
Esteem Needs	These involve the need for self-confidence, worth, and capability.
Self-actualization	This is the need to become what one is capable of being.

Humanism, with Abraham Maslow as a major theorist, focuses on a hierarchy of needs, from physiological to self-actualization. In practice, it involves creating supportive learning environments that address these needs. Limitations include its subjective nature and reliance on a biased sample of self-actualized individuals.

Reference:

Zhou, Molly and Brown, David, *Educational Learning Theories: 2nd Edition* (2015). Education Open Textbooks. 1. <https://oer.galileo.usg.edu/education-textbooks/1>



# Humanism: Examples in Practice

In humanism, teachers play a pivotal role in cultivating a supportive learning environment for students by implementing various strategies:

- Establishing clear rules and expectations, providing a sense of structure and predictability.
- Valuing and respecting students within the classroom community.
- Ensuring students have access to essential resources such as food, water, and snacks.
- Facilitating the development of friendships among students.
- Allowing opportunities for collaboration on projects and group activities, fostering teamwork and cooperation.
- Promoting kindness and empathy, nurturing a culture of inclusivity and understanding.
- Celebrating students' accomplishments and milestones, reinforcing their sense of achievement.
- Providing avenues for self-expression, exploration, and independent learning, encouraging students to pursue their interests and passions.

By implementing these approaches, teachers create an environment where students feel supported, valued, and empowered to thrive academically, socially, and emotionally.

# Experiential



Experiential learning theory emphasizes the importance of learning through direct experiences in the learning process. Individuals learn best when actively engaged in experiences, reflect on those experiences, conceptualize new ideas based on their reflections, and apply their learning to future situations. Limitations include an overemphasis on individual reflection and overlooking the social and cultural aspects of learning. This theory does not always lead to transferable skills or knowledge.

## Reference:

Seaman, J., Brown, M., & Quay, J. (2017). The Evolution of Experiential Learning Theory: Tracing Lines of Research in the JEE. *The Journal of Experiential Education*, 40(4), NP1–NP21. <https://doi.org/10.1177/1053825916689268>

# Experiential: Examples in Practice

In the beginning of second grade, our curriculum dives into the exploration of plants and seeds. Leveraging the experiential learning theory, students engage in hands-on activities to comprehend the various stages of a plant's life cycle. Beginning with the planting of seeds using soil, pots, and seeds, this tactile experience provides students with firsthand insight into the initial phase of plant development.

As the plants progress through their growth stages, students are encouraged to observe and document changes in a plant journal, fostering reflective observation throughout the process. Once the plants reach a certain stage of growth, they are transferred to our school garden, where students continue to monitor and record the various stages of plant growth in a natural environment.

Upon reaching maturity, students utilize their plant journals to create visual representations of the plant's life cycle using art materials. These projects serve as tangible manifestations of their understanding and insights gained throughout the project. Students also present their projects to the class, facilitating a collaborative exchange of observations, questions, and discoveries, which enriches the collective learning experience of all students.

# Transformative

Jack Mezirow

Emphasized individuals undergo a significant shift in perspective as they develop reflective judgement in adulthood. This transformation involves critically examining and reassessing one's habitual expectations, making assumptions explicit, contextualizing them, validating them, and acting on them. Mezirow described education as the facilitation of this transformative effort, emphasizing the importance of self-directedness in understanding one's experiences.

Transformative learning theory is central to adult education and involves challenging and reassessing one's beliefs and assumptions. Metacognitive reasoning plays a crucial role in advancing and assessing reasons, allowing individuals to critically reflect on perspectives. Limitations to this theory include an overemphasis on cognitive processes and overlooking social, cultural, and structural factors sharing in learning and change. It also does not account for diversity in perspectives and contexts and can be challenging to assess due to the subjectivity and dependent nature in learning.

Reference:

Cranton, P. (2016). *Understanding and Promoting Transformative Learning: A Guide to Theory and Practice* (Third edition.). Stylus Publishing, LLC.

# Transformative: Examples in Practice

In exploring transformative learning theory within the context of adult education, we could consider a graduate course focused on the psychology of education. At the beginning of the course, students could be asked to reflect on their own beliefs and assumptions about education, learning and teaching. Through written reflections, class discussions, and interactive activities, students would identify their existing perspectives and consider how these influences impact their understanding of educational psychology. Throughout the course, students could encounter challenging concepts and theories and then be encouraged to critically analyze these concepts, questioning their assumptions and exploring alternative perspectives. Students could participate in experiential learning activities that simulate real-world educational contexts to gain insight into different perspectives and experiences within the educational system. Students would develop critical thinking skills and deepen their understanding of how psychological principles are applied to education practice through analyzing and engaging in problem-based learning activities that require them to apply theories to real-life educational situations. Throughout the process, students would also be required to keep reflective journals, documenting their learning experiences, insights and reflections and then collaborate with peers in small groups to discuss/support each others' learning. At the end of the course, a reflective paper could be written to demonstrate the reflection of their own beliefs and assumptions about education and how that has evolved throughout the learning process. This reflective exercise highlights the impact of critical reflection on personal and professional growth.

# Connectivism

 George Siemens

George Siemens' Eight Principles of Connectivism highlight the value of diverse opinions, the process of connecting information sources, and the critical capacity to know more over current knowledge. These principles guide learners to see connections across various fields and emphasize the importance of up-to-date knowledge and decision-making as a learning process.

Connectivism is a learning theory that highlights the importance of networks and connections in the digital age. It suggests that learning occurs through the interaction with information sources and peers in online environments, emphasizing the role of technology and social networks in knowledge acquisition and creation. Connectivism faces challenges due to its relatively short history and the difficulties of operationalizing it in structured educational settings. The theory's reliance on technology may also limit face-to-face interactions and overlook the social and cultural factors that shape learning experiences.

 Stephen Downes

Involved with the development and facilitation of MOOCs (Massive Open Online Courses), which are online courses that are open to anyone and often attract large numbers of participants from around the world – emphasizing the importance of learner autonomy, peer collaboration, and open access to educational resources. Knowledge is dispersed throughout a network of connections, and learning entails the capacity to build and navigate those networks

## References:

- Corbett, F., & Spinello, E. (2020). Connectivism and Leadership: Harnessing a Learning Theory for the Digital Age to Redefine Leadership in the Twenty-First Century. *Heliyon*, 6(1), e03250–e03250. <https://doi.org/10.1016/j.heliyon.2020.e03250>
- Kathleen Dunaway, M. (2011). Connectivism: Learning Theory and Pedagogical Practice for Networked Information Landscapes. *Reference Services Review*, 39(4), 675–685. <https://doi.org/10.1108/00907321111186686>
- Utecht, J., & Keller, D. (2019). Becoming Relevant Again: Applying Connectivism Learning Theory to Today's Classrooms. *Critical Questions in Education*, 10(2), 107-119.

# Connectivism: Examples in Practice

Viewing the design of learning environments through a connectivism lens emphasizes the importance of collaboration, networking, and the exploration of diverse perspectives. Reflecting on my own experiences, graduate courses serve as example of connectivism learning principles in action.

In these courses, the traditional role of the teacher, or professor, is not the main source of information. Instead, the focus shifts towards guiding students in the process of acquiring knowledge, sharing insights within a networked community, and engaging in collaborative discussions to enhance individual understanding. Central to this approach is the need for students to critically evaluate the credibility of sources, synthesize information from various sources, and to create connections between ideas and perspectives.

The online format of graduate coursework particularly displays connectivism principles, as students navigate a digital world that encompasses resources and diverse perspectives. Through active engagement with course materials, participation in online discussions, and collaborative projects, students gain a collective intelligence of their peers to deepen their understanding and expand their cognitive skills. In essence, connectivism learning environments empower students to take ownership of their learning journey, fostering a dynamic exchange of ideas and knowledge within a collaborative network.

# References

Corbett, F., & Spinello, E. (2020). Connectivism and Leadership: Harnessing a Learning Theory for the Digital Age to Redefine Leadership in the Twenty-First Century.

*Heliyon*, 6(1), e03250–e03250. <https://doi.org/10.1016/j.heliyon.2020.e03250>

Cranton, P. (2016). *Understanding and Promoting Transformative Learning: A Guide to Theory and Practice* (Third edition.). Stylus Publishing, LLC.

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