

Summary of Learning Theories



Originators & proponents	Circa	Key Points	Further explanation	Examples
Behaviorism		Human and animal behaviors can be conditioned	Repeated behaviors until automatic	<ul style="list-style-type: none"> • Create measurable outcome • Tangible rewards, feedback • Mastering predictable skills
Ivan Pavlov (McLeod, 2018)	1890s-1930s	Classical conditioning	Two stimuli are linked together to produce a new learned response in a person or animal.	Animal and human behaviors alike
J.B. Watson (O'Donnell et al, 2011)	1910s-1950s	Extrinsic motivation	Learn desired behaviors regardless of internal states or previous experiences.	Rewards and punishment
B.F. Skinner (Schacter, 2011)	1960s-1970s	<ul style="list-style-type: none"> • Operant conditioning • Radical behaviorism • Reinforcement • Verbal behavior 	<ul style="list-style-type: none"> • Operant conditioning • Radical behaviorism • Reinforcement • Verbal behavior 	Environmental stimuli
Constructivism		Places learner at the center of learning	Learner controls own learning	<ul style="list-style-type: none"> • Meaningful learning tasks • Group learning • Learners design construction
Jean-Jacques Piaget (Schacter et al, 2014)	1930s-1980s	Cognitive development of children and knowledge actively constructed.	Four stages: <ul style="list-style-type: none"> • Sensorimotor • Preoperational • Concrete operational • Formal operational 	Active learner engagement: <ul style="list-style-type: none"> • Assimilation • Accommodation • Equilibrium
Lev Vygotsky (Kozulin et al, 2003)	1920s-1930s	Cultural and social nature of learning and development.	Bridge between behaviorism and constructivism	<ul style="list-style-type: none"> • Mediation • More knowledgeable other • Zone of Proximal Development
Cognitivism		The thought process behind the behavior	Observes new behavioral patterns Focus on how to learn	<ul style="list-style-type: none"> • Factor in learner characteristics • Analyze tasks • Apply various learning strategies
Jerome Bruner (McLeod, 2019)	1930s-2016	Discovering learning through intellectual development	Three stages of development <ul style="list-style-type: none"> • Enactive • Iconic • Symbolic 	Scaffolding
Social cognitivism				
Albert Bandura (McLeod, 2016)	1977	Agrees with behaviorist learning theories of classical conditioning and operant conditioning.	Added two ideas: <ul style="list-style-type: none"> • Mediating processes occur between stimuli & responses. • Behavior is learned from environment through observational learning. 	Self-efficacy or confidence. <ul style="list-style-type: none"> • Mastery experiences • Vicarious experiences • Verbal persuasion • Emotional & physiological states
Cognitive load				
John Sweller (Sweller, 1988)	1970s-Now	Limited working memory capacity <ul style="list-style-type: none"> • Sensory memory • Working memory • Long-term memory 	Memory components <ul style="list-style-type: none"> • Intrinsic load • Germane load • Extraneous load 	Use of media <ul style="list-style-type: none"> • Signaling, e.g. keywords on screen • Segmenting, e.g. 6-minute chunks • Weeding, e.g. eliminating music • Matching modality, e.g. narration
Richard Mayer (learning-theories.com)	1970s-Now	Cognitive load in multimedia learning	<ul style="list-style-type: none"> • Limited capacity assumption • Active processing assumption 	<ul style="list-style-type: none"> • Limit text in PowerPoint slides • Five model structure - Two-channel: Visual, auditory - Comparison - Generalization - Enumeration - Classification
Connectivism				
George Siemens, Stephen Downes (krist2336)	2000s-Now	Digital age	<ul style="list-style-type: none"> • Internet technology, worldwide web • Learning happens across peer networks online • Knowledge sharing • Teacher guides students to information and answers key questions as needed 	<ul style="list-style-type: none"> • eLearning • MOOCs • OER • Social media • Wikis
Andragogy		Adult learning	Andragogy: Man-leading in Greek	As opposed to Pedagogy: Child learning in Greek
Alexander Kapp (Loeng, 2017)	1833	Inventor of the term andragogy	Emphasis on inner qualities rather than outer, objective competence	Forming of character is the foremost value for human beings.
Malcolm Knowles (Pappas, 2017)	1980s	The need to learn Five Assumptions: <ul style="list-style-type: none"> • Self concept • Adult learning experience • Readiness to learn • Orientation to learning • Motivation to learn 	Four principles: <ul style="list-style-type: none"> • Involved adult learners • Adult learners' experience • Relevance & impact to learner's lives • Problem centered 	Example of application in personal computer training: <ul style="list-style-type: none"> • Command, functions & operations • instruction task-oriented vs promoting memorization • Learners with different backgrounds • Self-directed learning with guidance

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