Theory of learning and development

Self-regulated learning

- Ability to analyse the demands of tasks/activities
- Is reflected in learners awareness of their strengths and weaknesses
- Believe that effort and effective strategy use will lead to success
- Believe that ability is incremental
- Focus on personal progress
- Co-regulators can be adults for children or children for peers or peers for adults
- Exists when learners have a genuine interest in learning
- Use of effective thinking and problem solving strategies to cope with the challenges that tasks present
- View errors as opportunities to learn
- Children who are productively self-regulating attend to key features of the environment and can inhibit automatic or more favoured responses that may not serve them well in particular situations
- Willing to try challenging tasks
- Presumes at least one participant in an interaction has knowledge or skills that others need to achieve a goal
- SR predicts children's success in school more powerfully than IQ tests or knowledge of math and reading upon school entry
- Involves giving and receiving support that is instrumental to learning and SRL
- Resist distractions, persist when tasks are difficult, delaying immediate gratification to meet a more important long-term goal
- Why is it important
- Metacognition
- Motivation
- Apply strategies effectively and efficiently
- Requires learners to choose from a repertoire of strategies best suited to the learning situation
- Co-regulation
- Individuals' ability to control thoughts and actions to achieve personal goals and respond to environmental demands
- Self-regulation
- Learners abilities to give and receive targeted instrumental help in the service of learning and completing academic work
- Why? It is believed to contribute to positive interactions and the accomplishment of collaborative goals in the classroom
- Peer-based regulated learning
- Socially responsible self-regulation
- Strategic action
- SRL

Social contexts of learning

- Scaffold
- Classroom discourse ie. Class meetings, mini-lessons, informal interactions with students
- Familiar participation structures (routines)
- Students support one another
- Requires socially responsible self-regulation
- Non-threatening evaluation procedures
- Co-regulators provide students with just enough or just in time support for developing and enacting self-regulation
- Student choice
- Awareness of individual student needs (low floor, high ceiling, providing entry points for all learners)
- Autonomy promoting practices
- Learners personalized interpretations of opportunities to regulate learning
- Task understanding
- Explicit task understanding
- Learners grasp the task requirements, criteria for evaluation, and available materials
- Implicit task understanding
- Information that learners must infer from the more explicit elements of a task, task context, or their experience with similar tasks
- Contextual task understanding
- Learners knowledge of how the task relates to larger ideas and intentions
- Can create anxiety because father is away from home for example
- No participation in decision making eg parent promotion at work
- Relationship between parents and teacher
- Interactions between different parts of a persons microsystem
- A setting does not involve an active participant but still affects them
- Closest to the person
- Most influential system
- Mesosystem
- Home, school, daycare, work
- Relationships are bidirectional
- Link between self-regulated learning and motivation
- Microsystem
- Ecosystem
- Macrosystem
- Ecological systems theory
- For learning to happen it needs to be at the student's just right level or zone of proximal development
- Positive or negative effects eg. Third world vs. USA
- Chronosystem
- Urie Bronfenbrenner
- Development impacted by relationships of people and their environment
- Environments include immediate environment and the world in which we live
- Economy, cultural values, political system
- Cultural environment in which the person lives
- Timing of an event(s) unique to a paticular individual
- Eg. Death for 3 year old compared to teenager, growing up during war or depression, growing up with technology
- Dimension of time in relation to a persons development
- A process through which children and adults acquires and effectively apply the knowledge, attitude, and skills necessary to understand and manage emotions, set and achieve personal goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions
- A set of skills that individuals need to succeed in schooling, the workplace, relationships, and citizenship
- Definitions

Social emotional learning

- Mindup is a program that uses a chime (a type of behaviourism)
- Importance of experience
- Programs
- SEL, paths, tribes, art, mindup, zones of regulation
- Love is more important than knowledge
- Educating the heart is as important as educating the mind
- Casel's framework
- Social awareness, responsible decision making, relationship skills, social awareness, self-management

Learning environments

- Creating an artificial environment in which young organisms can be provided with optimal conditions to develop
- Cultural: entire body of socially inherited past human accomplishments that serve as the resources for the current life of a social group ordinarily thought of as the inhabitants of a country or region
- Education: the systematic instruction, schooling, or training given to the young in preparation for the work of life
- Primitive societies were taken as examples of early stages of history for all human groups...assumption the Europeans had simply developed faster
- Cross-cultural and historical perspectives
- Schooling: deliberate instruction for specific skills
- Enculturation: inducted into the cultural order of society
- Education as simulturation: no explicit teaching, education=enculturation/participation: social sphere of the adult and child in ordinary days participate in same culture
- Relatively developed with increase in population, development of technologies, accumulation of material goods, enculturation develops into schooling
- Modern schooling characteristics: segregated grades by age, schools as instruments for preparation of manpower, extension of schooling to previously excluded populations (woman, poor)

Behaviourism

- Reinforcement or Reward
- Punishment
- Behavior modification
- Operant conditioning
- Skinners behaviourism
- Link between behaviour and cognition
- Neobehaviourism
- Extinction burst
- Satiation
- Cognitive processes
- Bandura
- Observational learning
- Cognition bridges the environment/behaviour connection
- Experience or observation can influence learning/ knowledge
- Relationship between the environment and behaviour
- Social learning theory
- Emphasis is placed in the effects of external events on the individual
- The process through which experience cause change in behaviour
- It is evident in the classroom today
- Learning is observable
- Behaviour can change

Cognitivism

- Learning is social
- Importance of social interaction
- Meaning making is key
- Elaboration
- Rehearsal, reviewing, organization
- Strategies
- Basic processes of memory
- Mental Processes
- Concentrating and focusing mental resources to a task
- Attention
- Selective attention
- Sensory memory: fraction of a second up to 30 seconds
- Long term memory
- Working or short term memory: up to 30 seconds
- Has an effect on school achievement
- As short term memory increases so does processing speed
- Schemas
- Up to a Million
- Ability to focus on important parts while blocking out other stimuli
- Distribution
- Habituation
- Something interesting will need attention
- Automaticity
- No longer paying attention to a stimulus
- Processing information with little or no attention
- How memories are encoded in long term memory
- Scripts schemas: predictable aspects
- Personal schemas
- We all have different connections

Theory of learning and development

- Thinking as information processing
- Influenced by environmental conditions and internal conditions/ abilities
- Individuals seek equilibrium in cognitive systems (explains how we go from one stage to next): disequilibrium is cognitive conflict
- Active learning Self-observation Multimodal learning
- Piaget
- Learning as a constructive process
- Assimilation
- Accommodation
- Equilibration
- When a student adjusts to new knowledge
- Teachers should use developmentally appropriate practices to enable children to learn
- Incorporating new information into existing knowledge
- Activity is key
- Children must be developmentally ready to learn
- Children think differently then adults
- Children are active learners
- Stages of cognitive development
- Sensorimotor 0-2 child interacts with env't
- Pre operational 2-6 or 7 child begins to represent world symbolically
- Formal operational 12- adulthood adolescent can transcend concrete situations and think about future
- Concrete operational 7-11 or 12 child learns rules such as conservation
- Each stage qualitatively different, follow a regular sequence, experience and time needed to progress

Constructivism

- Piaget's theories seen in both Cognitivism and constructivism
- Learning is social
- Importance of collaboration and interaction in learning
- Children learn at different stages and ages
- Help students become expert learners
- Get students to reflect on and talk about what they are doing and how their understanding is changing
- Teachers role
- Use active techniques to create knowledge
- See social participation as important part of class
- Create an environment where students learn how to learn
- Learning involves activity
- Ideas are judged as useful or true, good or bad
- Give students tools to support their thinking
- Social learning
- Situated learning (all learning is contextual)
- Collaboration over time to share ideas, find solutions, build innovations
- Initially people are at the periphery, as they become more important they move more to the centre
- We become active participants and construct identities in relation to these communities
- Learning involves a process of engagement in a community of practice
- Common interest in subject or problem
- Can be part of many communities

Social constructivism (sociological constructivism)

- Children learn according to appropriate ages and stages
- Knowledge constructed through prior personal experience processes mental images
- Mind filters information to create its own interpretation of reality
- Making meaning of the world is open to change
- Creation of knowledge through meaningful experiences
- Learning does not require memorization of important facts
- Learning must include activity-practice, concept, knowledge, culture-context
- Strategies include collaborative learning, use of multiple sources, debate, discussions, reflective awareness

Piaget

- Language reflects thinking
- Teacher has a limited role

Motivation

- Link between cognition and behaviour ie. social interaction
- Importance of experience
- Link between external rewards as motivation and behaviourism
- Universalist
- Relativist
- Absolutist
- Metatheoretical approaches to culture
- Definition: an internal state that arouses, directs, and maintains behaviour
- Two main types are intrinsic (internal desire to be competent and do something for its own sake), extrinsic (influenced by external reinforcements and punishments
- To increase students intrinsic motivation teachers can: explain why what they are learning is important, create curiosity, use variety, provide games and simulations, help students set goals for learning, relate learning to student needs, help students develop plan of action, help students learn to reward themselves and each other
- Three psychological needs: autonomy, competence, relatedness
- Amotivation: lack of motivation (low ability, low effort, low value, unappealing)
- Personal investment theory
- Framework
- Sense of self
- Perceived goals: task mastery goals, ego/ performance goals, social solidarity goals and extrinsic reward
- Facilitating conditions: what is the environment like?
- Aspects are universal constructs
- Emic
- Etic
- Aspects are culture specific or variable constructs
- Cognitive development requires interaction with peers
- The role of the environment in learning

Social constructivism

- Zone of proximal development ZPD
- Teachers role is to provide activities within each students ZPD
- Scaffolding: glance / gesture, modelling, cueing, thinking aloud, asking questions
- The distance between what you can do on your own and what you can do with help from an adult
- Cultural tools
- Speech: private speech (self-talk), inner speech (thought)
- Vygotsky
- Thinking reflects language
- Real tools: rulers, computers
- Teachers role co-explorer
- Symbols: language, numbers
- Culture is key

Diversity

- Use gender free language
- Self-control can be learned and contributes to success
- Check for equal opportunities for all genders in school activities
- No overall IQ difference
- Watch for unintended biases in your classroom practices
- Provide role models for all genders
- Differences are small
- Mathematically gifted boys perform better than mathematically gifted girls
- Behavioural self-control
- Check textbooks for gender bias
- Eliminating gender bias
- Ongoing debate as to whether boys and girls learn differently
- Girls strength reading and writing
- Boys strength in math, mechanical and visual information processing
- Academic self-determinism
- Caring teacher-student relationships
- Academic self-efficacy
- Effective peer and home relationships
- Students experience resilience
- Students experience academic success
- Students learn to critically challenge status quo
- Gender differences
- Ethnic and racial differences
- This is learning
- Language differences
- Conditioned response
- Economic and social class differences
- Conditioned stimulus
- Culturally inclusive classrooms
- A public comment deserves a public response
- Inquiry into change
- Largest group, felt they should do something but didn't know how to confront hatred
- Hesitators
- Four archetypes
- Integrators
- Confronters
- Combat issue of homophobia through curriculum
- Avoiders
- Those teachers who educate students about hate speech
- Homophobia met with silence from teachers
- Diversity in our classrooms: physical abuse, emotional abuse, poor health, neglect, homelessness, living with alcoholic or drug addicted parents
- Aspects of diversity
- Unconditioned stimulus
- Stimulus generalization
- We belong to many groups: geographic region, social class, gender, religion, sexual orientation, nationality, abilities/ disabilities, ethnic group, race
- Classical conditioning
- Extinction
- Pavlov
- No variable alone is an effective measure
- SES
- Level of wealth, power, prestige
- 4 levels: upper, middle, working, lower
- Relative standing in society
- ...and achievement
- Peer influences and resistance culture
- Low expectations- academic self-concept
- Health, environment, stress
- Home environment has limited resources
- Resilient students do well (not all SES students resist achievement)
- Positive correlation between SES and achievement