

Comparing Learning Theories

Learning Theory	Behaviorism	Constructivism	Cognitivism	Connectivism	Andragogy
Summary	Focused on observable and measurable behaviors resulting from responses to stimuli	Learning is an active and social process whereby new knowledge is constructed upon the foundation of previous experiences	Focused on the mental processes of the learner and how the mind receives, processes, stores, and retrieves information	Emphasizes how new technologies such as web browsers, social media, wikis, and online discussion forums have led to new ways of learning	The practice of teaching adult learners, which is also known as “adult education”
Theorists	Ivan Pavlov, J.B. Watson, B.F. Skinner	Jean Piaget, Lev Vygotsky	Jerome Bruner, Albert Bandura	George Siemens, Stephen Downes	Malcolm Knowles
Related Concepts	Classical Conditioning, Operant Conditioning	More Knowledgeable Other (MKO), Zone of Proximal Development (ZPD), Scaffolding	Social Cognitive Theory, Cognitive Load Theory	Massive Online Open Course (MOOC)	Formal vs. Informal vs. Non-formal Learning
Strengths	Allows teachers to use quizzes and tests to measure outcomes; works well for objective lessons, with clear “right” and “wrong” answers	Learners are actively engaged instead of passive listeners; Emphasis on critical thinking skills, so students learn the “how” and “why” of the topic	Well-suited for complex forms of learning, such as reasoning, analysis, and problem-solving; teacher can present new information in a manner that is meaningful to a learner	Open-source approach to knowledge; Not limited by time or space; No central authority to determine what and how content is taught and learned	Understanding andragogy and applying the principles can lead to highly engaging learning experiences tailored specifically for adults
Weaknesses	Focuses on the results and not the process; does not encourage critical thinking and analysis; punishment can weaken a behavior, but the underlying behavior still exists	Less structure might be difficult for some students; Without traditional evaluation methods, it might be difficult for teachers to see when students are falling behind	Relies on mental processes which we cannot directly observe; relies on active participation and intrinsic motivation of the learner, so if the learner is disinterested, learning might not be possible	There may not be a clear path for learners	Because the quality of adults’ lived experiences can vary, there may be a greater need for individualization of teaching and learning practices; Some teachers might find it challenging to change their teaching style to match the needs of adult learners
Implications for Instructional Design	Gamification that rewards points and badges (positive reinforcement) for correct answers (desired behaviors); multiple-choice and true/false tests and quizzes to measure outcomes	Focus on exploration; Provide opportunities for learners to observe and react to real-life situations; Use student-centered learning objectives such as justify, analyze, and evaluate; Encourage learners to reflect on their experiences	Use relevant examples and analogies so learners can make connections with previously learned material; Provide information in manageable pieces to allow learners to process new information effectively; Eliminate irrelevant details such as background music and decorative graphics	Use social media groups and online discussion; encourage exploration of online sources for information	Give learners the chance to choose their paths so they can learn what is relevant to their needs; Allow learners to share their experiences and demonstrate their capabilities using collaborative discussion and group activities. Discussion boards are great for this purpose; Address the learners’ needs quickly by aligning activities with real-world scenarios. Give them immediate opportunities to apply what they learn. Assign projects that will allow learners to demonstrate their skills.