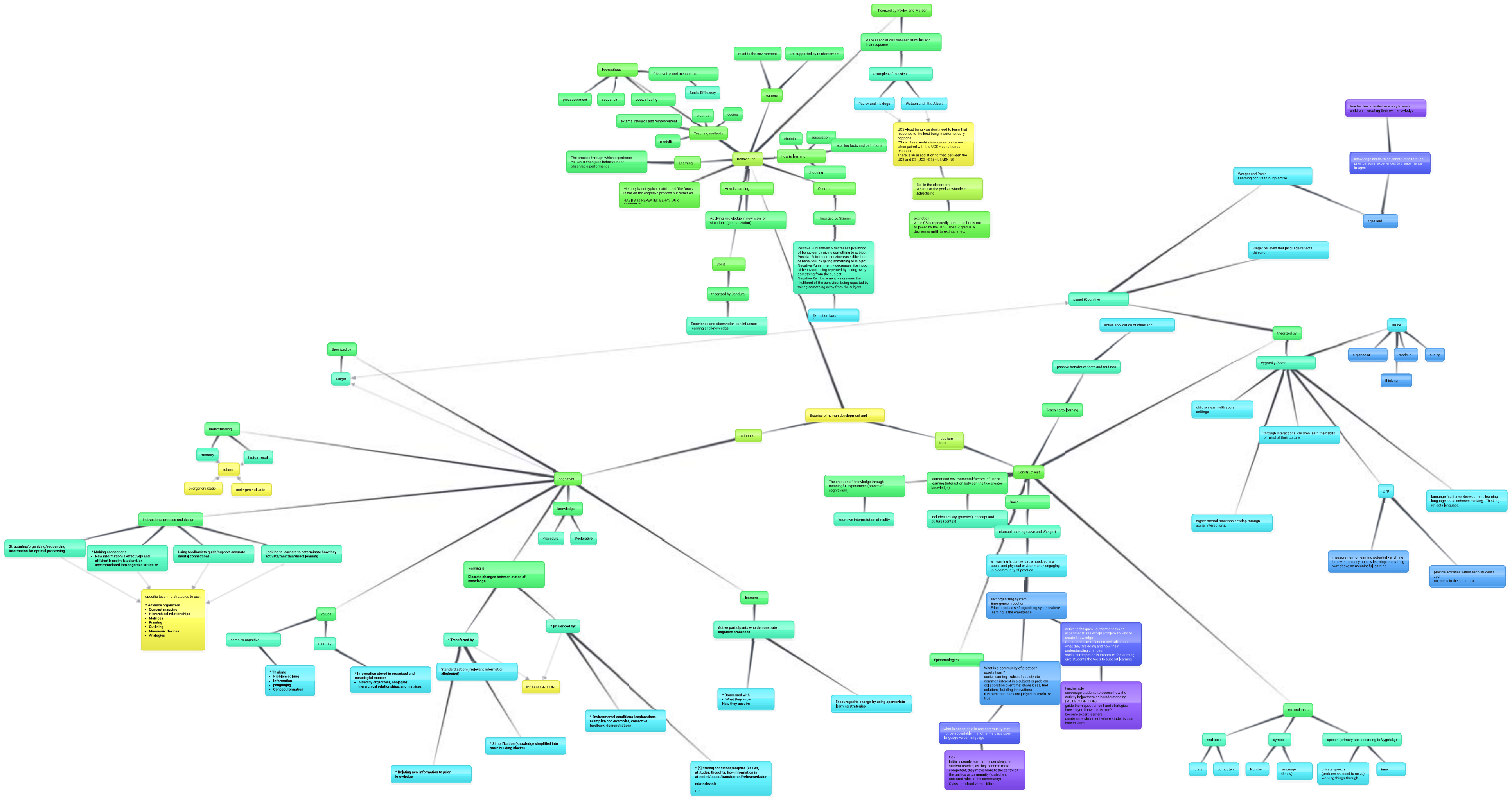
theories of human development and
rationalis
Idealism
idea
Behaviouris
Theorized by Pavlov and Watson
Make associations between stimulus and their response
examples of classical
Pavlov and his dogs
Watson and little Albert
UCS - loud bang - we don't need to learn that response to the loud bang, it automatically happens
CS - white rat - while innocuous on it's own, when paired with the UCS > conditioned response
There is an association formed between the UCS and CS (UCS =CS) = LEARNING!
Bell in the classroom
Whistle at the pool vs whistle at
extinction
when CS is repeatedly presented but is not followed by the UCS. The CR gradually decreases until it's extinguished.
react to the environment
are supported by reinforcement
learners
Instructional
Observable and measurable
Social Efficiency
preassessment
sequencin
cues, shaping
practice
cueing
external rewards and reinforcement
Teaching methods
modellin
The process through which experience causes a change in behaviour and observable performance
Learning
Memory is not typically attributed/the focus is not on the cognitive process but rather on
HABITS as REPEATED BEHAVIOUR
chainin
association
recalling facts and definitions
how is learning
choosing
How is learning
Operant
Applying knowledge in new ways or situations (generalization)
Theorized by Skinner
Positive Punishment > decreases likelihood of behaviour by giving something to subject
Positive Reinforcement >increases likelihood of behaviour by giving something to subject
Negative Punishment > decreases likelihood of behaviour being repeated by taking away something from the subject
Negative Reinforcement > increases the likelihood of the behaviour being repeated by taking something away from the subject
Extinction burst
Social
theorized by Bandura
Experience and observation can influence learning and knowledge
cognitivis
theorized by
Piaget
understanding
memory
factual recall
schem
overgeneralizatio
undergeneralizatio
instructional process and design
Structuring/organizing/sequencing information for optimal processing
* Making connections
New information is effectively and efficiently assimilated and/or accommodated into cognitive structure
Using feedback to guide/support accurate mental connections
Looking to learners to determine how they activate/maintain/direct learning
specific teaching strategies to use:
* Advance organizers
Concept mapping
Hierarchical relationships
Matrices
Framing
Outlining
Mnemonic devices
Analogies
knowledge
Procedural
Declarative
learning is
Discrete changes between states of knowledge
values
complex cognitive
memory
* Thinking
Problem solving
Information
Concept formation
* Information stored in organized and meaningful manner
Aided by organizers, analogies, hierarchical relationships, and matrices
* Transferred by
Standardization (irrelevant information eliminated)
METACOGNITION
* Influenced by:
* Relating new information to prior knowledge
* Simplification (knowledge simplified into basic building blocks)
* Environmental conditions (explanations, examples/non-examples, corrective feedback, demonstration)
* [b]internal conditions/abilities (values, attitudes, thoughts, how information is attended/coded/transformed/rehearsed/stored/retrieved)
learners
Active participants who demonstrate cognitive processes
* Concerned with
What they know
How they acquire
Encouraged to change by using appropriate learning strategies
Constructivist
The creation of knowledge through meaningful experiences (branch of cognitivism)
Your own interpretation of reality
learner and environmental factors influence learning (interaction between the two creates knowledge)
includes activity (practice), concept and culture (context)
Social
situated learning (Lave and Wenger)
all learning is contextual, embedded in a social and physical environment > engaging in a community of practice
self organizing system
Emergence - reaction
Education is a self organizing system where learning is the emergence
active techniques - authentic tasks eg experiments, real-world problem solving to create knowledge
Get students to reflect on and talk about what they are doing and how their understanding changes.
social participation is important for learning
give students the tools to support learning
Epistemological
What is a community of practice?
sports team?
social learning - rules of society etc
common interest in a subject or problem
collaboration over time: share ideas, find solutions, building innovations
It is here that ideas are judged as useful or true
teacher role
encourage students to assess how the activity helps them gain understanding (META COGNITION)
guide them question self and strategies
how do you know this is true?
become expert learners
create an environment where students Learn how to learn
what is acceptable in one community may not be acceptable in another (ie classroom language vs bar language
CoP
Initially people learn at the periphery. ie student teacher, as they become more competent, they move more to the centre of the particular community (stated and unstated rules in the community)
Class in a cloud video - Mitra
Teaching to learning
passive transfer of facts and routines
active application of ideas and
piaget (Cognitive
Weegar and Pacis
Learning occurs through active
Piaget believed that language reflects thinking.
ages and
teacher has a limited role only to assist children in creating their own knowledge
knowledge needs to be constructed through prior personal experiences to create mental images
theorized by
Vygotsky (Social
Brune
a glance or
modelin
cueing
thinking
children learn with social settings
through interactions: children learn the habits of mind of their culture
higher mental functions develop through social interactions.
ZPD
measurement of learning potential - anything below is too easy no new learning or anything way above no meaningful learning
provide activities within each student's zpd
no one is in the same box
language facilitates development, learning language could enhance thinking. Thinking reflects language.
cultural tools
real tools
rulers
computers
symbol
Number
language
(Snow)
speech (primary tool according to Vygotsky)
private speech
(problem we need to solve)
working things through
inner