

# Theory of Development & Learning

## Social Contexts of Learning

- Bronfenbrenner (Ecological Systems Theory)**
  - Micro** = system closest to person; direct contact
    - ie. home, school, work
    - family, peers, teachers
    - most influential level
    - relationships are bidirectional
  - Meso** = interactions between different parts of person's micro systems
    - micro systems interconnected
    - interactions direct impact on individual
    - ie. relationship parents & teachers
    - (+) when work together
    - (-) when work against one another
  - Macro** = cultural environment in which person lives; all other systems that affect them
    - ie. economy, cultural values, political systems
    - exposure to different cultural perspectives; values systems
- Archer (Critical Realist)**
  - 3 Orders of Reality
    - natural
    - practical
    - social
  - natural - time constraint
  - practical - technological constraint
  - social - work-related constraint
- E-Learning (contexts)**
  - individual
  - 1-to-1
  - group
  - community
  - Blended Learning = combination of contexts
  - sometimes all 4
- 3 Forms of Knowledge**
  - embodied = what we can do in nature (direct experience; becomes second nature; context dependent)
  - practical = skills acquired in practice (eventually becomes embodied)
  - discursive = propositional elaborations we can make in social order
- Link to BC curriculum: Personal Awareness & Responsibility Social Responsibility**
- Impact on Education:**
  - student comfort, safety at school (sense of belonging)
  - Challenges:
    - lack of policy
    - heteronormative, stereotypical examples
    - teacher discomfort, lack of training
    - one identity brought to forefront/overshadows other elements of identity
  - Needs:
    - inclusion for all (ie. LGBTQ+, gender neutral washrooms)
    - all layers of identity present at one time (belong to many cultural groups)
    - eliminate gender bias
  - Culture**
    - knowledge, values, attitudes, traditions that guide behaviour of groups/people/follow them solve life problems
    - important part cultural identity = self-knowledge
  - Culturally Inclusive Classrooms**
    - students experience academic success
    - learn to critically challenge status quo
    - experience resilience (academic self-efficacy, behavioural self-control, academic self-determination, caring student-teacher relationships, effective peer-home relationships)

## Diversity

- Intersectionality:**
  - interacting effects on various aspects of individuals
  - identity/social positioning
  - ie. race, class, gender, disability, sexual orientation
- Teacher Archetypes**
  - avoider (homophobia met with silence from teacher)
  - confronter (teacher educates students about hate speech)
  - integrator (combat issue of homophobia through curriculum)
  - hesitator (teacher wants to do something but doesn't know how to confront hatred)
- What is it?**
  - gendered anti-racist pedagogy - acknowledge and explore the ways students do not silence "other" identities to foreground queer identity
  - fluid notions race, sexuality, gender, class, disability
- Impact on Education:**
  - children entering school without necessary skills
  - well-designed, implemented programs = positive social, emotional, behavioural, academic outcomes
- Challenges:**
  - variety of implementation quality
  - no large blocks of time for SEL
  - SEL rarely integrated meaningful ways (ie. sole focus on classrooms)
  - not sustained (little continuity year-to-year)
  - not embedded in day-to-day interactions
  - lack practice across multi-age groupings
- Needs:**
  - common language & expectations in schools
  - staff training, collaboration
  - integration between home & school
  - intense programs - embedded in everyday interactions/school culture
  - inclusion of shared spaces (ie. hallways, playgrounds)
- Outcomes:**
  - (positive) academic achievement
  - (positive) behavioural adjustment (perspective taking, getting along well with other children, solving conflicts, exhibiting less aggression)
  - emotional health/well-being (lower levels depression, social isolation)

## Social and Emotional Learning

- SEL skills**
  - Emotional Processes:
    - knowledge & expression of emotions
    - emotional/behavioural regulation
    - empathy
    - perspective taking
  - Social Interpersonal Skills:
    - understanding social cues
    - interpreting others' behaviours
    - navigating social situations
    - positive interactions with peers/adults
    - prosocial behaviour
  - Cognitive Regulation:
    - attention control
    - inhibiting inappropriate responses
    - working memory
    - cognitive flexibility
- What is it?**
  - process of acquiring, applying knowledge, attitudes, skills - to understand/manage emotions, set goals, have empathy, positive relationships, responsible decision making
  - What is SEL?
- Impact on Education:**
  - development begins earliest years
  - continues through childhood/adolescence
  - SEL skills need continual development
  - in-context (daily life)
- Influenced by:**
  - relationships
  - social environments (informal interactions, structured programs)
- SEL skills**
  - self management
  - self awareness
  - responsible decisions making
  - relationship skills
  - social awareness
- Benefits:**
  - positive interactions in classroom
  - accomplish collaborative goals

## Self-Regulated Learning

- Notable Figures:**
  - Vygotsky
    - just enough, just-in-time support for developing/enacting self-regulation
    - not too easy, not too difficult
  - Zimmerman (2008)
  - Butler, Perry, Schnellert (2015)
- Self-regulation (SR)**
  - individuals' ability to control thoughts and actions to achieve personal goals and respond to environmental demands
  - ie. resisting distractions, persisting w/ difficult tasks, delay immediate gratification for long-term benefit
- Socially Responsible Self-regulation (SRSR)**
  - learners' ability to give & receive targeted instrumental help in the service of learning and completing academic work
  - recognize strengths & weaknesses of others (understanding other's learning)
- Impact on Education:**
  - important predictor of student success
- Strategies:**
  - familiar routines
  - modelling & teaching learning/problem-solving strategies
  - guiding children's thinking/performing
  - provide informative/corrective feedback
  - offer encouragement
  - engage students in conversations about learning and SLR (process of learning)
- What is it?**
  - learning guided by metacognition, strategic action (planning, monitoring, evaluating personal progress against a standard), motivation to learn
  - task understanding
  - SRL
- Co-Regulation**
  - giving, receiving support instrumental to learning/SRL
  - one participant has knowledge/skills others need to achieve goal
  - requires SRSR
- Co-Regulators**
  - adults for children
  - children for peers
  - children for adults
- Metacognition**
  - awareness of strengths & weaknesses
  - able to analyze demands of task/activity
  - effective thinking
  - problem solving strategies to cope with challenges
- Motivation**
  - genuine interest in learning
  - ability incremental
  - focus personal progress
  - willing to try challenging tasks
  - view errors as opportunities to learn
  - effort = effective strategy = success
- Strategic Action**
  - choose from repertoire of strategies best suited to learning situation
  - apply strategies effectively, efficiently
- Role of Teacher:**
  - design complex tasks
  - promote student autonomy (meaningful choices, control over challenge, student self-evaluation)
  - provide support, opportunity peer support

## Constructivism

- Notable Figures:**
  - Piaget (Cognitive Constructivist)
    - individual construction of knowledge
    - "solitary scientist"
    - development precedes learning
    - language reflects thinking
  - Vygotsky (Social Constructivist)
    - learning occurs through active participation
    - cognitive development depends on interaction with others
    - learning fosters development
    - thinking reflects language
  - Bruner
    - role of culture
    - children naturally curious; inherently sensitive to culture around them
  - Skinner
    - "scaffolding"
- Pragmatism (constructivist)**
  - application of knowledge - uses ideas for problem solving
  - interdisciplinary
- Existentialism**
- What is it?**
  - creation of meaning through personal experiences
  - mind filters information to create own interpretation of reality (construct own understanding of world)
  - memory constantly under construction - changes as new information and experiences are gathered
  - engaging learner in activities
- Impact on Education:**
  - provide activities within ZPD
  - encourage students to continually assess how activity is helping gain understanding
  - guide students to question themselves & their strategies
  - classroom environment = students "learn how to learn"
- Role of Teacher "Guide on the Side"**
  - students create meaning through personal experiences, and acquisition of new knowledge
  - students as active participants in creation of learning
  - learning must be relevant to students
- Strategies:**
  - collaborative learning
  - gathering multiple sources of information
  - debate
  - Inquiry
  - problem solving
- Communities of Practice**
  - social learning
  - common interest in subject or problem
  - collaboration over time
  - become more competent - move periphery to centre
- Situated Learning (Lave & Wenger)**
  - learning is contextual - embedded in social/physical environment
  - engagement in "community of practice"
- Social Constructionism**
  - "culture is key"
  - learning is contextual - embedded in social/physical environment
  - engagement in "community of practice"
- Equilibration**
  - process of balancing what we know with what we may be asked to learn that doesn't quite fit
  - we are always trying to achieve equilibrium (balance) - when balance is disrupted seek to restore equilibrium
  - movement through stages - cognitive conflict & disequilibrium
  - "Providing students with evidence that contradicts their initial beliefs will require them to modify cognitive structures on the basis of new information. Through this process of adaptation, students build new cognitive structures."

## Cognitivism

- What is it?**
  - information processing
  - how and why we think
- Impact on Education:**
  - children think differently than adults
  - children must be developmentally ready to learn
  - teachers should use developmentally appropriate practices to enable children to learn
- Notable Figures:**
  - Piaget
    - cognitive development in any stage depends on activity
    - children must engage in appropriate activities in order to learn (active learners)
    - cognitive growth occurs through (1) process of adaptation and (2) process of assimilation and accommodation
- Knowledge and Memory**
  - Declarative Knowledge = knowing what
    - semantic memory
    - episodic memory
  - Procedural Knowledge = knowing how
  - Conditional Knowledge = knowing when & why
  - Knowledge
    - ability to remember new information is highly related to amount of knowledge already acquired
- Memory**
  - Assimilation = incorporating new knowledge into existing knowledge
  - Accommodation = adjusting to new knowledge
- Stages of Cognitive Development**
  - Sensory/motor Stage (0-2)
    - child begins to interact with environment
  - Preoperational Stage (2-6 or 7)
    - child begins to represent words symbolically
  - Concrete Operational Stage (7-11 or 12)
    - child learns rules such as conservation
  - Formal Operational Stage (12+)
    - adolescent can transcend concrete thinking and think about the future
- Working (short term) (VWM)**
  - focused on explicit task
  - up to 30 seconds
- Long Term (LTM)**
  - up to a lifetime
- Processes of Memory:**
  - Habituation
    - no longer paying attention to stimulus
    - action becomes habit
  - Dishabituation
    - something changes so you need to pay attention
  - Automaticity
    - processing information with little to no effort
    - action becomes automatic
  - Attention
    - concentrating or focusing mental resources to a task
    - Selective Attention
      - ability to focus on important parts while blocking out other stimuli

## Behaviourism

- What is it?**
  - a process
  - experience causes change in behaviour
  - effect of external events on individual
  - observable behaviours
- Role of Teacher "Sage on the Stage"**
  - Impact on Education:
    - students expected to achieve specific, desired outcome
    - behaviours are rewarded or punished (consequences)
    - external reinforcement changes behaviour over time
    - punishment changes behaviour over time
- Notable Figures:**
  - Skinner (operant)
    - good consequence = likely to repeat behaviour
    - bad consequence = unlikely to repeat behaviour
    - ie. hand on hot stove
  - Neo-behaviourism (Bandura)
    - observation influences behaviour\*
    - \*not all the time (ie. speeding ticket)
- Classical Conditioning (Pavlov):**
  - unconditioned stimulus (ucs)
  - conditioned stimulus (cs)
  - cs + ucs = conditioned response (cr)
  - association forms b/w ucs and cs
  - cs alone leads to response
- Punishment vs. Reward (Reinforcement and Punishment)**
  - Punishment always decreases behaviour
  - Reinforcement always increases behaviour
  - Reinforcement serves to maintain or increase behaviour
  - intermittent reinforcement most effective over time (to change behaviour)
  - fastest way to change behaviour = consequence EVERY time
- Operant Conditioning (Skinner):**
  - consequence of behaviour influence probability of reoccurrence
  - target behaviour want to change (train new behaviour)
- Idealism (behaviourist)**
  - idea centered
  - teacher central to learning
  - lecture, discussion, imitation
- Realism (behaviourist)**
  - content systematic, organized
  - standardized tests, textbooks, curriculum isolated to subject area

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## Stages of Cognitive Development

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## Existentialism

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## Strategies

- collaborative learning
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- debate
- Inquiry
- problem solving

## Authentic tasks

- real world problem solving
- self-reflection - what student is doing, how understanding changes
- social participation
- provide students tools to support learning