



EDUCATIONAL PSYCHOLOGY

LEARNING THEORIES

Learning

**RELATIVELY PERMANENT CHANGE IN BEHAVIOR THAT IS
THE RESULT OF EXPERIENCE**

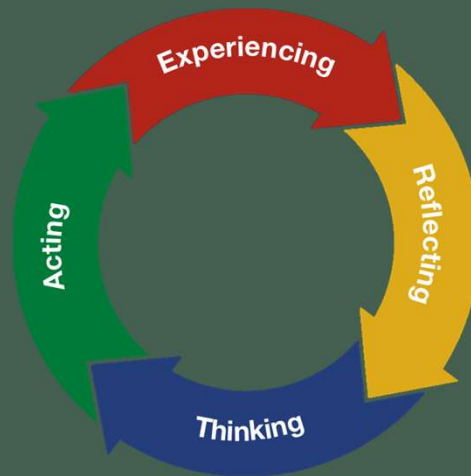
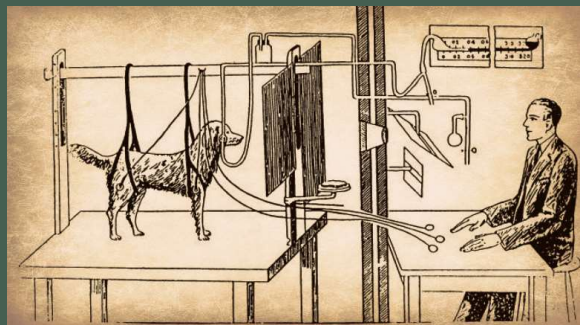
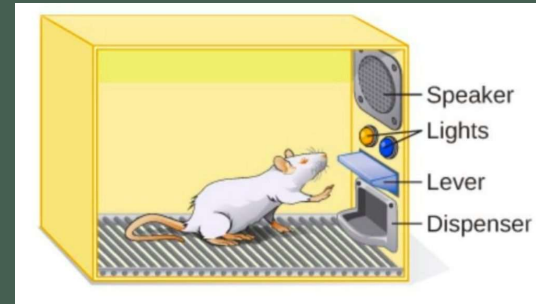
- through association, observation, or just plain thinking
- allows us to adapt to our environment and to survive

Learning Theories

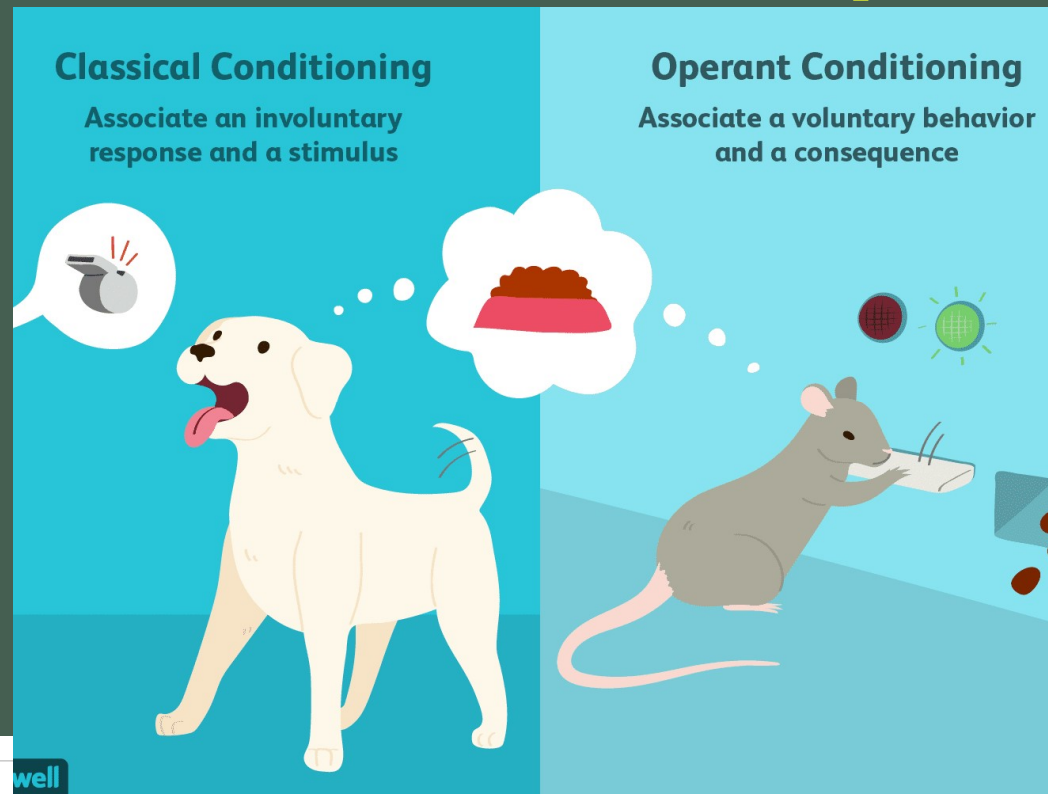
A. Conditioning

B. Constructivist approach to learning

C. Social learning

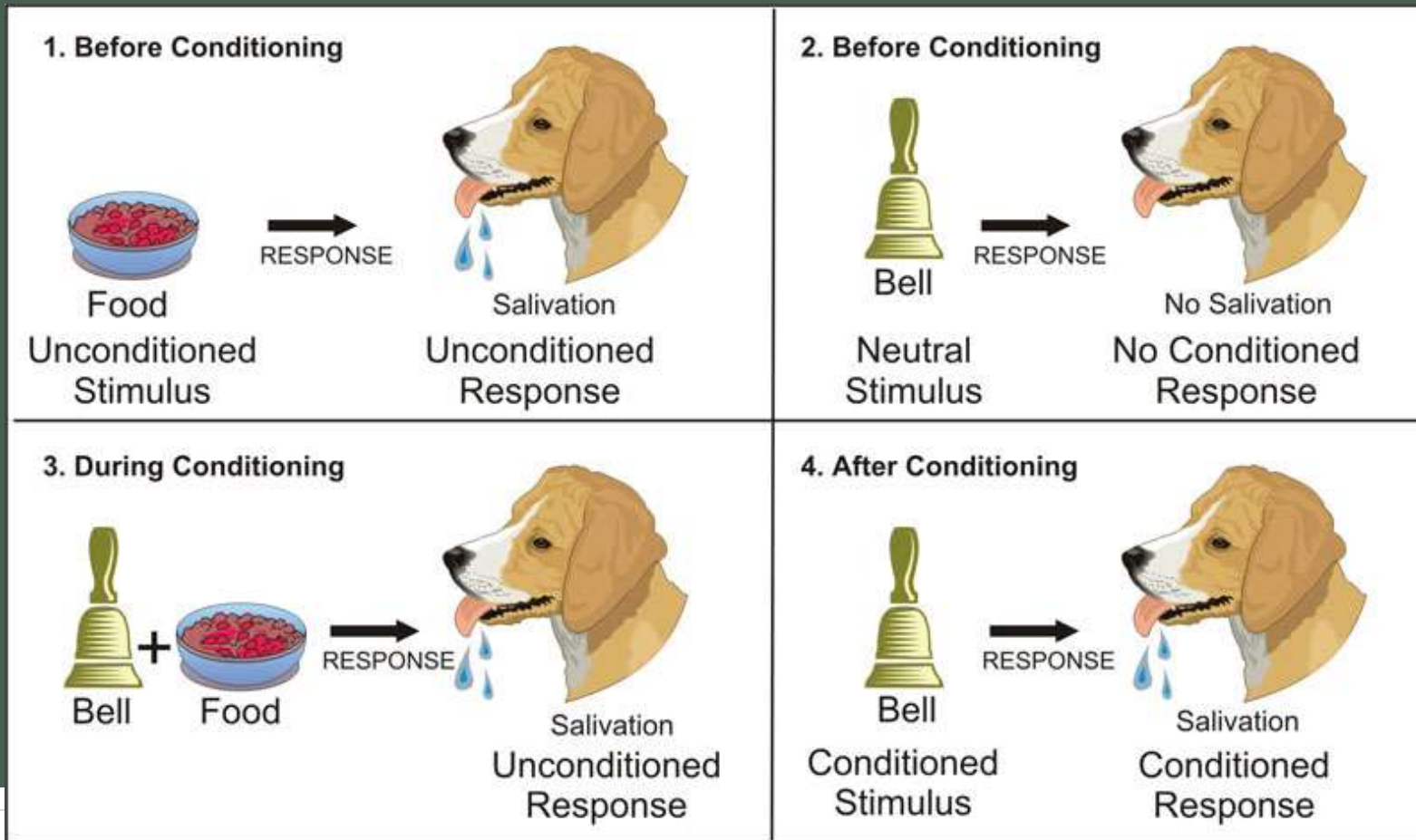


A. Conditioning



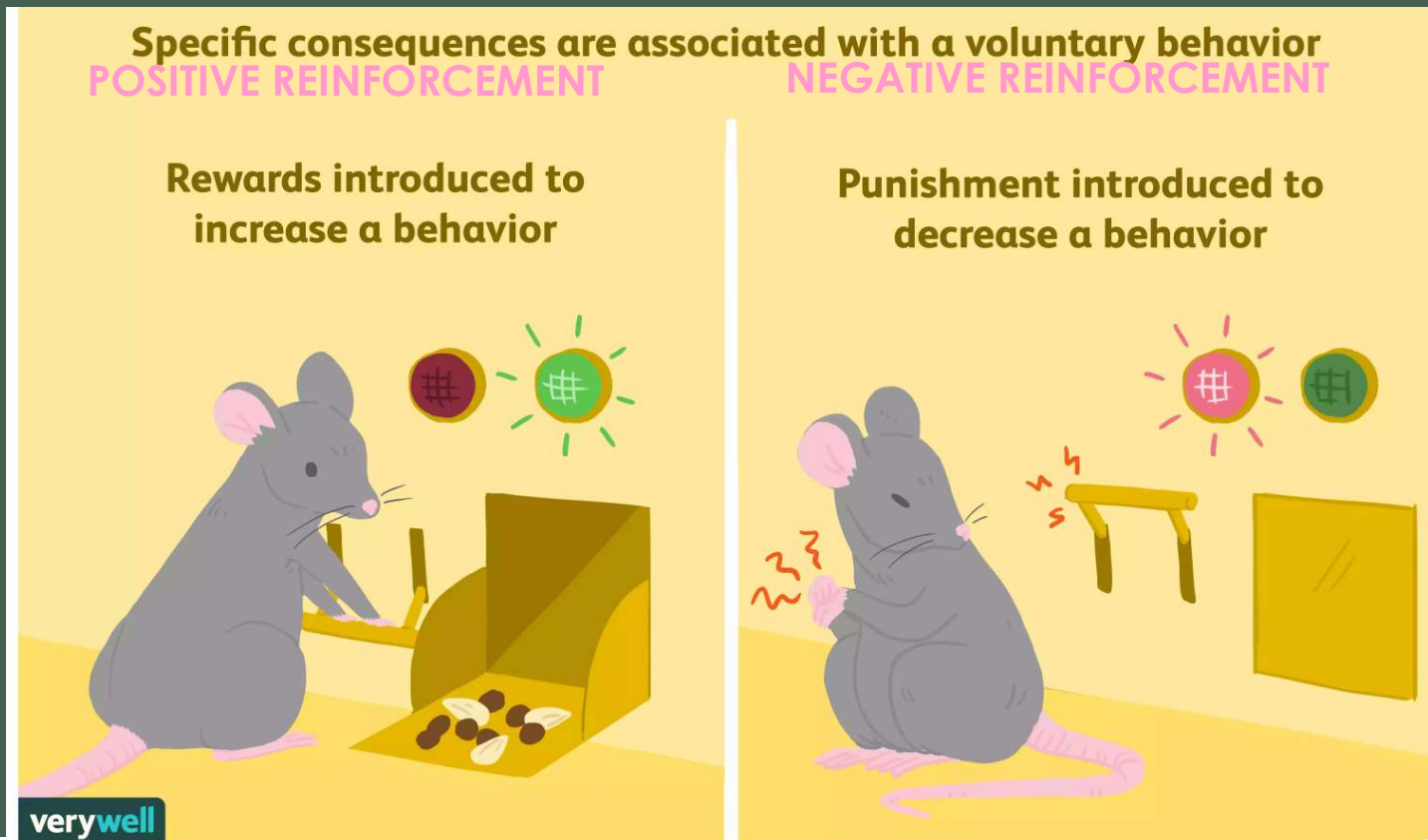
Classical conditioning

Ivan Petrovich Pavlov
1897



Operant/Instrumental Conditioning

B.F. Skinner
1937



Conditioning in practice

- Practicing
- Putting things together (time and space)
- Making important things stand out
- Learning from mistakes
- ...



B. Social Learning Theory

- People are not driven by either inner forces or environmental stimuli in isolation; instead behaviors are learned through **continuous interaction of personal and environmental determinants** and all learning from direct experience occurs by **observing** other people's behavior. (Burton, Moore, & Magliaro, 1996).
- https://www.youtube.com/watch?v=XHlhkM1cAv4&ab_channel=Sprouts



Social Learning Theory

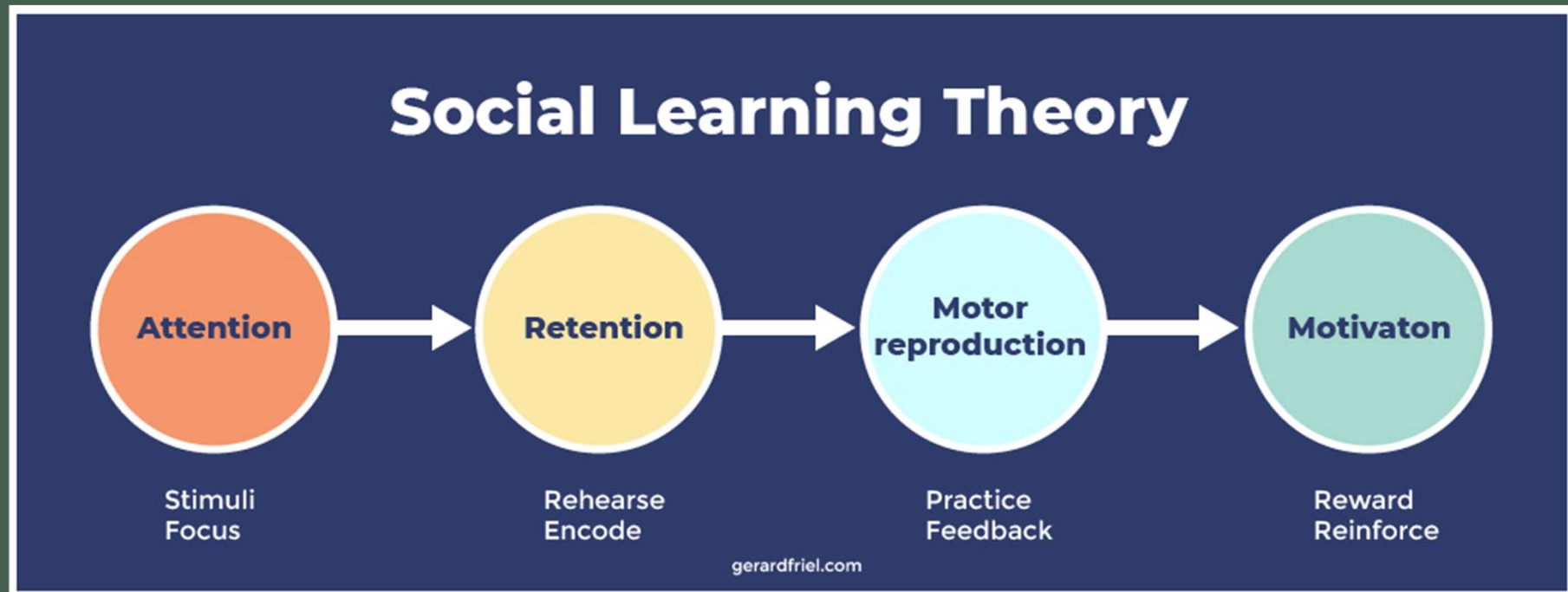
Basic forms of social learning

- social strengthening
- imitation
- identification
- observational learning
- anticipation
- association

Products of social learning

- ❖ Social roles
- ❖ Attitudes
- ❖ Values
- ❖ Ideals, etc....

Social Learning in practice



C. Constructivist approach to learning

- Learning is an **active, contextualized process** of constructing knowledge based on **personal experiences and social environment**



- Students' background, perceptions and perspective affect his learning in that they are foundations to build upon

Constructivist approach to learning

- Comparison:

- **Methods:**

- Lecture
 - Drill and Practice
 - Rote learning
 - Multiple choice tests

Behaviorism

Learner is passive: learns via external processes i.e. positive reinforcement

Cognitivism

Learning goes beyond external: is an internal process - short & long term memory

- **Methods:**

- Lecture
 - Visual tools: mind maps, charts etc to facilitate memorization for learning
 - Multiple choice & essay assessment

- **Methods:**

- Discovery
 - Collaborative group work
 - Scaffolding
 - Self-guided learning based on personal experience
 - Peer grading/ review

Constructivism

Learner builds on personal experience [internal], active & social in the learning process

Connectivism

Learner is self-directed learning via nodes [content source, people, groups] within network

- **Methods:**

- Self-directed quest for content
 - Sharing of content, sources
 - Spontaneous learning groups
 - Creates knowledge collaboratively

Constructivist approach to learning

Jean Piaget (1896 – 1980) – Cognitive constructivism

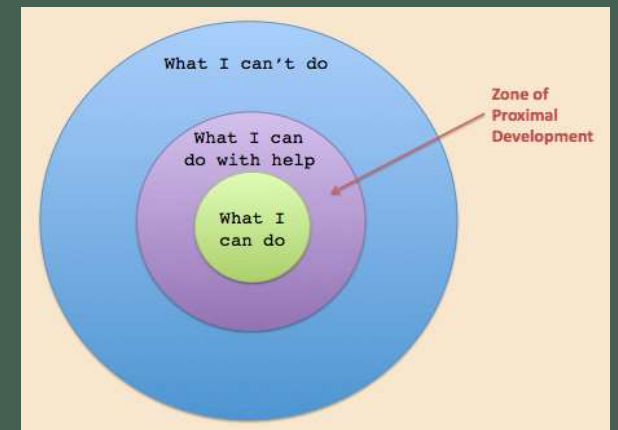
- Learning occurs by an active construction rather than passive receiving
- When new situation our current way of thinking, we must alter our thinking to restore equilibrium.



Constructivist approach to learning

Lev Vygotskij (1896 – 1934) – Social constructivism

- Knowledge exists in social context and is initially shared with others instead of being represented solely in the mind of an individual
- **Sociocultural Theory**
 - Vygotsky's perspective on cognitive development
 - children acquire their culture's values, beliefs, and problem-solving strategies through **collaborative dialogues with more knowledgeable members of society**
- **Zone of Proximal Development:** the range of tasks that are too complex to be mastered alone but can be accomplished with guidance and encouragement from a more skillful partner.



Constructivist approach to learning

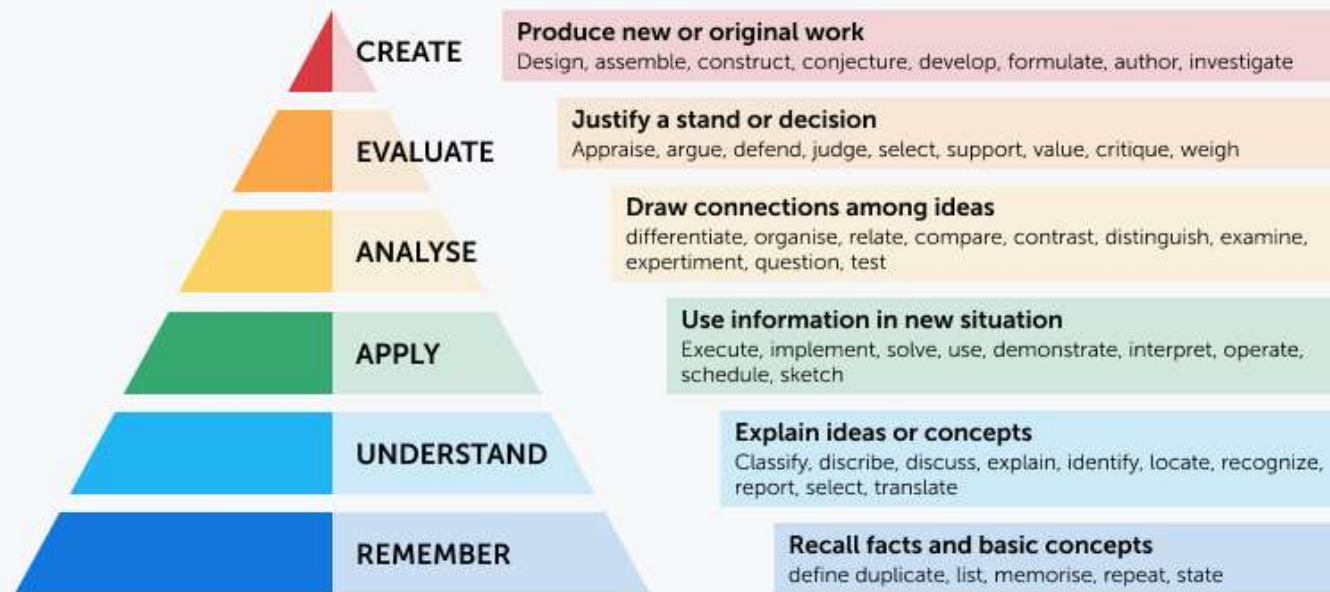
Benjamin Bloom (1913-1999) – Taxonomy of educational objectives

“**Bloom's Taxonomy**“ = *framework for categorizing educational goals*)

- a system for classifying objectives, processes, principles, questions, assignments, and facts
- in a hierarchy from simple to complex, and from concrete to abstract
- **Purpose:** To help educators to inform or guide the development of assessments, curriculum and instructional methods
- **Versions:**
 - Original taxonomy: 1956 (Benjamin Bloom)
 - Revised taxonomy: 2001 (Lorin Anderson)

Constructivist approach to learning

Bloom's Taxonomy



Constructivist approach to learning

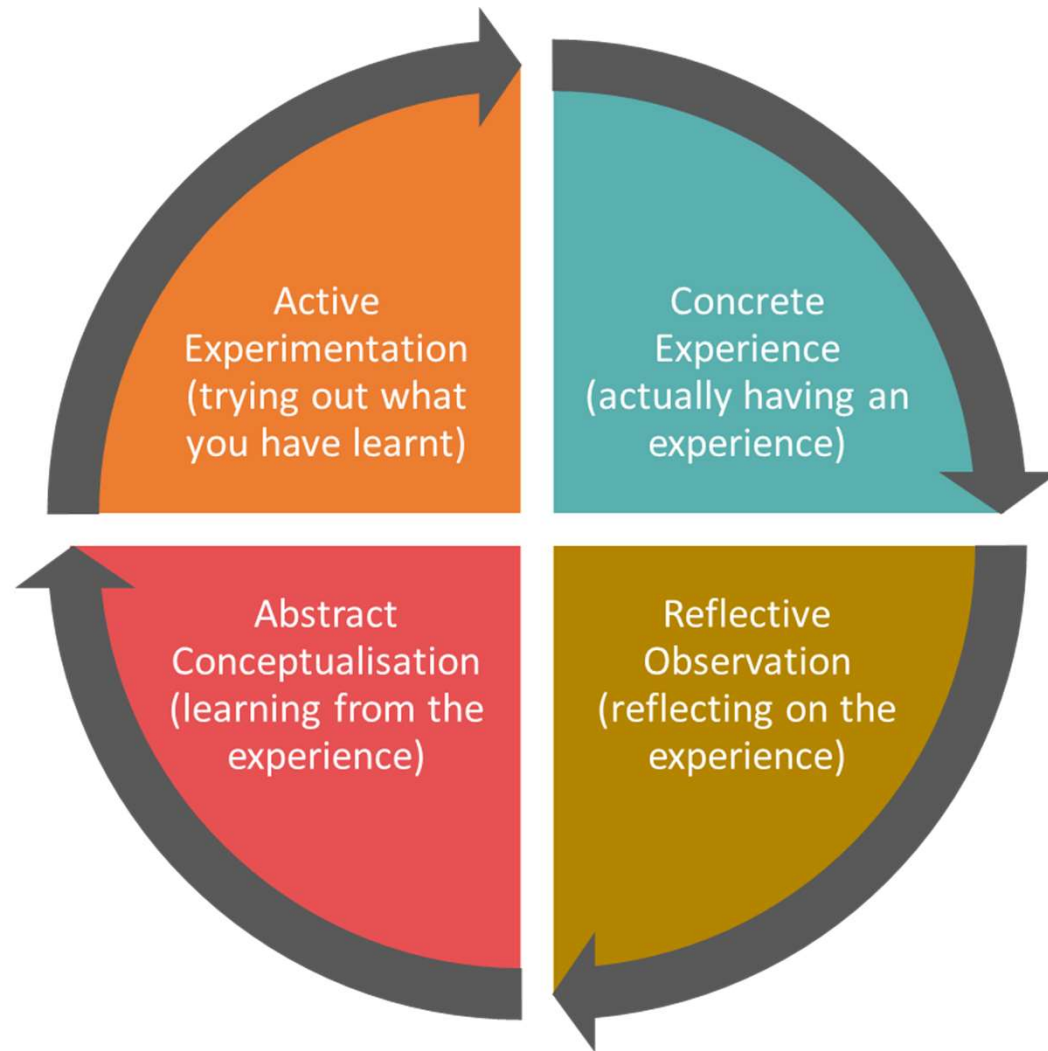
David A. Kolb (born 1939)

- Kolb's Experiential Learning Theory

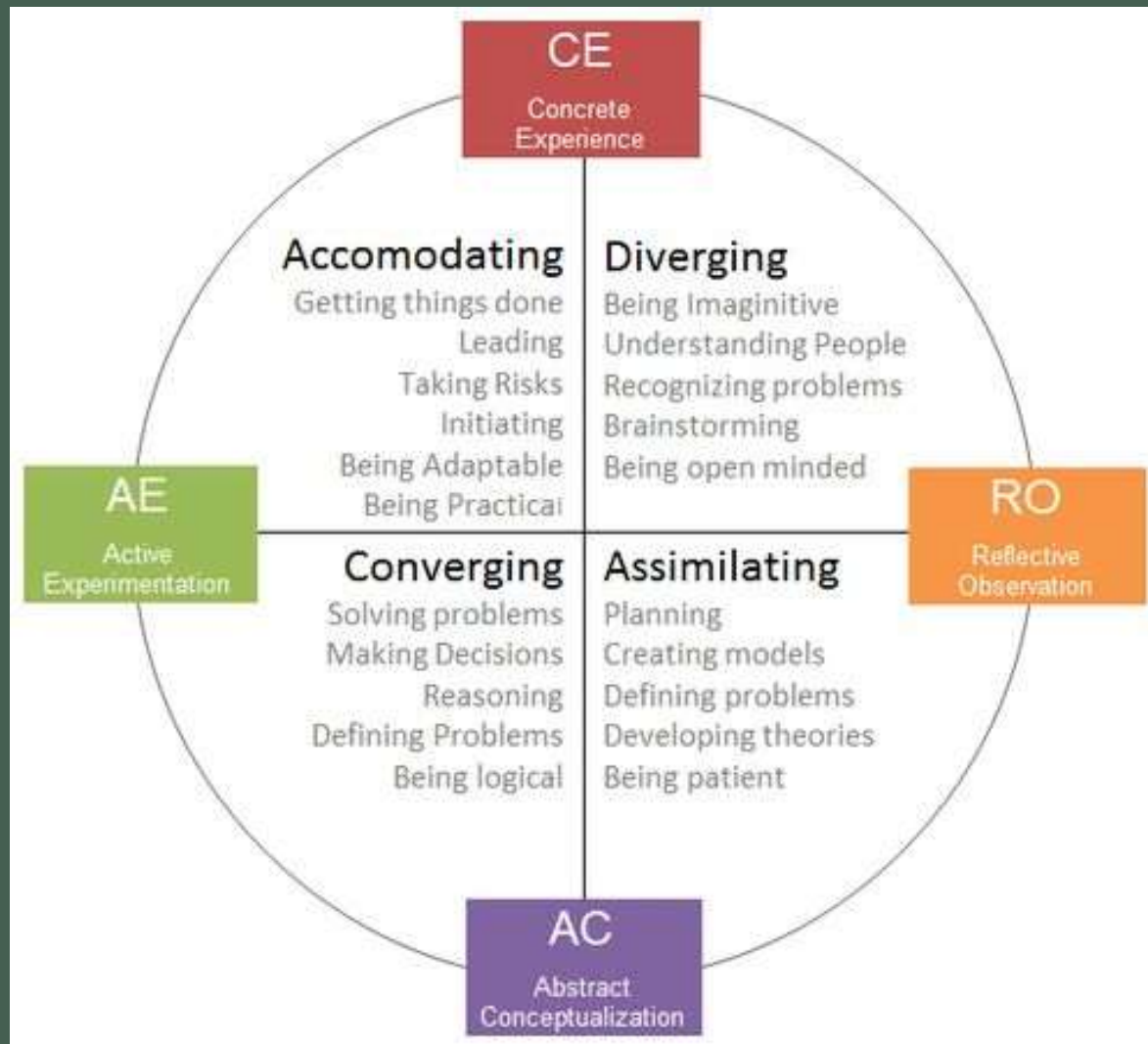
- knowledge is created through the transformation of experience – grasping and transforming it

- experiences, including cognition, environmental factors, and emotions, influence the learning process

Kolb's learning cycle



Kolb's Learning Cycle (1984)



Constructivist approach to learning

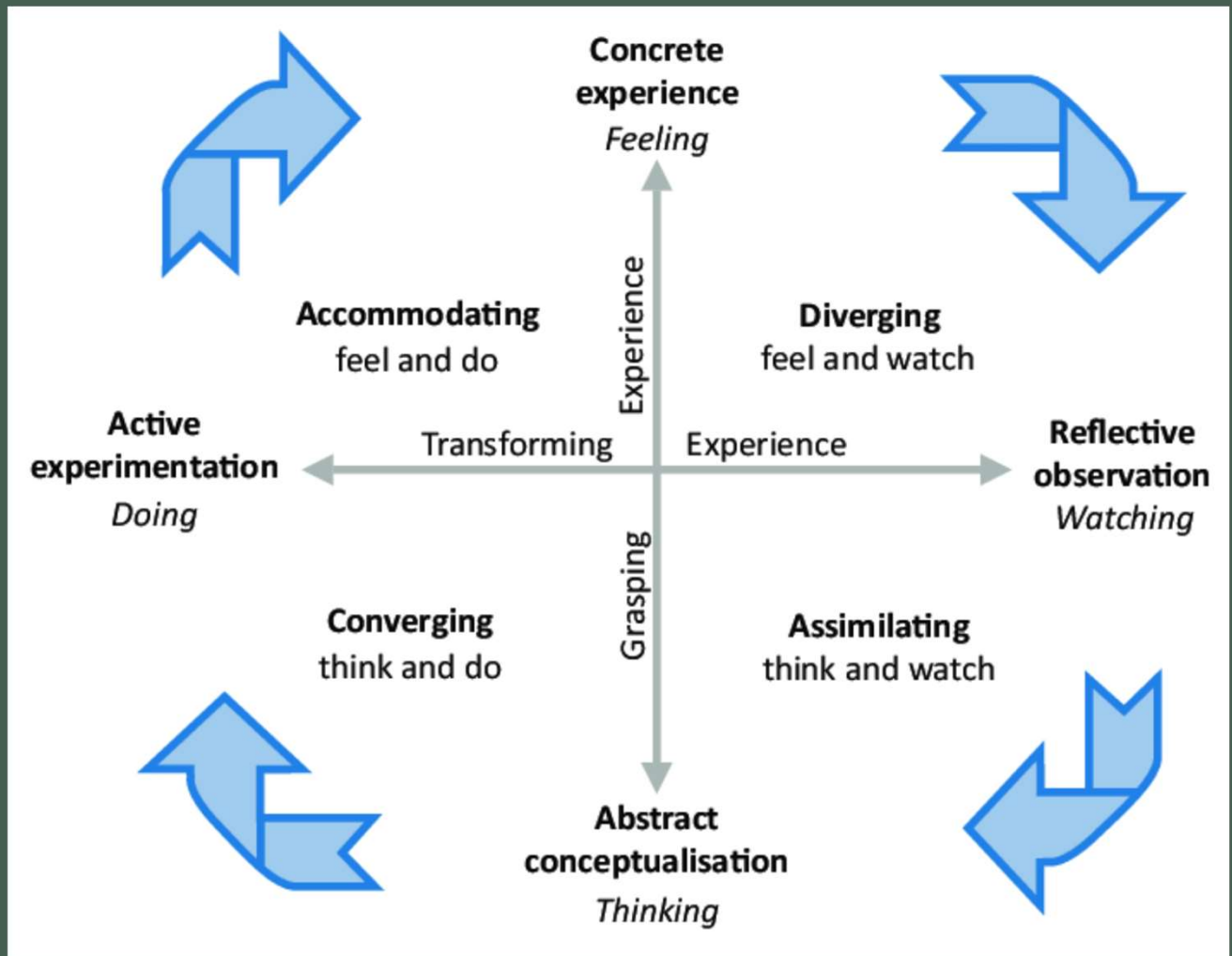
- Jean Piaget – Cognitive constructivism
- Lev Vygotskij – Social constructivism
 - Sociocultural Theory
 - Zone of Proximal Development
- Benjamin Bloom – Taxonomy of educational objectives
- David A. Kolb – Experiential learning theory (ELT), Kolb's learning cycle

Constructivist approach in practice

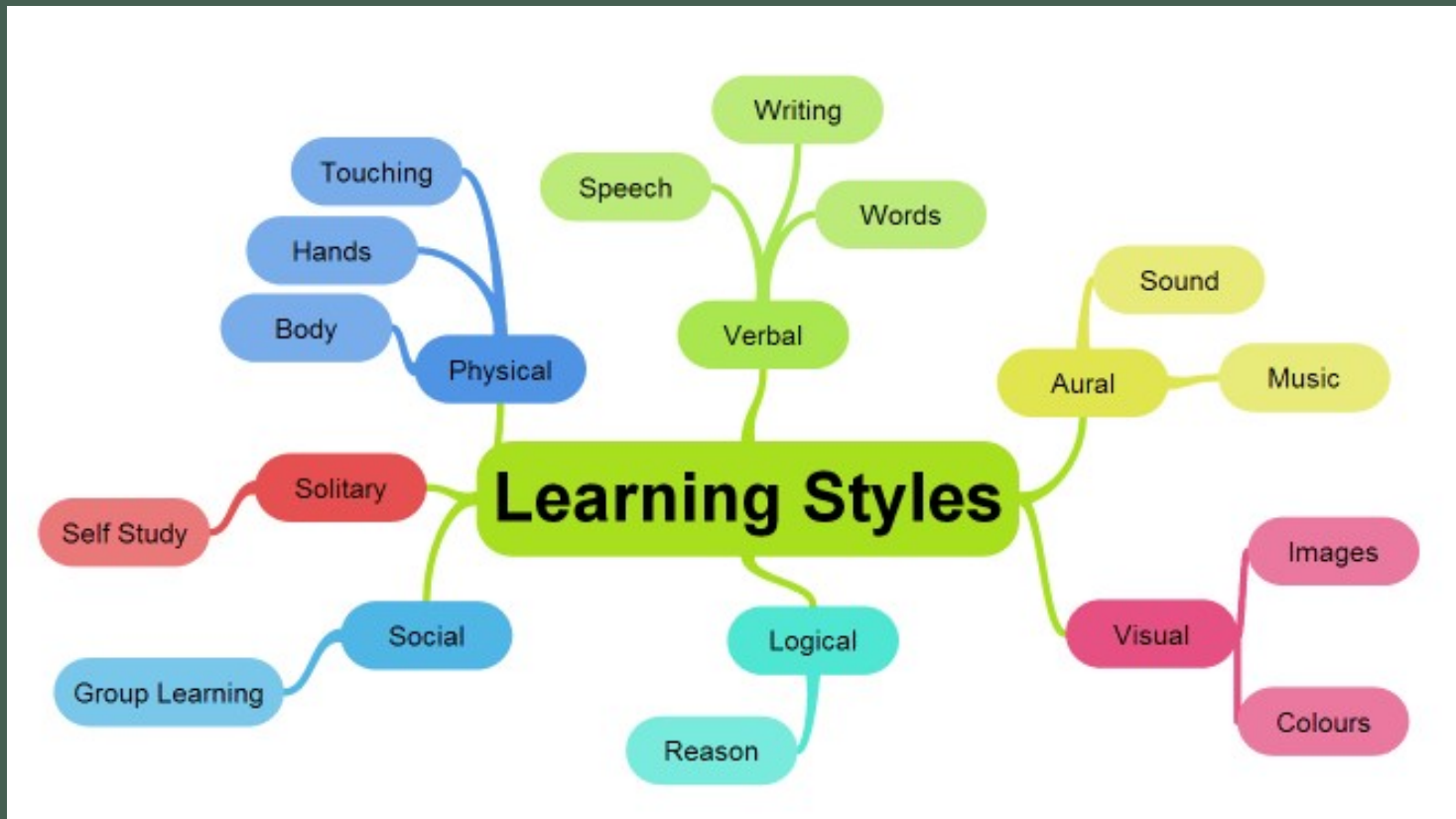
Traditional Classroom	Constructivist Classroom
- Curriculum begins with the parts of the whole. Emphasizes basic skills.	- Curriculum emphasizes big concepts, beginning with the whole and expanding to include the parts.
- Strict adherence to fixed curriculum is highly valued.	- Pursuit of student questions and interests is valued.
- Materials are primarily textbooks and workbooks.	- Materials include primary sources of material and manipulative materials.
- Learning is based on repetition.	- Learning is interactive, building on what the student already knows.
- Teachers disseminate information to students; students are recipients of knowledge.	- Teachers have a dialogue with students, helping students construct their own knowledge.
- Teacher's role is directive, rooted in authority.	- Teacher's role is interactive, rooted in negotiation.
- Assessment is through testing, correct answers.	- Assessment includes student works, observations, and points of view, as well as tests. Process is as important as product.
- Knowledge is seen as inert.	- Knowledge is seen as dynamic, ever changing with our experiences.
- Students work primarily alone.	- Students work primarily in groups.

(http://www.thirteen.org/edonline/concept2class/constructivism/index_sub1.html)

Constructivist approach in practice









Learning Styles



Is learning styles-based instruction effective? A comprehensive analysis of recent research on learning styles

[Joshua Cuevas](#)  [View all authors and affiliations](#)

Volume 13, Issue 3 | <https://doi.org/10.1177/1477878515606621>

 Contents |  PDF / ePub |  Cite article |  Share options |  Information, rights and permissions |  Metrics and citations

Abstract

In an influential publication in 2009, a group of cognitive psychologists revealed that there was a lack of empirical evidence supporting the concept of learning styles-based instruction and provided guidelines for the type of research design necessary to verify the learning styles hypothesis. This article examined the literature since 2009 to ascertain whether the void has been filled by rigorous studies designed to test the matching hypothesis and identify interaction effects. Correlational and experimental research recently published on learning styles is reviewed, along with an examination of how the subject is portrayed in teacher education texts. Results revealed that the more methodologically sound studies have tended to refute the hypothesis and that a substantial divide continues to exist, with learning styles instruction enjoying broad acceptance in practice, but the majority of research evidence suggesting that it has no benefit to student learning, deepening questions about its validity.

Related

Similar

 Rest

[A te](#)

[pro](#)

[and](#)

Sho

Stop propagating the learning styles myth

Paul A. Kirschner ^{a, b} 

[Show more](#) 

 Add to Mendeley |  Share |  Cite

<https://doi.org/10.1016/j.compedu.2016.12.006>

[Get rights and content](#)

Abstract

We all differ from each other in a multitude of ways, and as such we also prefer many different things whether it is music, food or learning. Because of this, many students, parents, teachers, administrators and even researchers feel that it is intuitively correct to say that since different people prefer to learn visually, auditively, kinesthetically or whatever other way one can think of, we should also tailor teaching, learning situations and learning materials to those preferences. Is this a problem? The answer is a resounding: Yes! Broadly speaking, there are a number of major problems with the notion of learning styles. First, there is quite a difference between the way that someone prefers to learn and that which actually leads to effective and efficient learning. Second, a preference for how one studies is not a learning style. Most so-called learning styles are based on types; they classify people into distinct groups. The assumption that people cluster into distinct groups, however, receives very little support from objective studies. Finally, nearly all studies that report evidence for learning styles fail to satisfy just about all of the key criteria for scientific validity. This article delivers an evidence-informed plea to teachers, administrators and researchers to stop propagating the learning styles myth.

The Scientific Status of Learning Styles Theories

[Daniel T. Willingham](#)  [Elizabeth M. Hughes](#) and [David G. Dobolyj](#) [View all authors and affiliations](#)

Volume 42, Issue 3 | <https://doi.org/10.1177/0098628315589505>

 Contents |  Get access |  Cite article |  Share options |  Information, right

Abstract

Theories of learning styles suggest that individuals think and learn best in different ways. The differences of ability but rather preferences for processing certain types of information or for information in certain types of way. If accurate, learning styles theories could have important for instruction because student achievement would be a product of the interaction of instruct student's style. There is reason to think that people view learning styles theories as broadly ac fact, scientific support for these theories is lacking. We suggest that educators' time and energ spent on other theories that might aid instruction.

Learning Styles: Where's the Evidence?

Rohrer, Doug; Pashler, Harold

Online Submission, Medical Education v46 n7 p634-635 Jul 2012

Whereas modern medicine owes much of its success to its reliance upon evidence-based treatments, most popular techniques of instruction have not been subjected to thorough empirical scrutiny. A particularly glaring and costly result of this, we argue, is the wide acceptance of the idea that instruction should be tailored to a student's so-called "learning style." For example, students might be divided into visual learners and verbal learners (on the basis of a learning style test given to each student) and then provided with instruction that emphasizes pictures or words, respectively. The visual-verbal distinction is only one simple example of the many proposed taxonomies; a recent review described 71 different schemes. Given this advocacy by academics and the ensuing heartfelt praise of educators, tailoring instruction to students' style is now a prevalent and profitable enterprise. However, as we and others have pointed out, a thoughtful review of the data provides no support for style-based instruction.

Descriptors: [Evidence](#), [Cognitive Style](#), [Instructional Effectiveness](#), [Classroom Techniques](#), [Individualized Instruction](#), [Teaching Methods](#), [Literature Reviews](#)

Learning Styles

Support

- correlation between students learning styles and their chosen majors
- The theory addresses how learners can play to their own strengths as well as developing areas in which they are weakest

Criticism

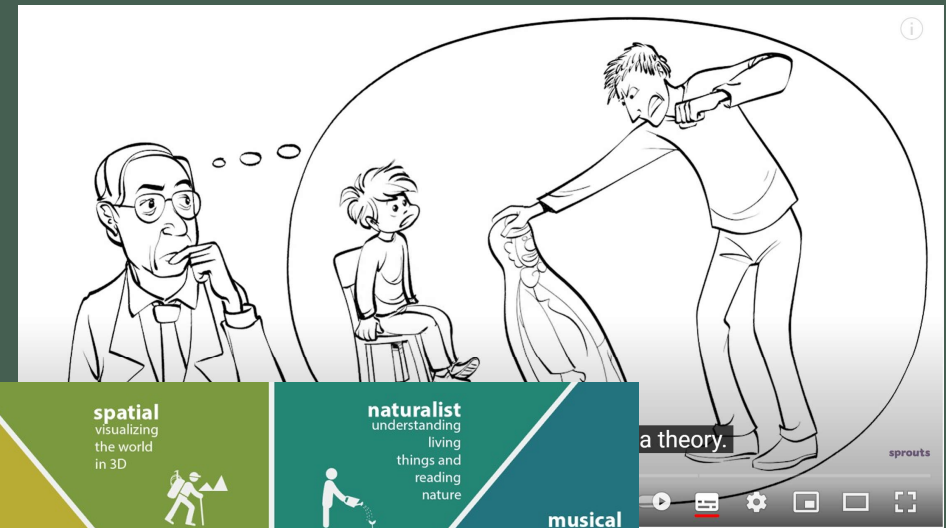
- Little research support
- Does not apply in all types of learning situations
- Learning styles may not be stable over time

- Learning Styles => **Multimodal Teaching**

- Multimedia effect

- **The Theory of multiple Intelligences**

- Gardner's theory of intelligence (developed by a psychologist Howard Gardner in early 1980s)



THE TYPES OF INTELLIGENCE

by Mark Vital

intra-personal

understanding yourself, what you feel, and what you want



spatial

visualizing the world in 3D



naturalist

understanding living things and reading nature



musical

discerning sounds, their pitch, tone, rhythm, and timbre



quantifying things, making hypotheses and proving them



logical-mathematical

tackling the questions of why we live, and why we die



existential

sensing people's feelings and motives



interpersonal

coordinating your mind with your body



bodily-kinesthetic


finding the right words to express what you mean



linguistic

Children with special educational needs





LEARNING
THEORIES FOR
EVERYDAY
TEACHING

CAROL THOMPSON AND
LYDIA SPENCELEY



Pictures

- <https://enabled.in/wp/conference-special-needs-learning-support-inclusive-education/>
- <https://xtralia.com.au/2015/05/16/learning-styles/>
- <https://www.freepik.com/free-photos-vectors/inclusion>
- http://discuss.cle.ust.hk/mediawiki/index.php?title=Constructivism,_Learning_and_Educational_Technology
- https://www.podomatic.com/podcasts/psycounting/episodes/2012-07-17T05_17_46-07_00
- <https://theamericangenius.com/entrepreneur/pavlovs-dog-experiment-modern-business-world/>
- https://tyonote.com/operant_conditioning/
- <https://experientiallearninginstitute.org/resources/what-is-experiential-learning/>
- <https://www.verywellmind.com/operant-conditioning-a2-2794863>
- <https://www.verywellmind.com/classical-vs-operant-conditioning-2794861>
- <https://www.gerardfriel.com/instructional-design/social-learning-theory/>
- <https://www.language mentoring.com/vocabulary-flashcards-for-language-learning/>
- https://www.rcgates.com/psyc/c2_3.html
- <https://www.valamis.com/hub/blooms-taxonomy>
- <https://educationaltechnology.net/kolbs-experiential-learning-theory-learning-styles/>
- <https://www.eduolog.com/en/test/kolbs-learning-style-test/>