




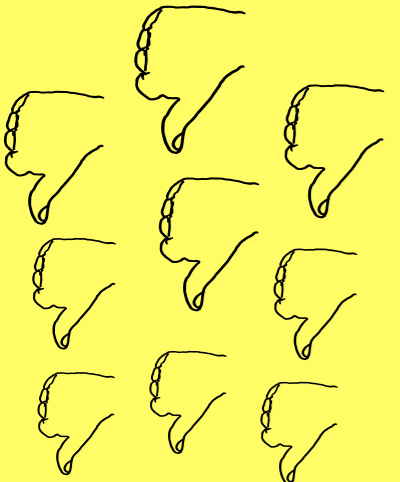



HOW 5 KEY LEARNING THEORIES COMPARE

TLB

	BEHAVIOURISM	CONSTRUCTIVISM	CONNECTIVISM	COGNITIVISM	ANDRAGOGY
CENTRAL IDEA 	New behaviours can be conditioned through stimulus and reinforcement and only observable changes in behaviour indicate successful learning.	Learners are not passive and must be actively involved in constructing their own understanding of the world.	The networked and digital world has impacted the way people need to learn, how much, from whom and how often.	The way learners' mental processes work and the cognitive strategies they use are just as important as the observable output of learning.	Adult learners have a different approach to learning than children because of their prior experience, identity and role in society.
KEY THEORISTS & THEORIES 	Ivan Pavlov Classic Conditioning Edward Thorndike The Law of Effect B.F. Skinner Operant Conditioning	Lev Vygotsky Social constructivism, Zone of Proximal Development Jean Piaget Cognitive Constructivism, Theory of Equilibrium Jerome Bruner Scaffolding Theory	George Siemens Connectivism Stephen Downes Connectivism and Connective Knowledge Alaa ALDahdouh Artificial Neural Networks and Connectivism	Jerome Bruner Cognitive Growth Albert Bandura Social Learning Theory Alan Baddeley Working Memory Model John Sweller Cognitive Load Theory	Malcolm Shepherd Knowles 5 assumptions of Adult Learners, 4 Principles Of Andragogy
HOW EDUCATORS TEACH 	Educators instruct learners in new information through repetition and question-and-response techniques, also using positive reinforcement to help learners to memorise information and pass tests.	Educators create a flexible curriculum and play a variable role based on the needs of the students, with the ultimate goal that students can take ownership of the topic and possibly even design their own learning.	Educators leverage online learning technology and information networks to enable students to learn in flexible environments. They must be able to accommodate life-long learners who often adapt their skills as needed.	Educators design their instruction around the mental processes and working memory of the student, imparting the right level of information at the right time.	Educators understand that adults are self-directed and experienced, so facilitate rather than instruct, enabling adults to take control, engage in discussions and access assistance as required.
HOW STUDENTS LEARN 	Learners memorise and repeat and seek out reward in the form of good grades or approval. They are expected to demonstrate they know the right answers.	Learners must be active participants in constructing their own knowledge; exploring ideas, questioning them and solving problems themselves.	Learners need to learn faster and more often, using technology and online networks to select and process new information, whenever required.	Learners adopt mental strategies to learn, understanding how to receive, organise, store, and retrieve information when they need to.	Learners leverage their prior experiences, identity and intrinsic motivation to learn, instead of relying entirely on the instructor.
KEY STRENGTHS 	<ul style="list-style-type: none"> Easy to determine if student has met the requirements. Enables scenarios in which there are straightforward right and wrong answers that must be memorised. Works in situations where it is not beneficial for the learner to formulate a contrary perspective. 	<ul style="list-style-type: none"> Enables learners to take ownership of their development. Provokes learners to develop teamwork skills and critical thinking. Accommodate individuals and diverse ways of thinking. 	<ul style="list-style-type: none"> Considers how technology impacts learning. Considers the development of work-related skills that pivot or change regularly. Recognises the skill required to find and select information from an abundance of knowledge available online. 	<ul style="list-style-type: none"> Able to accommodate a variety of cognitive abilities and levels. Works with - not against - the learner's mental processes. Enables meaningful learning and true comprehension. 	<ul style="list-style-type: none"> Considers how adults can adopt new skills that can positively impact their careers, while they are working. The sharing of personal experiences with others increases learning potential. Contemporary education technology aligns well with this approach.
KEY LIMITATIONS 	<ul style="list-style-type: none"> Individualism and personal context are not considered. True comprehension levels are unclear. Risk of low knowledge retention outside of pass/fail structure. 	<ul style="list-style-type: none"> Difficult to facilitate in a classroom of many. Learning evaluation can't easily be standardised. Not suitable in scenarios when unquestionable facts must be learned fast. 	<ul style="list-style-type: none"> Difficult to enable deep specialisms that require linear learning pathways. Focusses on adopting known information, not developing new ideas. Can limit what is learned to what is popular and findable in the network. 	<ul style="list-style-type: none"> Educators need to understand multiple instructional theories to meet the needs of many possible situations. Cognitive science changes fast so instructional design must continually adapt to be effective. As mental processes cannot be directly observed, evaluation relies on inferences by the educator. 	<ul style="list-style-type: none"> Relying on the learner to ask for guidance could mean struggling self-directed learners miss out. Designing a highly flexible curriculum and supporting materials could impact quality. Relies on all adults being clear about what they need to know, which is not always the case.
IMPACTS TO INSTRUCTIONAL DESIGN 	<ul style="list-style-type: none"> Create modules designed around passing tests that have only one right answer. Leverage positive reinforcement by awarding badges for right answers. Create linear pathways - or chaining - in which you must pass one level to get to the next one. Leverage game-based learning or gamification to improve effectiveness. 	<ul style="list-style-type: none"> Evaluate learners on how they actively build their own understanding. Create a flexible curriculum and the ability for learners to possibly co-design their own instruction. Allow students to apply information to scenarios they can relate to from their own lives and communities. Facilitate discussion to develop critical thinking. 	<ul style="list-style-type: none"> Accommodate non-linear learning pathways. Orientate curriculum around skills development. Leverage online learning technology and the most contemporary and popular LMS capabilities. Incorporate content from trusted online networks and enable learners to identify reliable content. 	<ul style="list-style-type: none"> Design content with cognitive load theory in mind, neither overwhelming nor under stimulating students. Incorporate goal setting, planning, and self-monitoring strategies. Allow learners to reorganise their learning plan based on their own needs and experiences. Conduct a cognitive task analysis to inform how content should be delivered. 	<ul style="list-style-type: none"> Accommodate learners' intrinsic motivations for learning in the content and evaluation. Flexibility of time and place must be central to the way the course is delivered. Enable learners to take control, engage in discussions and access assistance as required. Include practical applications and demonstrations on how knowledge can be applied in specific scenarios.

REFERENCES

Behaviourism

Stangor, C., & Walinga, J. (n.d.). *Introduction to Psychology* (1st Canadian Edition) [E-book]. BCcampus Open Education.

Behaviorism | GSI Teaching & Resource Center. (n.d.). GSI Teaching & Resource Center. Retrieved May 1, 2021, from <https://gsi.berkeley.edu/gsi-guide-contents/learning-theory-research/behaviorism/>

Skinner, B. F. (1976). *About Behaviorism*. New York: Vintage Books.

Constructivism

McLeod, S. A. (2018, Aug 05). *Lev Vygotsky*. *Simply psychology*: <https://www.simplypsychology.org/vygotsky.html>

McLeod, S. A. (2012). *Zone of proximal development*. Retrieved from www.simplypsychology.org/Zone-of-Proximal-Development.html

Collins, C., Benson, N., Ginsberg, J., Grand, V., Lazyan, M., & Weeks, M. (2012). *The Psychology Book: Big Ideas Simply Explained* (Illustrated ed.). DK.

Tchoshanov, M. (2013). *Engineering of Learning: Conceptualizing e-Didactics*. UNESCO Institute for Information Technologies in Education.

Vygotsky, Lev (1978). *Mind in Society*. London: Harvard University Press.

Connectivism

Siemens, G. (2005). *Connectivism: A Learning Theory for the Digital Age*. Published. http://www.itdl.org/Jan_05/article01.htm

ALDahdouh, A. A., Osório, A. J., & Caires Portugal, S. (2015). Understanding knowledge network, learning and cognitivism. *International Journal of Instructional Technology and Distance Learning*, 12(10), 3-21. Retrieved November 11, 2018, from <https://files.eric.ed.gov/fulltext/ED572896.pdf>

Clarà, M. & Barberà, E. (2013): Learning online: massive open online courses (MOOCs), connectivism, and cultural psychology. *Distance Education*, 34(1), 129-136.

Cognitivism

Michela, E. (2020). Cognitivism. In R. Kimmons & scaskurlu (Eds.), *The Students' Guide to Learning Design and Research*. EdTech Books. <https://edtechbooks.org/studentguide/cognitivism>

Emory, Bethany. "Chapter 2: Cognitive Load Theory and Instructional Message Design" (2019). *Instructional Message Design*. 12. https://digitalcommons.odu.edu/instructional_message_design/12

D. Sorden, S. (2005). A Cognitive Approach to Instructional Design for Multimedia Learning. *Informing Science: The International Journal of an Emerging Transdiscipline*, 8, 263-279. <https://doi.org/10.28945/498>

Andragogy

Pappas, C. (2013, May 9). *The Adult Learning Theory - Andragogy - of Malcolm Knowles*. <https://Elearningindustry.com>. <https://elearningindustry.com/the-adult-learning-theory-andragogy-of-malcolm-knowles>

Cochran, C., & Brown, S. (2016). Andragogy and the Adult Learner, 73-84.

The National Institute for Organisational Development (NISOD). (2007). 30 Things we know for sure about adult learning. *NISOD Innovation Abstracts*, XXIX(4).

Infed.org. (2013, January 1). *Malcolm Knowles, informal adult education, self-direction and andragogy - infed.org*: <https://infed.org/mobi/malcolm-knowles-informal-adult-education-self-direction-and-andragogy/>

Blondy, L. C. (2007). Evaluation and Application of Andragogical Assumptions to the Adult Online Learning Environment. *Journal of Interactive Online Learning*, 6(2).