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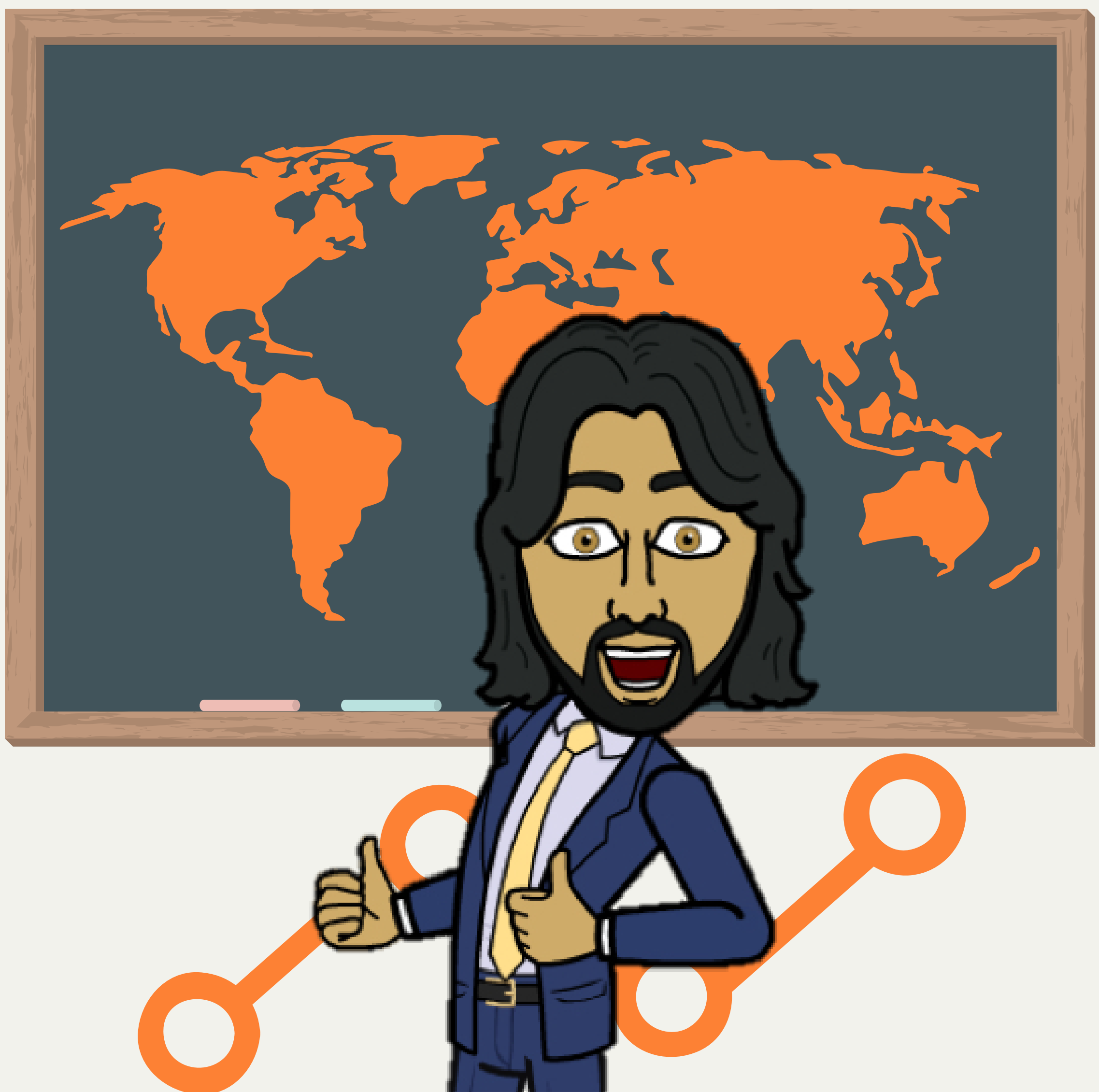# EDUC 5001G LEARNING LOG

A TEACHERS PROFESSIONAL LEARNING GUIDE

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MODULE 1

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Behaviourist Approaches

Overview

Behaviourism is a learning theory that describes the relationship between learning and a response to a stimulus. Learning within this theory is often times viewed as conditional dependent on an external stimulus, response or reinforcer. Due to this knowledge, understanding and behaviour can be learned and unlearned within this framework. Teachers often adopt behaviourist approaches within the context of classroom management however one must understand how effective or ineffective behaviourism is within teaching and learning.

The 3 Major Types of Behavioral Learning

Classical Conditioning

A neutral stimulus is associated with a natural response

Operant Conditioning

A response is increased or decreased due to reinforcement or punishment

Observational Learning

Learning occurs through observation and imitation of others

Application

Classical Conditioning

- The teacher claps three times and students automatically knows to conform to the desired and required behaviour within the classroom.
- A bell rings and students know to transition from one classroom to the next, or are aware that it is the start or end of day.

Operant Conditioning

Reinforcement:

- Rewarding students with a treat, time with a device or a sticker when a desired behaviour or learning outcome is achieved.

Punishment:

- The removal of free time, detention or receiving the removal of a point within a class reward system can a consequence of a undesired behaviour or learning outcome achieved.

Observational Learning

- A new student enters a classroom and mirrors the behaviour seens by his or her peers. If a student raises their hand to speak, the same behaviour is adopted.

Reflection

The application of behaviourist theory within the classroom is an important theory to analyze to better understand its strengths and limitations. Behaviourist theory is often adopted by teachers across the world. Teachers are able to manage behaviour and learning by eliciting a desired response through positive reinforcement and consequences. If the behaviour is a simplistic relation to the outcome outlined by the teacher, then how does one internalize behaviour within students outside of a response to rewards and consequences? When behaviourist theory is applied in the context of learning, the notion of grades as a means of rewards is often the first association to this view. This can seem positive however can come with many implications. One of which for example, is students that only learn for gratification of a grade or numerical mark. This can really hinder students as they only complete learning tasks as a means of acquiring higher grades as the reinforcement or reward; this system of learning in fact limits creativity and is essentially limiting the academic performance of those students. The behaviourist model is essentially a very teacher-centered behaviour or learning approach that gives authority to the educator to dictate how students will behave or learn in response to outcomes. A solution to this problem is the adoption of community based classroom environments where a person-centred community is constructed. Within this learning environment individuals construct goals, rules and work towards achieving academic or behavioural goals. Fostering intrinsic motivation outside the realm of stimulus based learning is a solution moving forward in developing more critical thinkers and higher order learners within the framework of education.
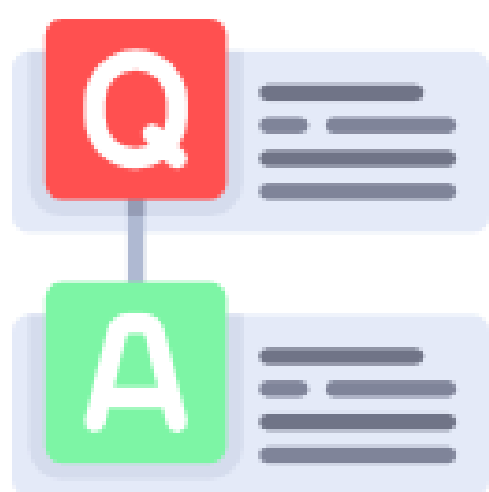
Cognitive Approaches

Overview

Cognitivism is psychological theory that when used in the context of learning analyzes the internal information processing of a learner or individual. The previous theory of behaviourism failed to acknowledge the cognitive functioning and abilities of the individual learner. Within this framework a learner is active and able to make meaning through his or her cognitive development and ability. The theories of Blooms Taxonomy and constructivism will be viewed in this section. Within constructivism a contrast between Piaget's constructivism and Vygotksy's social constructivism will be explored.

Application

Blooms Taxonomy

Remember: Recall key elements of story, Horton Hears a Who.

Understand: Summarize the story.

Apply: Construct a theory as to why Horton was more compassionate to the people of Whoville than other characters.

Analyze: Differentiate between the reaction characters had to the existence of the "Who's".

The framework of Blooms has been updated since its ...
...

Evaluate: Assess the reality of this story occurring and the application of this context witihn real life.

Create: Construct a create project outlining your understanding of the story in a new form: video, song, skit, newsreport or a student choice.
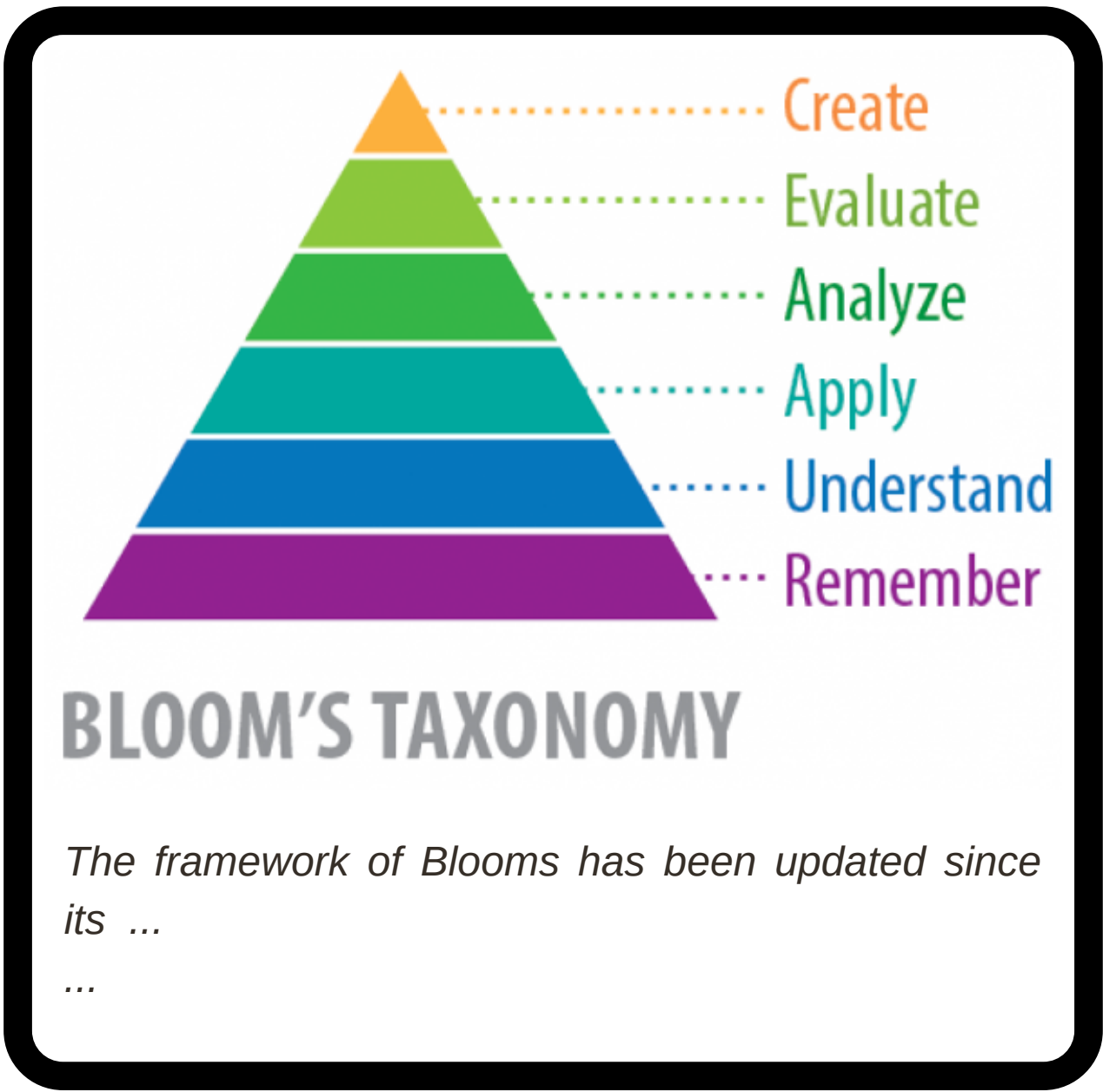
Vygotsky Constructivism

- Children are active participants within their own learning.
- Teachers act as facilitators and MKO's (More Knowledgeable Other) that guide the learner towards mastery.
- The ZPD (Zone of Proximal Development) what a learner can do without help and he or she can achieve or master through guidance, scaffolding and support from an MKO.
- Knowledge, understanding and meaning are co-constructed.

Piaget Constructivism

- Children are active participants within their own learning.
- Teacher acts as a guide and facilitators.
- Learners progress within stages of development 4 stages outline the child's knowledge, development and level of cognitive function.
- Learning occurse within a class through exploration and discovery.

Social Constructivist Approaches

Overview

Social constructivism is a psychological theory that views knowledge, understanding and meaning as socially constructed through interactions and experiences. In social constructivism, the learner is responsible for constructing their understanding and external elements in the form of a more knowledgeable other (MKO) help facilitate or guide the individual through the learning process.

Application

- **Teachers** act as a facilitator and guide with the use of a variety of instructional tools to help facilitate learning.
- **Students** are an active agent within their learning who brings their own experiences and prior knowledge into learning in the construction of new meaning and understanding.
- **Classrooms** hold a lot of autonomy and promote collaboration and learning through social interaction.
- **Assessments** and learning activites should allow choice, they should hold opportunities for reflection, growth and allow students to critically think to build meaning and understanding. Examples include portfolios, journals or project-based learning activities.

Reflection

Vygotsky and Piaget's constructivist theories hold some similarities in their understanding of learning through external environments and in the process of making meaning. Educators and teachers should focus on adopting Vygotsky's constructivist approach as it fosters more critical thinking, learner autonomy, and personal connections within learning. This theory is not limited to four stages and does not implicate learners with restrictions on their cognitive and psychological development. Learning instead is an active life long process and should be understood outside of age-based development and institutionalized learning.
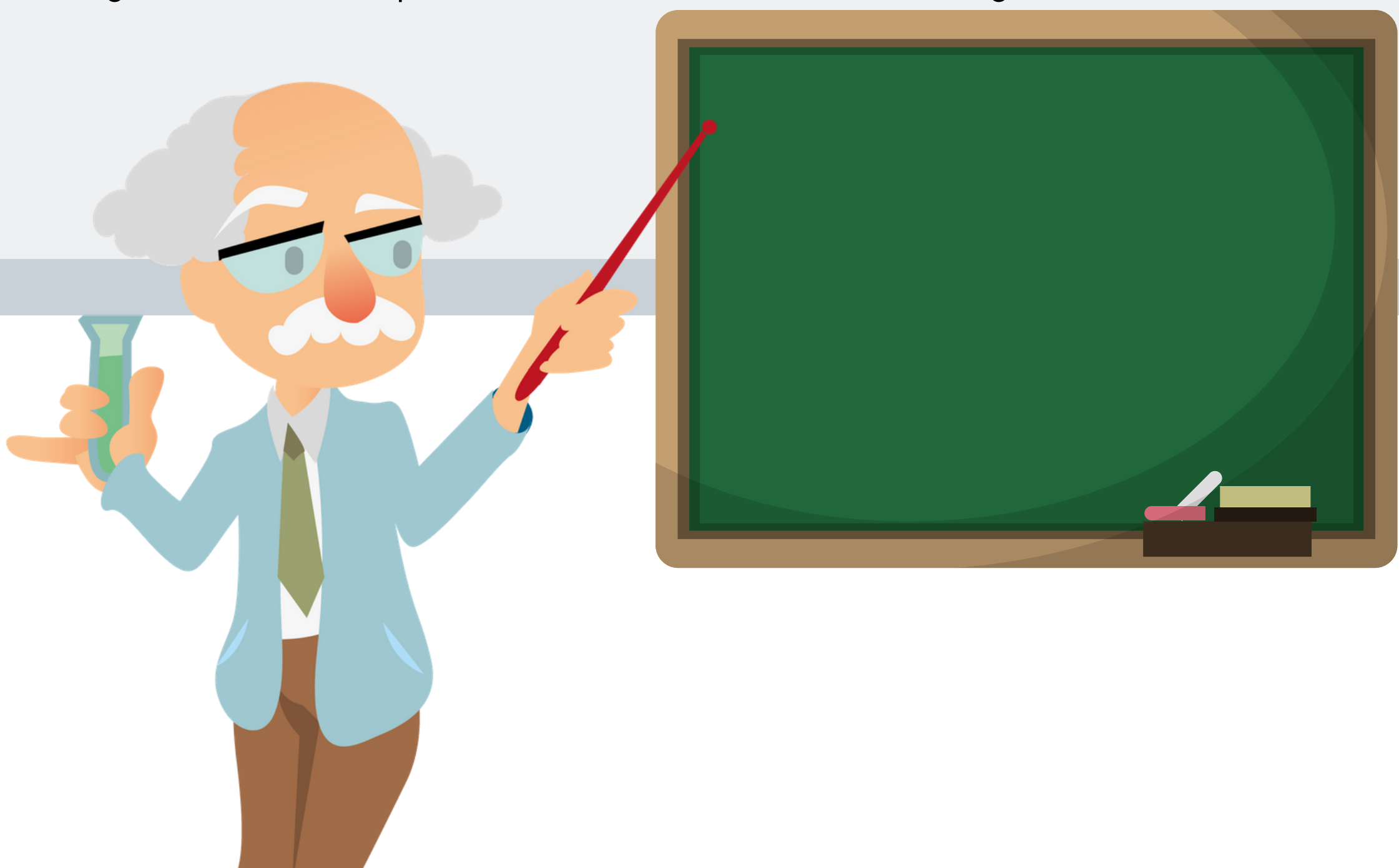
MODULE 2

Early Childhood Education

Overview

Learners have been previously defined through various theoretical frameworks and viewed through skewed lenses of learning styles such: auditory, visual, kinaesthetic reading and writing that define the individuals learning ability. The notion that a learner can be defined through a singular or even through a few selected learning styles is a misconstrued point of view adopted within the framework of education, and teaching and learning.

Application

Gardner's theory of multiple intelligences may have significant limitations as an independent theory of learning. It does however, point out some key tenants that can be adopted within the framework of planning and instruction. Gardner identifies that students cannot learn in a traditional or linear model

without a variety of instructional elements designed to help students attain proficiency, mastery and understanding in education. Although students may not have specific learning styles, a variety of instructional activities and assessments increase student engagement and promote higher levels of learning within classrooms. Therefore, teachers should be cognizant of their reflection to update their practice and pedagogy regularly, to be best suited for effective teaching and learning.

Reflection

Multiple intelligence theory holds little merit due to the fact the if a person excels within music for instance it does not mean that the individual learner only attains knowledge through sound and auditory functions, rather is required to have strong linguistic abilities in reading and interpreting music and even mathematical skills in the construction of rhythms. When learning has so much overlapping elements to view learning in a singlular lense would only limit a learners ability, therefore this theory needs to be unlearned and the effective interplay of learning styles needs to be relearned.
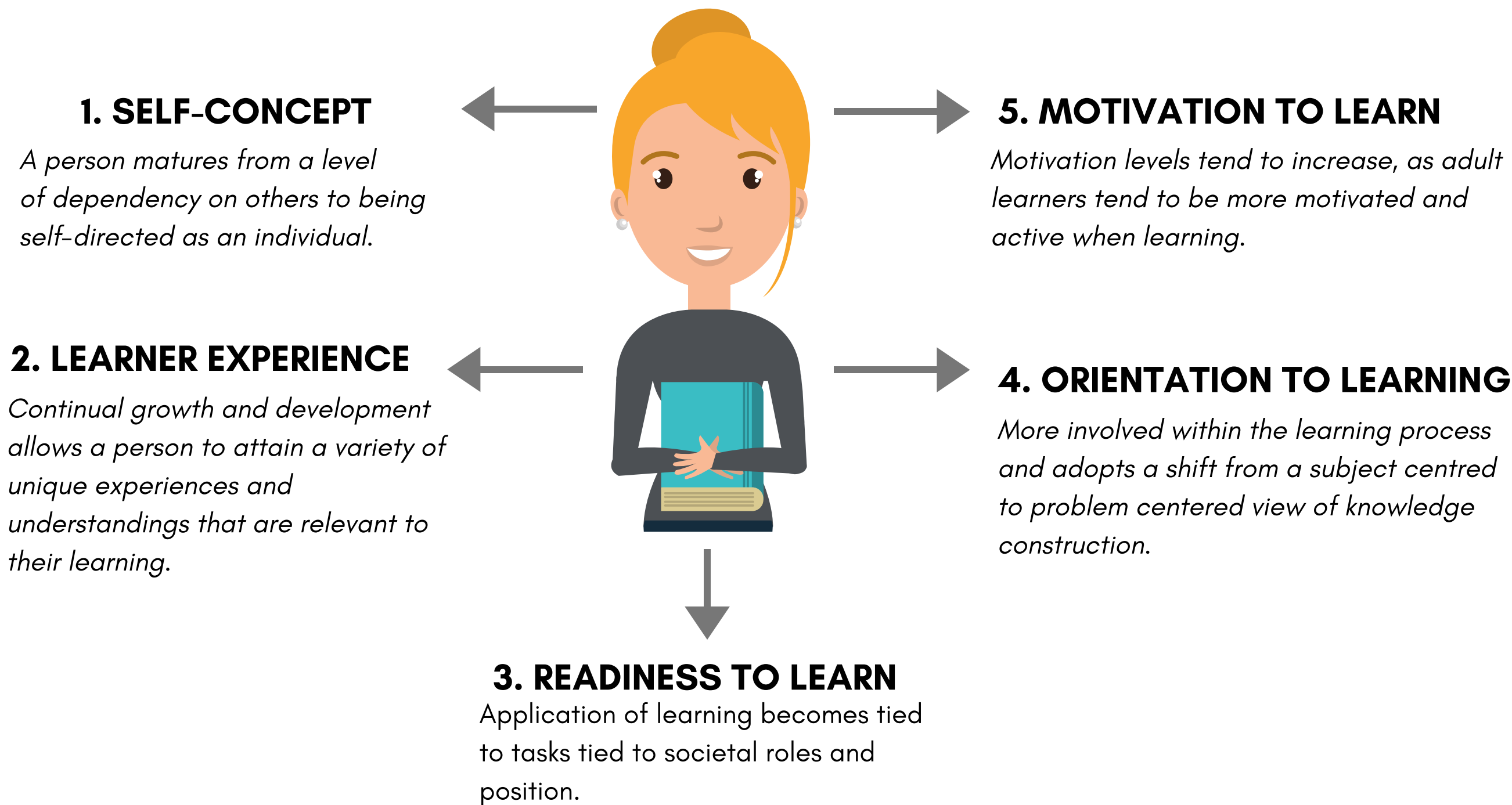
Andragogy

Overview

Knowles defined andragogy during the 1980s and indicated five assumptions of adult learning that are meant to vary from child learnings, but hold similarities with good teaching and learning practice.

ASSUMPTIONS OF ADULT LEARNERS

1. SELF-CONCEPT

A person matures from a level of dependency on others to being self-directed as an individual.

5. MOTIVATION TO LEARN

Motivation levels tend to increase, as adult learners tend to be more motivated and active when learning.

2. LEARNER EXPERIENCE

Continual growth and development allows a person to attain a variety of unique experiences and understandings that are relevant to their learning.

4. ORIENTATION TO LEARNING

More involved within the learning process and adopts a shift from a subject centred to problem centered view of knowledge construction.

3. READINESS TO LEARN

Application of learning becomes tied to tasks tied to societal roles and position.

Application

Graduate student who opts to complete in a Masters of Education program:

1. **Self- Concept:** The adult learner has proven to do well in an academic context and chosen to apply for graduate school.
2. **Learner Experience:** Compounded experiences through education, schooling, family and society allow the learner to draw from their experiences while learning.
3. **Readiness to Learn:** Masters of Education may help the individual better understanding principles of teaching and learning, or to advance into an administrative position.
4. **Orientation to Learning:** Learner is prone to engage with materials that promote problem-solving and include the learner's experiences, in this case, teaching and learning.
5. **Motivation to Learn:** Graduate program is by learner choice and relevant to career.

Reflection

Adult learning is very similar to children's learning in how meaning, relevancy, prior knowledge and experience hold value in learning. For example, a difference in adult and children's' education is with choice and motivation. Adults are viewed as wanting to learn by choice, as opposed to children. This difference is only apparent in learning environments that are not relevant and meaningful to the learner. School is a mandated learning institution and students may be disengaged or unmotivated due to varying factors, however, those same students may excel in learning environments outside the classroom in sports, music or video games. Similarly, an adult may excel when learning is for a job or a self-selected graduate school program. Therefore, comparing motivation and age is a limited way of looking at learning. A better way of understanding learning is to identify the similarities in motivation and learner engagement between adults and children.

Neuroscience

Overview

The brain can retain information through meaningful connections. Talking to teachers and students about neuroscience and brain development leads to increased student engagement and performance within education. When the goal of education is to produce more active learners with increased academic achievement, then the adoption of teaching neuroscience should be a mandated proponent in the realm of teaching and learning.

Application

The BrainU program provides teachers with an opportunity to learn neuroscience in the context of professional development and training. There are many advantages, the two key signifncant ones being:

- Training teachers on how neuroscience works can help improve planning and pedagogy.
- Students who are taught about neuroscience tend to show higher improvements within their own learning and understanding.

Reflection

Neuroscience is not a new area of research within education however it is seemingly quite neglected within the framework of teaching and learning, as the focus still lies with the enhancement of teaching pedagogy and not through the understanding of cognitive development. Psychologists researchers, academics and theorists have glorified Blooms Taxonomy or constructivism as integral frameworks to be employed by educators to enhance teaching and learning, but the lack of integration around neuroscience from the school board, administrative or even teacher level is quite concerning given the positive impact of neuroscience within teaching and learning. One may argue that a lack of knowledge and awareness is a central component to the slow rate of adoption, but this does not warrant an excuse. Questions are raised around how teaching and learning needs to adopt neuroscience as a way of enhancing learning environments for both the teacher and learner. With a huge focus on student mental health, standardized testing, bullying, peer pressure and the need to develop higher-order thinkers, the simplistic solution lies in understanding how the brain learns and makes meaning.

Learning with Technology and Gamification

Overview

Gamification in the classroom and gamified elements can be used to engage students within classrooms and increase academic achievement. However, what is the limitation with the adoption of gamification within teaching and learning and is gamification a truly revolutionary theory.

Application

One element of gamification that was used in personal instruction is with the use of **Prodigy**. The game is aligned with 1-6 Ontario Curriculum and holds similar comparison to Pokemon Go, where students go an adventure to caputer and defeat characters, while completling math problems to build mastery and proficiency.

Gamified Elements:

- Rewards in the form of points and experience are linked to the game play.
- Leaderboard, allows students to see how they compare to other players in the game.
- Avatars in the form of wizards allow the player to immerse themselves into the game by customizing the wizards looks and selecting names.
- Characters embedded in the game, in addition with monsters that can be caputered and kept as pets are linked to the gameplay and storyline.
- Problems and math based learning questions are weaved through game play and the story of a question to capture different monsters and pets.

Reflection

Benefits

- Encourages mastery-based learning.
- Allows for self-learning and encourages student to work at their own pace, by taking risks and learning through failure.
- The game scaffolds learning by providing, hints, support and modifying difficulty based on the learners performance.

Limitations

- Assessment is not effective or present in the game based model and needs to be added one.
- Instructional elements are limited, therefore teachers need to create their own instructional methods to help

MODULE 3

Learning Environments

Overview

Teaching and learning enviornments tend to vary internatioanlly and one may uncover a lot of hidden elements to help enhance their own teaching and learning environment. Through active research and understanding some key tenants can be understood through global classrooms and learning.

Application

Japan

- Active listening is perceived as learning.
- Peer-to-peer learning is actively encouraged.
- Students should respect their place of learning through ownership: cleaning up school and preparing meals.

Indigenous (Navajo)

- Learning is through active listening and individuals that talk more during learning are not viewed as actively engaged in the lesson.
- Grades, assessments and learning tasks should not be a means to facilitate competition or comparison.

Reflection

Learning environments should be explored through a global context or else the understanding of teaching and learning. This is problematic given the diverse construct of Canadian classrooms and challenges in educational success within First Nation students. Within Western contexts, the ideas around participation in learning vary significantly to those of Japanese of Navajo classrooms studied. Similarly, the use of grades as a constant measurement tool may not be the best method of teaching and learning and serve as a limiting tool within education. It is by studying and understanding of global teaching and learning, Canadian educators can ensure their classrooms are designed to produce the best learners.

Teaching, Learning and Professional Development

Overview

Reflection is often a skill that is taught to students within the framework of teaching and learning, mandated in professional contexts by administrators or school boards, but is seldom taught within a personal context.

Application & Reflection

Teachers should aim to create professional developmental plans outside the regulatory learning and development plans mandated by administrators or schools. The use of an external planning model can help promote higher levels of self-reflection, a better understanding of futures goals and higher levels of achievement long term with those goals.

1. GOAL SETTING

- Goals should be realistic and attainable.
- Applicable within personal and professional domains.
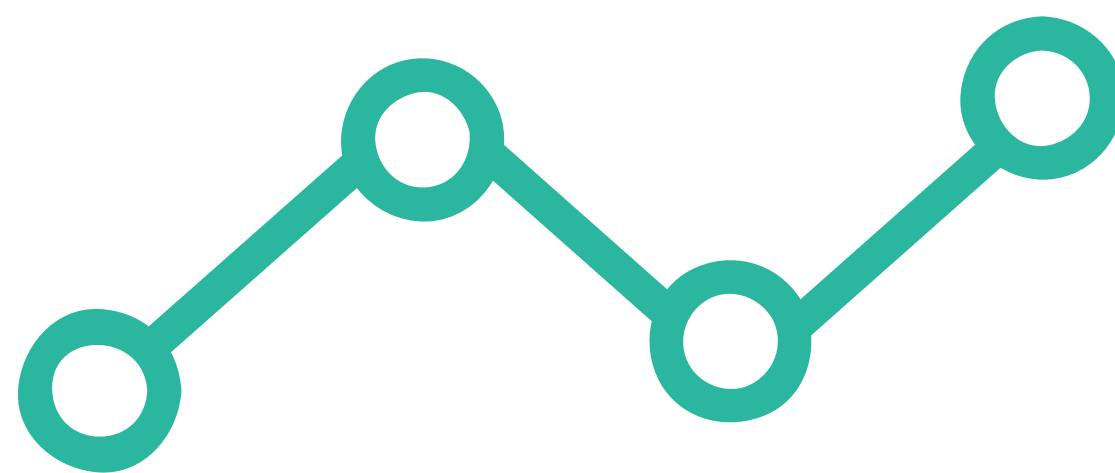- Keep cognisant of timelines with goals.

2. METHOD

- Plan how to achieve goals.
- Set actions and break down goals into a series of actionable steps.

3. CHECKING IN

- Set check points and allocate time to review and check in with the progress of goals set.

4. REFLECTING

- Review the progress with shortcomings and success within set goals: reflect, revaluate and redirect as needed.
- Goal setting is not a linear singular task, but needs reflection and reassessment.