

TITLE: APPLYING THEORIES OF LEARNING TO INCREASE INCOME

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Abstract:

The constructivist approach intends to give encounters through which students make an association and develop meaning. A synergistic climate gives a genuine word experience where understudies figure out how to work together and help out others to acquire insight and learn (Bansal, 2018).

A mix of these learning strategies gives a more comprehensive way to deal with help students and improve their learning.

Five Keywords: Theoretical approach, pedagogical philosophy, instructional model, brain-based strategies, K-W-L grid

Introduction

Learning is the acquisition of new information, knowledge, habits, and attitudes. Learning involves a change in one of the above areas caused by the addition of experience. Learning is ultimately the result of knowledge; a change follows it in human action. It is impossible to observe all the changes; learning is an invisible process in the nervous system. There are different theories and approaches to learning that focus on various aspects of the learning process.

SUMMARY OF CONCEPT 1:

Constructivist Approach in Instructing Learning

Schunk (2012) describes learning as a demonstration that includes change, suffers over the long haul, and happens through experience. The students associate with the learning climate and the learning local area to acquire encounters, consider something similar, make the association, and build new significance to propel their learning. The development of significance, in view of encounters occurs through the two ideas of convenience and digestion. Students either oblige or fit in the new data by rebuilding the past information and understanding or absorb or add the changed variant of the new data to the all-around existing information.

This study is structured around one general objective and three specific objectives.

The general objective is to find out how teachers, educators can apply theories of learning to teaching of education and also increase their income as a result of the strategies used.

The specific objectives seek to show:

- examine the impact of the level of learning relating to theories of learning.
- analyze the impact of the theories of learning in education.
- how Learning Theories could increase my income

METHODOLOGY AND RESEARCH METHOD

MATERIALS AND METHODOLOGY

Sources of Data: Data was collected from two sources.

For initial observation administration using a form that contains eight observational areas, these areas will be correlated with Likert scale-like questionnaires (Taherdoost, 2019) that will be used to determine the how teachers, educators, researchers could apply theories of learning as a means of increasing their income. This study is also based on documentary analysis. After processing the data from the questionnaire, an interview questionnaire was developed based on the data provided.

THEORETICAL FRAMEWORK

Contrasting Constructivist Approach and the Expressed Educational Philosophy.

Student-centered instructing learning is at the center of the creator's instructive way of thinking and the constructivist hypothesis of learning. Instructors' job is to work with learning by setting out open doors that open students to differed data, essential assets, peer communication, and joint effort to give encounters from which they can learn. The normal conviction is to give experiential learning freedoms to understudies that empower them to interface with their past information and guarantee the extending of existing or formation of new arrangement. The learning hypothesis lines up with the instructive way of thinking that intends to guarantee students' inspiration by getting sorted out and organizing the climate through self-sufficiency, gathering example, and execution assessment, and by fusing objective to set assumptions.

Effective Instructional Practices

Instructional methodologies center around experiential and request based discovering that cultivates interest, advances addressing, and energizes investigation. Diverse learning speculations impact the arranging and planning of guidelines dependent on study hall needs. While behaviorism gets encouraging feedback and the psychological hypothesis guarantees the consideration of true encounters, the constructivist approach guarantees consistent learning by making associations and building meaning.

The instructing learning rehearses go past basic review of certainty and address the psychological space setting off basic reasoning, dynamic, and critical thinking. For example, using the strategy Know, Want-to-know, and Learned (KWL), or thinking routines such as Think– pair–share, or See–Think–Wonder (PZ’s Thinking Routines Toolbox | Project Zero, n.d), all of which initiate curiosity and encourage students to inquire The learning engagements created are inclusive, they involve a variety of strategies that are based on the theory of Multiple Intelligence by Howard Gardner (Marens, 2020) and scaffold according to the types of knowledge being factual, conceptual, or procedural.

They also provide opportunities for cooperative learning allowing students to work in small groups to accomplish a common goal, for example using the jigsaw strategy that provides opportunities for students to collaborate, share responsibility, develop their critical thinking, communication, collaboration, and problem-solving skills, as well as improving their listening skills (Reading Rockets, 2013). Gagne’s instructional hypothesis gives a coordinated and deliberate methodology in planning the exercise intend to guarantee students are prepared to learn, interface with their past experience, make new information and convert that to long haul memory, and hold something very similar (Northern Illinois College, n.d.). Blossom’s scientific categorization helps in planning the learning targets that guarantee learning movement and the progression from the psychological trouble of less difficult to more intricate structures (Wilson, n.d). Gathering conversations and undertakings address inquiries of higher-request thinking to help intentional discovering that includes examination, assessing, interfacing, envisioning, expounding, and blending.

Benefits of Constructivist Approach

The constructivist hypothesis gives a comprehensive way to deal with schooling. This methodology encourages variety and assists kids with uncommon instructive requirements to take part in standard classes. Since students are effectively occupied with the cycle, they are associated with accomplishing something, zeroing on the thing they are doing and pondering what they are realizing. It upgrades inspiration, advances basic reasoning, improves critical thinking, improves dynamic, and guarantees scholastic accomplishment.

Challenges of Constructivist Approach

School culture and framework may neutralize the methodology. Difficulties lie in joining the hypothesis into training rehearses as numerous instructors are

ill-equipped to educate in this style. The shortfall of a particular construction may lead a few understudies to fall behind if not tended to. A few schools may require state sanctioned tests and progressed scores, which may downsize the significance of theoretical understanding as empowered by the constructivist approach. Nonetheless, the advantages exceed the difficulties when seen from the objective of schooling in the 21st-century world.

Conclusion

The instructional approach and strategies are beneficial to the author's students in terms of supporting their development as self-directed learners that can collaborate and interact with their peers, who can think critically and creatively, solve problems, provide solutions and create products, as well as developing as global and digital citizens.

DATA ANALYSIS AND RESULTS

SUMMARY OF CONCEPT 2:

Three Levels of Learning: Learner-centered, Knowledge-centered, & Assessment centered Learning Learner-Centered Instructional Practices

Introduction

Idealized model of education that centers educative experiences on the intersection of learner-centered, knowledge-centered, and assessment-centered practices. In such a school, students would receive an education that is culturally respectful and appropriate, backed by a well-organized body of knowledge, and able to effectively prepare students for a series of assessments that rigorously and critically test a student's intellectual aptitude in a variety of subjects. Clearly, such an idealized model is problematic considering that any of the three considerations may contradict each other.

My present teaching assignment is in the suburbs of Okayama prefecture, where I teach English as a second language as part of the Foreign Language Instruction curriculum in Japan for elementary and high-grade students. I also serve on the city's Board of Education Sub-committee. In the learner-centered environment, teachers are aware that learners construct their own meanings, beginning with the beliefs, understandings, and cultural practices they bring to the classroom (Bransford, 2000). In my milieu, I have to pair with a Japanese English teacher that helps students understand the relevance of learning other cultural backgrounds to gain agreement and favorable submission to the curriculum they are about to learn before we can even begin a positive learning environment. Due to the difficulty in learning a different sound and an attempt in speaking a language quite different from their native tongue, many students refuse to take part in a positive learning environment and question the validity of the curriculum being part of the Japanese school system. Becoming a foreign language teacher of these students has become more and more of a challenge to teach children who don't have the motivation to learn and do not have the trust for teachers who are not from their native culture. A teacher must learn the many ways about their culture, understand it, learn their way of life, and speak their language to gain acceptance to proceed.

INTERSECTION OF THE THREE LEARNING ENVIRONMENT

Learner-centered Learning

In a learning environment where the focus is on integrating the learner's thinking into the topic to be taught or learned, the topics for discussion are shared earlier or before the learning session so that each learner is allowed to develop their own understanding of the subject matter. The teacher's role is to give guidance to the learners especially on what is not relevant to the topic and why it's not relevant. They can also give the possibility of where those ideas can be applied. This creates a sense of participatory approach and ownership of the outcome of the learning process. This enables students to relate to the characters they are learning about because of the similar attributes they share. Consequently, the teacher can better diagnose misconceptions when he/she understands the individual students and the viewpoints that he/she has in the classroom. The teacher can then appropriately address misconceptions and clarify core understandings for the students by giving scenarios to think about (Herr, n.d). Therefore, the teacher builds on what the students come with to the classroom rather than assuming that they are passive consumers of information.

Knowledge-centered Learning

Bransford (2000) mentioned that solely learner-centered instruction would not help students acquire all the knowledge and skills needed to be effective and function in society. As Bruner (1981) reiterates, knowledge-centered environments help students become knowledgeable. For example, Japanese students learning English will most benefit from this approach. Knowledge-centered instruction will help them understand the advantages of learning English and how it can benefit them and society at this age of globalization. Teachers, therefore, focus on applying strategies that will help increase chances of understanding of new knowledge building on what the individual students already have with their different backgrounds. The teacher plans on how he/she will engage mainly the metacognitive faculties of the students and provides them the strategies to cope with thinking and problem-solving skills and apply the newly acquired knowledge and skills (Herr, n.d).

Assessment centered Learning

In an assessment-centered environment, Bransford (2000) concludes that the key principles of assessment are that learning should provide opportunities for feedback. The revision and what is assessed must also be coherent with one's learning goals.

A learning-centered and knowledge-centered environment can only be effectively designed when there is assessment-centered instruction involved. Effective teachers continually attempt to learn about their students' thinking and understanding. Opportunities to work collaboratively in groups can also increase the quality of the feedback available to students. For formative assessments, the teacher provides comments on the tasks submitted as drafts so that they are refined and portfolio assignments while summative assessments may include the tests, laboratory investigations to be carried out or essays to be written with some number of choices for students to make

decisions on what to do but designed by the teacher and with a due date for submission.

Delivering instruction in my lessons with simultaneous conducting of feedback and assessment has gained even more perspective on how I can better take my classroom to a level where students approve of the context on why they have to learn, how they will learn, what are the advantages of learning that emphasize understanding and does not require elaborate or complicated assessment procedures.

Implication on my teaching instruction in the classroom.

Teaching Challenging Content

To achieve teaching goals, every teacher needs a repertoire of instructional strategies that range from methods of direct instruction to cooperative and small group work to one-on-one work. No single method will work for a given teacher for all students in each subject every day. Whatever method is chosen, teachers need strong content knowledge to make challenging content understandable and to allow for ideas to be developed fully and coherently. Teachers need to weigh their options thoughtfully, making decisions about what methods and content best meet their goals and the needs of their students for a given unit of instruction (Bransford, Brown, & Cocking, 2000; Wilson, & Peterson, 2006). There are many ways in which cognitive complexity has been introduced into the teaching of students at risk of educational failure. To achieve teaching goals, every teacher needs a repertoire of instructional strategies that range from methods of direct instruction to cooperative and small group work to one-on-one work. No single method will work for a given teacher for all students in each subject every day. Whatever method is chosen, teachers need strong content knowledge to make challenging content understandable and to allow for ideas to be developed fully and coherently. Teachers need to weigh their options thoughtfully, making decisions about what methods and content best meet their goals and the needs of their students for a given unit of instruction.

Indicators of Challenging Activities

The teacher:

1. assures that students for each instructional topic, see the whole picture as a basis for understanding the parts.
2. presents challenging standards for student performance.
3. designs instructional tasks that advance student understanding to more complex levels.
4. assists students to accomplish more complex understanding by building from their previous success.
5. gives clear, direct feedback about how student performance compares with the challenging standards (Teaching tolerance, n.d).

DISCUSSION

My Portfolio and personal reflection on Teaching Philosophies

In my previous definition of learning, I did not just use what I think learning is but I used a definition that I felt Japan uses in their educational system at the end of the day. Since I teach using the Japanese curriculum, the school,

teachers, learners, and parents consider their child to have learned if he or she gets good grades on their report cards and later be prepared enough to write the correct answers on the final exams. They also expect to see children demonstrate what is learned in their day-to-day activities. These good grades emerge as a result of a learner's has shown that he/she can remember how to answer questions whether through memorization or understanding and the system cannot be able to differentiate since the focus is on passing the exam.

In my experience, I have found out that there are some learners who are anxious and due to the test setup and atmosphere, they lose their calm and turns to forget what they knew. In 2013 when I was teaching in a special needs school, I used to teach learners one-on-one who were slow in English compared to their grade level. For some learners who were revising for their class tests, through motivation and continuous lesson reviews, I felt that my learners were well prepared to pass their class tests. Some passed but there were different occasions when some came back and told me that they completely forgot what they had read.

With all this, I really think that there is more to learning than I thought. Although the concept of remembering what one learned should still be part of that definition, it shouldn't be the independent definition. According to Schunk (2012), learning involves the ability to acquire and modify knowledge, skills, strategies, beliefs, attitudes, and behaviors. As Leo Buscaglia indicated in his quote, "Change is the end result of all true learning." For this reason, when assessing what has been learned, it should not focus on only what a learner can do on paper, but rather his/her life in general including his/her attitudes, beliefs, and behavior.

As Schunk (2012) explained it, a learner should be able to acquire knowledge and also modify it to fit into this changing world. According to (Bransford, Brown & Cocking, 2000), "Learning theory does not provide a simple recipe for designing effective learning environments; similarly, physics constraints but does not dictate how to build a bridge.

Nevertheless, new developments in the science of learning raise important questions about the design of learning environment questions that suggest the value of rethinking what is taught, how it is taught, and how it is assessed." In this description, we see the need for a learning environment to focus on who is being taught/ the learner when it talks about 'how it is taught'. 'What is taught' also points to the knowledge part of the learning environment and when it further explained 'how it is assessed', it means that assessment is key in a suitable learning environment. Otherwise, it would be difficult to know how learners have acquired.

In my school, there is a science fair that is held annually. This puts into consideration almost all the aspects of learning environments. In groups or individually, learners come up with projects (learner-centered) and find or create information, but can ask for help from the teacher as well (knowledge-centered). These projects are evaluated on the very science fair day by teachers, parents, and their fellow learners, and feedback is given (assessment-centered).

Also, these projects are meant to solve an issue in the society that is known, for example, constructing the green city project (community-centered). Not only through the science fair, oftentimes we are encouraged to make our lessons student-centered and that is why seating arrangements in classes are in groups, but students also do group presentations and teachers assess every now and then and put these grades on our school management system for parents and learners to track their learning.

That said, learning should impact change. This change should affect the child as a whole. Every aspect of the life of the learners should be impacted by learning; knowledge, skills, attitudes, beliefs, and behaviors. Only until then, that learning will have happened.

DISCUSSION

CONCEPT 3: BEHAVIORISM AND COGNITIVE PSYCHOLOGY

The relationship between Robert Gagne and Behaviourism and Cognitivism/Cognitive psychology will be explored. It is a fact that both Behaviorists and Cognitivists are geared towards behavior, they have differences in their beliefs about what causes the behaviors (Rachita, 2014). The Behaviorist believe that a person or students' actions are caused or stimulated by external environmental influences which may include the conditioning of the person to take a specific action due to repetitive practice; or to the giving of rewards for desirable behavior and/or punishment for undesirable behavior. Alternatively, Cognitive psychology is founded upon the belief that the mental thought processes of logical thinking, reasoning, memory, motivational or positive/negative thoughts, etc. influence the behavior of the person/student (Rachita, 2014).

GAGNE'S NINE EVENTS

During COVID-19, many teachers found creative ways to engage students while continuing to provide instructional content through the virtual world. One widely used educational learning tool is called Kahoot! "a game-based learning platform that makes it easy to create, share and play learning games or trivia quizzes in minutes". (Kahoot!, 2019)

Theorist Robert Gagne inferred that specific conditions should be present in order for the acquisition, retention, and retrieval of knowledge to occur and he created a list of nine events to showcase these necessary learning conditions (Northern Illinois University Center for Innovative Teaching and Learning [NIU], 2020). Gagne's nine events of instruction include:

- 1. Gain the attention of the students:** This is about stimulating the interests of the student at the start of the class. This is more closely linked to Cognitive psychology which focuses on motivation and which is not necessarily linked to repetitive actions or the rewards or punishments of behaviorism (Catio23, 2015). One strategy or classroom practice that illustrates gaining the attention of the student is starting the session with an exciting ice-breaker such as a "getting to know you" game, going around the room with each person introducing them self and saying why they chose to be at the session and this would stimulate motivation to further participate (NIU, 2020). For example, I usually use "call and response" to gain the attention of students. "Hello, Hi! "

“Lessons Time!!, No Joking!! ”.

The ice breaker is an interactive word cloud game. The teacher will engage students using a fun interactive presentation software by presenting some predetermined questions where students’ response will form a cloud of words. The objective of this online game is to have students think and respond to questions.

2. Inform students about the objectives: The objectives of the lesson should be discussed with students explain how their learning is going to benefit them. A strategy or classroom practice that illustrates this is giving handouts and slides showing the required standards and criteria to meet the stated expected outcomes (Bodrova, 2007).

The Expectancy phase informs students of what to expect and it takes the cognitive approach. A course rubric outlines all pertinent information relevant to the course to inform students of what to expect throughout the term. The Retrieval phase is demonstrated in practice safety drills to ensure students understand what to do in case of a fire, tornado, or other practiced drills. The goal is to make sure students can recall steps to take as well as understanding the importance and seriousness of the drills. Both the behavioral and cognitive approaches are addressed.

3. Stimulate recall of any prior learning: The third event of stimulation of recall of any prior learning which is deeply rooted in Cognitive psychology and its focus on thought processes and memory recall more so than the behaviorist repetition (Catio23, 2015). This is where I check the student’s relevant previous knowledge relating it to the new topic to be learned. A strategy would be to help students appreciate the new learning material by linking it to the memories of what they already know external environmental influences. The Selective perception addresses diverse learning styles and identifies with the behavioral approach. The use of presentations, print out of slides, and teacher instructions are used to appeal to the auditory, visual and kinesthetic learners. This help student to connect between the old information which they already know and new information which they will learn. I think this is the best tool through which a teacher also gets an idea about the learner’s past knowledge of that topic. In my class whenever we start any new topic or unit, I used to ask so many questions related to the topic and assure them how much they know about the current topic. With the help of this, I get an idea that how many students don’t know about the topic and I have to make some new strategies for them to make them understand the topic. This event can best be considered under the cognitive approach because it’s all related to thinking skills.

4. Present the content to the student: This is the presentation of the content to the student and this is more closely linked to cognitivism which is associated with thought processes, reasoning, and memory more than repetition and stimulation for reward and/or punishment (Schunk, 2012). The classroom practice for sharing content is using many different types of media to share chunk-sized bits of information so it can be easily assimilated (Catio23, 2015). Here, I will introduce the content of the topic systematically through visual cues, verbal instruction, and active learning) to suit all my

students.

There are the following ways to present the lesson in the class like to show videos, demonstrate good lectures, group activity. In my class when I am presenting any lesson to my children, I made PPT for them in that PPT I mentioned all the videos, hands-on activities, the picture for the kids which make the lesson interesting for them. This event can best be considered under the cognitive approach because in this all children are engaged in thinking skills, learning skill, problem-solving.

5. Provide the student with learning guidance: This is where different approaches that will be suitable for students to retain information such as storytelling and graphics are introduced. This learning guidance could be provided by scaffolding or providing support as needed through mnemonics, role-playing or, visualizing (NIU, 2020). “The overarching goal of providing learning guidance is to “make the stimulus as meaningful as possible”. Making connections with the topic of study helps learners better retain information. This event also offers examples of correct performance in the form of graphs or case studies” (Kurt, 2021, para 10). In my class when I feel kids need more help to understand the topic, I gave more examples related to the topic, show more videos, explain more about the topic. This is can best be classified under behaviourist approach because behaviours theory is a philosophy that focuses on how children will learn and here teachers help the learner to understand the topic more clearly.

6. Elicit performance or practice by the student: Students are given the opportunity to practice what they have learned. This is eliciting performance or practice by the student and this may be more behaviorist oriented as it veers more towards conditioning the person than cognitive psychology (Schunk, 2012). A strategy or classroom practice that highlights this event would involve a low-risk practice or mini-sessions or quizzes for hands-on experience (Catio23, 2015).

The learner shows their knowledge to the teacher what they have learned in the topic or what the teacher taught to them. In my class whenever I am teaching, so in between, I asked so many questions related to the topic so the children not getting bored and they keep maintain their attention in the class. I also allow them to make their own questions and ask with their peer. This is can be best classified under the cognitive approach because here we are using their skills.

7. Give feedback: At this stage, I give my students feedback on their performances and reinforcements if needed. I give feedback to the student about what they did and how they functioned and this event is more behavioral and influenced by the external environment more so than it's linked to cognitivism and its focus on the thought processes of the student (NIU, 2020). A classroom practice for feedback would be analytic feedback where suggestions for improvements are shared. In my class, I always give feedback to my kids either is positive or negative. Feedback helps the kids to understand where they have to work more.

8. Assess the performance. I make sure to assess student's understanding of the topic taught. This is to assess the performance of the student which is also tending more behaviorist than cognitivist as it's more influenced by the

external environment than thoughts (NIU, 2020). A classroom practice that could be used is a questionnaire (Catio23, 2015).

For assessment, there are different tools through which a teacher could understand their learner growth, like formative assessment, summative assessment, quiz, project, presentation, etc. In my class when I assess my kids, I gave them the liberty to choose how they want to show their learning to me. This event can come under the cognitive approach because it is showing learner skills.

9. Enhance student retention and transfer. This is to enhance student retention and transfer which is more Cognitive psychology oriented than behavioral as it's directly linked to seeking to ensure that what was taught gets stored in memory and can be applied in real-life situations. A strategy or classroom practice that demonstrates this event is to relate the content to real-world situations or provide simulations of the real-world equivalent (Catio23, 2015).

If the learner can demonstrate they've absorbed the content by applying it to their job and by teaching others, then they can finally call themselves a wisdom warrior! This is what we refer to as behaviour change (Growth engineering, 2019).

Conclusion

Gange's nine events help an educator or teacher to make and deliver instructional content. With the help of Gange's theory learners can achieve their goals and created the instructional event to achieve the objectives of that goal. As a teacher, we aim that our learner understands whatever content we taught. Our aim is that the learner recalls and remembers important information and shows good performance in the class. This can be achieved by when our planning should be very strong.

My theoretical approach (Domains of Teaching)

Classroom management: As I reflect on this, I find myself more behavioral biased. This is all influenced by my learning experience. I rarely think of why a child behaves a certain way but want him/her to behave how I have been raised to behave. When teaching students, clear objectives must be set. For example, I few years ago, when my teacher was teaching us a topic about, Cardiopulmonary resuscitation (CPR), she was very clear about why is it needed and why do we need to know these emergency procedures, and she related the topic to real-world experiences. She illustrated the whole process of manual chest compression to restore spontaneous blood circulation with the help of different students. This helped us to be attentive I class making sure we understand everything he was teaching.

Advantages

- It helps to set high standards.
- Some good practices can be passed on to others.

Demerits

- There can be a lot of frustration.
- Things are done just my way (teacher's way).
- Sometimes there are little considerations for the learners.

- It can lead to poor relationship with learners due to that feeling of not being understood.

What should be done?

- ✧ Put learners at the centre and not me (teacher).
- ✧ Invest time to learn why learners behave the way they do.
- ✧ Show them that you care about them and their behavior.
- ✧ Learn to separate emotions from my teaching.
- ✧ Test students to know if learning objectives were achieved (Guido, 2021).
- ✧ Rewards and Punishments plays important role in classroom management. Giving out rewards for good behavior and punishment for not adhering to the rules which was set by all.

Lesson plan construction: Reflecting on this, I see lesson planning to be the combination of cognitive and behavioral as this requires planning and making out strategies beneficial for the learner.

What should be done?

- ✧ Plan with who my learners are at the back of my mind. There is the need to stimulate recall. There is a need to know my learners' prior knowledge to plan instruction that helps them build on previous knowledge. (Northern Illinois University, n.d.).
- ✧ Present the content in a structured and systematic way. For example, in my school, we have a routine system, where every Saturday, (the student's holiday) teachers meet and plan out the content for the week. This helps us in aligning the videos puzzles, drama relating with the content to be learnt for the students.
- ✧ Explore different materials to make the lesson very interesting but comprehensive.
- ✧ Provide learning guidance: Teacher must make learners experience as easy and simple as possible. You model it out to the learner about how to perform a certain task. Modelling eliminates any false assumptions learners may have about how to do something, which reduces frustration that can result when learners practice or attempt to solve something based on poorly understood concepts (Derman-Sparks, 2010).
- ✧ Elicit performance (Practice): I think this point relates with Behaviorist approach as it is based upon practice of the learner and urges them to apply new skills and knowledge that they have learnt to confirm proper understanding of the content learned. For example: I always follow the rule of, 'Learning by playing' in my classroom, which helps the students to understand the concept better and through experience.

Instructional delivery style: As I reflect, I think this is more of a 'Cognitive Approach', as it deals with attention grabbing and influencing the learner.

Drag student's attention: These are a few methods for capturing learners' attention: Stimulate students with novelty, uncertainty, and surprise, pose thought-provoking questions to students, have students pose questions to be answered by other students, Lead an ice breaker activity (NIU. 2020)

Giving feedback helps the teacher leaves an impact on the learner's mind which helps them to assess their performance and identify the gaps in learning. Using the University of the People as example, students receive regular feedback at all stages of the learning process. Lecturers provide feedbacks which involves how students could improve on what is bee studied. This makes me confident in everything I study.

Enhance retention and transfer: The idea here is to relate the instruction and performance to the person's actual day-to-day work. You want to build a bridge between the classroom instruction and its application in the field (BerkeleyLab. N.d).

CONCEPT 4: THEORIES OF LEARNING

Learning theories differ greatly based on someone's style of teaching, as well as how they deliver curriculum and handle certain situations. Learning theories correlate with one another; however, some theorists believe one way works better than others. Although constructivism and social learning differ, there are many similarities such as learners having shared responsibilities. What may work for the goose, may not work for the gander. As teachers, we must assess each situation differently and use theories and strategies that work best for each individual and not the masses.

There are three views of learning: 1. Behavioral, 2. Cognitive, and 3. Social. Behavioral focus on change of behavior. Cognitive focuses on change in knowledge, and Social refers to observation of actions, as well as the consequences for those actions. Constructivism was established in the 1990's. According to Ktheuer (2008) Constructivism is grounded in the research of Piaget, Vygotsky, Bruner, and Dewey. This theory is not based on one, but many theories merged in one. When learners form their own learning, they are more active. Although social interactions are not the main frame, it is still vital for knowledge construction. There are two types of theories that fall under constructivism: 1. Individual and 2. Social. Individual is the first wave and was discovered by Piaget and Social was the second wave and discovered by Vygotsky and Bruner. These theories are embedded in learning, hold shared responsibilities, stem from multiple perspectives, nurture self-awareness, and take ownership in learning (Ktheuer 2008). It focuses heavily on inquiry, problem based, dialogue, and cognitive apprenticeship.

Teaching to many is an art. Students must be mentally, physically and emotionally prepared to intake information, whether it is cognitive or socially. Students must have the mental capacity to gather, retain, and comprehend information. Lesson plans are not something my school requires; however, we create objectives based on the standard. We are also held to a strict time frame in which we can teach. Students get direct teaching for about 30 minutes. After the lesson, we administer a four to five question assessment so that students can demonstrate what they learned. Assessments are graded on the spot. Students score one of four levels and must grab the work assigned to their level. We differentiate heavily. For example, today's objective was to decompose a number. Before we jump into the lessons, students engage in a table talk. They discuss what they think this word means. After we share,

students are given what the word decompose means. Though our model is not like most schools in America, I still engage in the “I do, We do, You do” method. Students are given examples and ways to practice decomposing an actual number. Because there are multiple ways numbers can be decomposed, we address those ways. Once students receive their assessment grade their levels range from 1. I do not understand 2. I understand the basics but I still need help 3. I understand and I am on grade level and 4. I understand and I am above grade level. Students have the opportunity to “level up”. Homework is an assignment based on if students completed classwork or if students need extra help to practice the skill learned for the day.

Constructivism can improve my lesson by giving more academic responsibilities to students, allowing students to collaborate with one another with their thinking, and making students more active in the learning. I could allow students to plan with me. Placing students at the forefront to be in control of their learning. Having students participating in their own learning can make them more willing to participate, become more engaged, and foster an environment that is open to their ideas and thoughts, adding new ideas to information students already know. This gives me as a teacher an idea of how students are thinking and how they process information. Constructivism theory can grow my learner well past where I am now as a teacher.

THE IMPACT OF CONSTRUCTIVISM APPROACH IN LESSON DELIVERY, ASSESSMENT STRATEGY AND CLASSROOM MANAGEMENT.

A Constructivist Approach to my lesson

Determining the method and theory behind how a teacher conducts one’s lesson is a vital aspect that reflects on the teacher’s teaching philosophy and pedagogy. The theory that an educator prescribes to can determine how well the classroom functions and more so, can be a key indicator of student academic success. When I look at the great scholars and philosophers of the past, it is evident that my teaching philosophy has unknowingly been inspired by so many, but most specifically John Dewey. Dewey claims that education and learning are social and interactive processes, and thus the school itself is a social institution through which social reform can and should take place (Talebi, 2015). Dewey’s beliefs are echoed by those of Lev Vygotsky as he similarly believed that socially meaningful activity was the key to human development (Schunk, 2012). When devising a lesson plan, I generally take an eclectic approach as I feel taking from multiple theories gives my lesson a more well-rounded approach which ultimately benefits student success. I will focus on how a constructivist approach to my lesson will improve the lesson.

Jones & Brader-Araje, (2002) define constructivism as learning that involves an active process in which learners gain meaning and understanding by relating the new ideas to their existing knowledge. Instead of idly taking in information, a constructivist approach encourages the learner to understand the lesson through prior knowledge, experiences, and reflection. I currently use elements of constructivism in my lessons but will aim to implement a more comprehensive constructivist approach to a current lesson.

Current Lesson

In my current lesson plan, I start the lesson off with a dialogue that incorporates the target function. I do this initially before introducing the grammar function as I am allowing students to use prior knowledge and real-life experiences to relate to the dialogue and grammar function. It is at this point I will cover unknown vocabulary and elicit students to engage each other in determining meaning. Next, I would go over the target grammar of the lesson and after modeling the grammar function, I will use a scaffolding approach to work on exercises by giving the student a sentence framework to add appropriate grammar functions. By giving the students, a simplified manner in using the target language, I believe I am providing them the knowledge and ability to perform the task with less assistance. A sample exercise question would be as follows:

After the exercise section of the lesson, I move to the final part of the lesson, situational practice. In this part of the lesson, I give the students real-life situations where they can use the grammar function to communicate. This section is often supplemented by the use of role plays to enact out a real-life situation. A sample situational activity would be:

Changes I would make to my current lesson

As stated above, I currently use some constructivist approaches to my lesson, but a big part of being a successful educator is having the courage to continuously evolve the lesson and avoid the comfort of the status quo. Schunk (2012) talks about how implicit theories are formed during self-reflection and

Exercise: Choose the correct question word and verb to complete the sentence.

Can. Could. Would. Will

Lend, Turn up, Bring, Open, Hold

1. _____ you _____ me another drink please?

how this affects student motivation and learning, yet I feel an important skill for teachers is to reflect on how they can improve their teaching. When devising a plan to have a more comprehensive constructivist approach to my lesson I take inspiration from Mvududu and Thiel-Burgess's paper titled 'Constructivism in Practice: The Case for English Language Learners. Mvududu and Thiel-Burgess (2012) state that "constructivist teachers do not take the role of the 'sage on the stage.' Rather, teachers act as 'guides on the side,' who provide students with opportunities to test the adequacy of their current understandings" (p. 110). To better incorporate constructivism into my lesson, I look to Vygotsky and the Zone of Proximal Development (ZPD) to assist me. Abtahi (2017) also states that there is a connection between ZPD and More Knowledgeable Others (MKO) as she states that we learn in the presence of others who have a better knowledge of certain historical and cultural practices. While I currently use scaffolding to an extent in my lessons, there is an

opportunity to use it more as Schunk (2012) states, there are five major functions of instructional scaffolding. For instance, I could incorporate reciprocal teaching into my lessons as means to not only improve my delivery but also facilitate learning. For my ESL classroom, I feel allowing the student to play the role of the teacher will help them be more active in their learning which would then lead to developing skills. I also feel that I need to emphasize peer collaboration more in my lessons. While I do have my students engage in situational role-plays, I need to implement it more as an instructional function. Research shows that cooperative groups are most effective when each student has assigned responsibilities and all must attain competence before any are allowed to progress. I have progressed through lessons at times even if some members in the group may not have attained the competence, they needed to attain the skills necessary in using the language outside of the classroom. By doing this I have compromised my assessment strategy. I use strategic competence as a base of my assessment strategy in which emphasis is placed on navigating through scenarios and getting one's message across despite any shortcomings in proficiency or skill (Caban, 2003).

Currently, I do not have any time dedicated to student self-regulation and I feel by incorporating this into my lesson plan, it will help the student digest the content in terms of how it can be used in the scenarios practiced in class and how it could then be utilized in authentic real-life situations outside of class. Self-regulation will increase the student's metacognitive awareness and procedural knowledge as well as encourage self-reflection which would allow the student to set new goals, adjust strategies, and make attributions for outcomes after task completion thus increasing student motivation and learning. Sieberer Nagler (2015) states that good teachers have the ability to connect key concepts and ideas learned across disciplines in order to connect ideas or make learning useful.

Conclusion

I feel that it would be prudent for me to incorporate a more comprehensive approach for the betterment of my students. It is important that educators take stock of their philosophies and teaching pedagogy to continue to strive to be better. This paper has enlightened me on how I can further use constructivism in my ESL lessons. Now as I look to the future, I feel a deeper look into social learning as it relates to my ESL lessons may prove to be beneficial

ANALYSIS 1: BRAIN BASED STRATEGIES

Introduction

As Schunk, (2012) has stated in his book, there has been a concentration of interest in brain research, and much of the research suggests that academic content is processed primarily in the left hemisphere, but that the right hemisphere processes context which has led to complaints claiming that teaching is too focused on content and not enough on context. To further simplify this, learning that is content-based primarily leaves students to have a disconnect between the content they have learned and life events leaving the student learning to become meaningless (Schunk, 2012). One of the best

methods to increase the context in teaching and to promote student learning is to incorporate brain-based strategies into one's classroom.

The more knowledge and memories a teacher can disseminate to students and the more often it is done will help students learn and recall the information through the hippocampus. The presenting of the content relies on students perceiving information and making it relatable, thus it is easy to relate this type of instruction to cognitivism. Yet, if the amygdala is not engaged and working in unison with the hippocampus, the knowledge they have received from the teacher cannot be learned or mastered. Among other things, the amygdala deals with your emotional state, and when your brain experiences negative emotions like fear, anxiety, or even boredom, your amygdala puts your brain into survival mode, which blocks the entry of any new information into your prefrontal cortex (TeachThought, 2015). This is where brain-based strategies can help the entry and eventually the mastery of the knowledge and skills they have learned. As the Resilient Educator, (2020) states, learning engages the whole body to enhance the learning process and that brain-based learning in essence is the total body immersion in a topic.

Strategy 1: The addition of emotion can help students remember.

As stated in the introduction, emotions like fear, anxiety, or even boredom, blocks the entry of any new information into your prefrontal cortex (TeachThought, 2015). Learning engages the whole body and when the entire body, mind-body, is engaged the learning process is enhanced (Brain-based Learning, 2017). One strategy that would engage the whole body is the addition of emotion can help students remember. The theory behind this strategy states that emotion drives attention and attention drives learning so in an adolescent brain whose frontal lobe is not fully developed, many times the thinking gets accomplished by the amygdala (The adolescent brain learning strategies & teaching tips, n.d.). Judy Willis, (2011) explains the amygdala as an emotional filter and if a person is in a state of stress, the amygdala becomes highly active, and then it sends the information to the lower 80% of the brain, which is the reactive involuntary animal brain which will then not process or evaluate the information. Willis, (2011) further goes on to simplify it by stating that teachers need to keep that amygdala in a state of low stress because "boredom, fear, concern about their language differences, fear of reading, test-taking, those things turn the amygdala into a big 'STOP' sign" (para 5). To combat this in an ESL classroom, I enlisted strategic competence as an assessment tool. Caban (2003) talks of strategic competence as the skills needed to maneuver through breakdowns in communication due to such factors as misunderstandings and low proficiency allowing speakers to get their message across despite hindrances in language ability or environment. By focusing on strategic competence regardless of mistakes, creates a more nurturing environment.

Strategy 2: Practice/rehearsal is critical to learning for the long term

As aptly put in the title, for learning to be for the long term, the knowledge must be practiced. Understanding must be checked frequently to ensure that

the rehearsal is correct and this could be facilitated through storytelling, analogies, and for my classroom, simulations (The adolescent brain- learning strategies & teaching tips, n.d.). By enhancing the knowledge content with simulations, the teacher is promoting an active approach to understanding how the knowledge content relates to the real world. This could be a direct reflection of the Freirean pedagogy, which promotes a student-centered dialogue which problematizes generative themes from everyday life as well as topical issues from society and academic subject matter from specific disciplines (Shor, 1992). If the new information proves useful to us, it becomes a permanent memory so by providing ESL students real-life scenarios where the content can be applied in a communicative sense, the probability of memory becoming long-term is very high (TeachThought, 2015). When conducting simulations, it is very important that we engage the affective and psychomotor domains as self-efficacy, movement and interaction are great tools to enhance long-term memory. Educators must also be wary of the possible negative side effects of simulations and role-play as this can cause anxiety and stress in students if had to be done in front of the entire class. To insure against this, the buddy system could be a good approach versus a presentation-style simulation approach.

While there are many brain-based strategies that an educator can look to, in an ESL classroom, the addition of emotion can help students remember strategy, and the practice/rehearsal is critical to learning for the long-term strategy are two that are highly effective to promote learning. Ideally, any teacher would try to incorporate many brain-based strategies based on each individual classroom.

ANALYSIS 2: THE VISUAL LEARNING STRATEGY

V_Anu, (2021), defines visual learning as that strategy which “Captures the image of what it sees based on spatial awareness, images, color, brightness” (para.3),, implying that, these are the potential qualities teachers must consider largely, when considering delivering content by this mode. So that, examples of teaching and learning materials must be adequately prepared and presented to make the impact it is intended for.

As it has always been put, a picture/video is a thousand words (“The Adolescent Brain Learning Strategies & Teaching Tips”, n.d.). What a learner has seen can speak volumes compared to what he has heard. For example, “The Adolescent Brain –Learning Strategies & Teaching Tips”, (n.d.) goes ahead to elaborate that; “Have the students visualize an image and connect it to them personally: “Imagine that...”, “Close your eyes and picture ...”, “What do you see when I say ...” (para. 31). It is important to note that graphics does not always mean graphs, other simple diagrams like flow charts can also be used. (“The Adolescent Brain –Learning Strategies & Teaching Tips”, n.d.). Another practical example is to imagine a referee in a soccer game expected to official a match, and the goal posts are invisible to him, how can he or she indicate a goal if there should be? Replace the referee with the educator who is teaching a learner but does not know when and how a goal is scored (how and when a learner learns any information just because he/she does not understand the

way the brain of the learner functions).

Moreover, learning support aids, such as comic oriented material, cartoons, and video presentations with overhead projectors, smart interactive boards, simple flow charts, picture cards and observable concrete experiences, among many others, would serve the purpose quite well. These are relatively content discipline friendly. In any case, recent research findings reveal that, the majority population in a class tend to be visual learners, with tactile learners making the large minority. Auditory learners, on the other hand, constitute the very least of them all (Sun Protection Outreach by Students, n.d.). This therefore makes it most imperative for 21st century educators to realize the negative implication which the lecture pedagogical strategy may have on 21st century learners.

Well, there are very obvious reasons one could assign to viewing this choice as the best for pedagogy in our current times. To examine a few of them one must be made aware that, learning only becomes more meaningful to young learners, especially teenagers when they are well able to place meaning and value on content, and stimulate their emotions in a more appealing manner. This strategy therefore appeals more to their emotions as their frontal lobes, which control their emotions are not mature enough. Young learners often respond to issues based on the functions of the temporal lobe, which processes information with emotions. This must give the teacher reason enough to organize lesson activities that emphasize a great deal on observation, leading to concrete learning experiences, as this tends to offer the basis for symbolic (video, picture presentations, etc.) and abstract concepts.

Meanwhile, employing visual strategies enhance retention in young people. I make this claim because, research indicates that, 90 % of the information we receive through the vision, is directly retained in the long-term memory (Admin, July 9, 2014). This is the case when content is presented in its pictorial form. Research has it that, "Our eyes can register 36,000 visual images per hour (Admin, July 9, 2014, para.7). This therefore implies that, instead of a teacher reading and discussing characteristics of the three main types of soil (sand, clay and loam), he/she may bring samples to the classroom to give students a concrete learning experience (observation) and entrench cognition with pictures or a video presentation. This experience may stay with students for a long time, and they may be able to transfer information gained in other situations.

Then again, visuals facilitate meaning and understanding of content in the most efficient manner for retention and behaviour modification. For instance, a student may ignore a poster in the classroom which reads „Do not throw pieces of paper on the floor" and yet would understand the information better when he sees a colleague disciplined for failing to adhere to that class rule that is a concrete situation. Then again, if the warning is presented pictorially and colourfully, it captures students' attention easily as there may be a high tendency for them to cognitively interact with its colourful appearance.

Most of the learning that young people do is sustained with emotions and the extent to which content is linked to relevant familiar situations (Sun Protection

Outreach by Students n.d.). For that matter, learning is crucial for the purposes of survival and progress (Sun Protection Outreach by Students n.d.). Therefore, any visual presentation that threatens the survival and progress of the young learner could be detrimental. The educator must therefore, come to terms with the fact that, expressed negative emotions, attitudes and beliefs he/she brings to the learning environment could be barriers to learning. Therefore, he must be able to discern any observable environmental factors and personal gestures among others, that could be considered threatening and capable of hindering students' learning, and eradicate.

ANALYSIS 3: HANDS ON / SIMULATION LEARNING STRATEGY

This strategy is more effective when it is craftily aligned with the visual learning approach. Apparently, it emphasizes the kinaesthetic/tactile learning style. Young learners are very curious and therefore would like to attempt to touch what they see just for the satisfaction of it. In other ways, teenagers often yearn to physically interact with what they observe and find most valuable.

The brain structure that supports this strategy is the prefrontal lobe. This is largely responsible for regulating emotions, making and acting upon decisions, planning, solving problems and facilitating the engagement of accurate motor skills. It happens to be the only structure of the brain which is taken over by the myelin only when individuals are in their early to mid-twenties. Before, this time the "Temporal lobe, parietal lobe and the amygdala are used for language development and decision making" (Sun Protection Outreach by Students, n.d. p.7), this tends to make young people impulsive and reason irrationally and illogically, which often affects their capacity to learn and yet, they become high risk takers and unnecessarily adventurous.

For this reason, teachers must cease the opportunity to channel this overwhelming energy into positive action, such as engaging them in service learning, learning activities through apprenticeship, and performance eliciting among others. The teacher may also design psychomotor-oriented, inquiry and project-based lesson activities related to craft work, drama, role play and more. Content must also appear tangible for students to see, touch, feel, apply to real life situations, analyze, synthesize, evaluate, and more. Teachers must therefore assume the role of procedural guides to help their young students make decisions and take appropriate action.

Timmons, Greg, (2018) seems to acknowledge the fact that, within this strategy, the educator is well able to take advantage of the multiple modes of learning styles for students to construct their own cognition. Thus, by learning with this strategy learners are offered the opportunity to acquire and apply, if not to improve upon, the four main mental skills, namely, critical thinking, communication, collaboration, and creativity.

Clearly, creating a learning community where the main learning perspectives, (knowledge, assessment and student-centered environments) (Bransford, & Cocking, 2000), are integrated may be more supportive of the hands on/simulation learning strategy. More so, this strategy serves well, when students have no prior knowledge with which to link new content. For example,

students who have no previous learning experience on identifying the three main types of rocks, would be able to identify them as they see, touch, feel and analyze their appearance and different structures. To evaluate the extent to which they remember the concept, would be to give them a bucket containing rocks of various types to sort into grouping according to their characteristics.

ANALYSIS 4: ACTIVE LEARNING INSTRUCTIONAL APPROACHES

Active learning is an instructional approach that engages all students in the learning process through well-planned learning engagements/ activities, and discussion. It focuses on higher- order thinking. It involves students working in groups and some cases individually. Active learning provides students with meaningful learning experiences that positively impact students since it improves their academic performance and increases the retention and recall of information (Barron et al., 2008).

My two Active Learning Instructional Approaches

Two active learning approaches I would use in classroom practice is the use of visible thinking strategies and experiential learning. “Visible Thinking are practices that help make thinking visible: Thinking Routines loosely guide learners’ thought processes and encourage active processing” (Project Zero, 2016, para. 1). I would use visible thinking routines for units of inquiry that are social studies based. For example, in a future unit that involves caring for resources on earth I would give students opportunities to do ‘headlines’, ‘word-phrase-sentence’ and ‘think-pair-share’ visible thinking strategies. Students would read and listen to the story of Wangari’s Trees of Peace (Yao, 2018) and then use visible thinking strategies for many beneficial reasons. To help show their thinking about this story, they will use visible thinking strategies to help them understand the story and show thinking in different ways. First, at different points in the story, they will listen to teacher questions. They respond by doing ‘think-pair-share’ by turning to a peer and sharing thoughts. This routine encourages students to share their thinking and value multiple perspectives as they hear multiple responses to a story. At the end of the story, they will find a word that they think is powerful in this story, then they will find a phrase that provoked them, and finally they will find one sentence in the book that is meaningful. Doing ‘wordphrase-sentence’ helps students to individually capture the essence of a text as it encourages engagement with the text. The last visible thinking routine for this activity would be for the students to make a ‘headline’ to capture the essence of the story. This routine helps the teacher to see if students really understood the central significance of the story.

Another active learning instructional approach is experiential learning. The theory, proposed by Kolbe is when students learn from their experiences. It is “the process whereby knowledge is created through the transformation of experience. Knowledge results from the combinations of grasping and transforming the experience” (Kolbe, as cited in Cherry, 2020, para. 2). They are also drawing on their own experiences of being a consumer to help guide them make decisions. The students also connect their experiences of using

information technology to support the advertising component of the project. The activity enables students to synthesize their knowledge and experiences to support them with a new learning engagement.

Reasons/Benefits of the approaches

The benefits of allowing students to engage in experiential learning are that students have an opportunity to be creative, be reflective, to learn from mistakes, to be actively engaged, and to better grasp concepts (Educating Adventures, 2020). Experiential learning allows students to reflect on their performance to see if they are being successful. It allows them to recognize failures and an opportunity to be creative in adapting thinking and actions to be more successful. Experiential learning enables students to use concepts at a deeper active level so encouraging a better understanding of these concepts. By connecting concepts to 'real life' application students are more engaged, learning is relevant, and concepts have more significance.

Challenges in using the Approaches

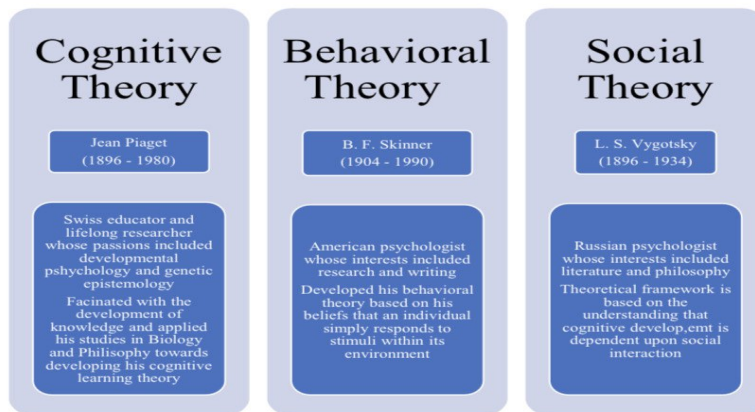
In my experiences the challenges of experiential learning in my setting for the teacher to produce authentic experiences that allow students to learn required objectives. It requires firm understanding of the learning objectives, and creativity to formulate effective experiential learning experiences. The challenges for the student are being able to connect previous knowledge and experiences to new learning situations. In my opinion, if students have learning gaps of knowledge and limited experiences, they will find experiential learning harder as they are unable to use required knowledge to make sense of what they are doing. Conclusion Despite the challenges of experiential learning and visible thinking routines, these approaches are fundamental in any active learning environment.

ANALYSIS 5: THE THEORISTS, PIAGET, VYGOTSKY AND SKINNER

B.F SKINNER

B. F. Skinner developed the theory of extensor reinforcement and called it the theory of operant conditioning. According to Skinner, most human behaviours are operative, e.g., going to school, writing a letter: This means that these behaviours are premeditated, involuntary, and not directly caused by stimuli such as blinking, falling. According to Skinner's theory, the most important teaching is to use reinforcement and punishment (Mcleod, S. n.d.). Reinforcement can be both positive and negative. Positive reinforcement involves encouragement; Negative reinforcement is the removal of unpleasant stimuli after implementing acceptable behaviour. It is experienced as a relief. Whenever a teacher smiles at a student, says something nice, praises him, writes a high grade, notes his successes with peers, he uses positive reinforcement. The student will repeat the behaviour that is followed by such action on the part of the teacher. The kind of punishment when uncomfortable exposure measures are used to prevent unwanted behaviour is called positive punishment. E.g., punctuation or writing a bad grade according to a student's bad behaviour.

Fig. 1



Sociocultural Theory | Simply Psychology.

Lev Vygotsky

He is the author of *The Cultural-Historical Theory of Higher Mental Functions* and the *Theory of Systematic Localization of Mental Functions in the Brain*. He also developed a sociocultural theory of child development (Zhou, M., & Brown, D. 2017). Vygotsky gave rise to an experimental study of the relationship between speech and thought in the context of development. Because a child is born into a particular social and cultural environment, his or her mental development is determined by social relationships and cultural gains, e.g., writing, numerical system, and so on. Consequently, the development of the child's thinking and, in general, the cognitive (cognitive) sphere occurs in a specific socio-cultural environment through an important adult (authority) (McLeod, S. n.d.).

Social relationships play a leading role in the child's mental development. In his theory, Vygotsky discusses the cognitive functions involved in child development on two levels: The first is the socio-inner psychological level, which means that the child's psyche is formed in social relationships with others. The second is the individual level is intra-psychological; at this stage, the experience gained concerning the child's environment is transferred to the inner plane. He/she plays a leading role.

Jean Piaget

Jean Piaget (1896–1980), a Swiss psychologist, is best known for his pioneering work in the development of intelligence in children (Zhou, M., & Brown, D. 2017). According to Piaget, people are born with two main tendencies: organization and adaptation. Organization – sorting behaviours and thoughts. They combine and rearranging in assembled systems. Also, the tendency to organize thought processes; Adaptation The tendency to adapt to the environment involves two main functions – assimilation and accommodation. When we gain a new experience, our existing circuits can no longer explain the new experience, and our equilibrium is broken. Such situations create a disequilibrium – mental discomfort or an imbalance between children's existing knowledge and recent events. Piaget's theory proves that children go through the same stages of development, but they do so at different rates. Because

of this, the teacher should plan classroom activities for individuals and groups and not for the whole class.

Piaget called the mental structures through which man interprets the universe circuits. Schemes are elements of age change, "building bricks". These are the thought structures and programs that govern such sensory-motor sequences as sucking, watching, grabbing, and shaking hands. With practice, elementary circuits are integrated, integrated, and distributed into various patterns that gradually complicate behaviour. According to Piaget, for cognitive growth, it is necessary to work together on two basic processes – assimilation and accommodation. Assimilation modifies new information from the environment to bring it into line with an already familiar experience. The child applies existing schemas to structure the incoming sensory information. On the contrary, in accommodation, the child's existing schemes are modified to explain the new information more thoroughly.

What are the theoretical approaches of Piaget and Vygotsky to the relationship between learning and development?

Table 1

Comparison Chart

	Piaget	Vygotsky	Skinner
View of Knowledge	Students generate their knowledge through interaction and self-discovery (Ackermann, 2001).	Knowledge depends on one's engagement with others that enable them to construct their own views (Zhou & Brown, 2017).	Knowledge is a pattern of behavior that are initiated by environmental factors that elicit actions (Schunk, 2012).
View of Learning	Students develop their skills, knowledge, and experiences (Ackermann, 2001).	External variables have an impact on students' learning, and they need the supervision of their teachers (Schunk, 2012).	Learning occurs as a result of changes in explicit behavior (Schunk, 2012).
View of Motivation	Intrinsic motivation is a naturally occurring byproduct of cognition (Gottfried, 1983).	Aspects of motivation especially relevant include contextual factors, implicit theories, and teachers' expectations (Schunk, 2012).	Punishment and reinforcement affect the student's motivation (Schunk, 2012).
Implications for Teaching	The educator's responsibility is to encourage learning by exposing students to a range of experiences (Zhou & Brown, 2017).	Teachers facilitate learning that is progressive and task-allocated depending on the needs of students (Zhou & Brown, 2017).	Teaching needs properly arranged reinforcement contingencies (Schunk, 2012).

Piaget believed that development precedes learning. In other words, children must first form specific cognitive structures, or schemes, so that they can explore and cognize the world. Vygotsky's theory even suggests that learning precedes and promotes cognitive development. The child learns the meanings of symbols in society based on information provided by other people.

How does Vygotsky explain his ability to self-regulate?

According to Vygotsky, development involves the child grasping the meanings of symbols to think independently and solve problems. This ability is called

self-regulation. Vygotsky believed that social communication plays an essential role in a child's development. In his view, children's thinking develops as a result of communicating with other people. When communicating with more knowledgeable and experienced people, they acquire knowledge that they could not acquire independently. Piaget suggested that children learn about the world alone, while Vygotsky argued that it was not at all necessary or necessary for children to rediscover knowledge in their culture. Learning has been created in society for centuries, and the child has to absorb it through social communications.

CONCEPT 5: INSTRUCTIONAL APPROACHES FOR ACTIVATING PRIOR KNOWLEDGE

Instructional Approaches for activating prior knowledge

Prior knowledge refers to what a student knows, and they can bring to the lesson even before the teacher teaches any content. To activate prior knowledge, the teacher simply needs to mention the topic and allows for students to search their memory and retrieve any information about it (King, 1994). There are instructional approaches that activate prior knowledge very well. Therefore, the purpose of this paper is to investigate two instructional approaches and discuss their intended usage in the classroom as well as their limitations.

Strangman et al. (2004) mention six instructional approaches that activate prior knowledge namely, reflection and recording, interactive discussion, answering questions, K-W-L grid, CONTACT-2, and interpretation of topic-related pictures. This paper will investigate interactive discussions and the K-W-L grid approaches.

Interactive discussions

Interactive discussions are a great way to encourage students to get talking about a science topic. For example, Grade 4 students were busy with the States of Matter. The teacher knew that students had different learning styles. According to Schunk (2012), learning styles refer to the preferred way that individuals process information and handle tasks (p. 474). This meant that she had to do her best to tap into those styles to gain the attention of the entire class.

The teacher begins by playing a video that names and explains what the states of matter are. Once the video is completed, she allows students the opportunity to say what they have learned from the video. This should get students ready to participate as they have probably experienced states of matter in their everyday lives. Exploratorium (2021) provides benefits of science talking:

- Opportunities to gather their thoughts, create hypotheses, develop ideas, and ask new questions
- Encourages and motivates the growth of new understanding by manifesting new ideas and perspectives
- Activating their prior knowledge and experiences

- Supplying students with the tools to encourage them to take more responsibility in their own learning and understanding the value of student ideas
- Fostering an atmosphere of collaboration in science
- Allowing students to speak in their own informal language and expressing themselves rather than focusing on what is correct.

As the students discussed what they thought of the video, the teacher had some pictures with words on them. She had the definitions of what was portrayed on the page. These words all had something to do with the topic, she had solids, liquids, and gases. As soon as the students mentioned anything connected to those three, she put a picture up and this allowed them to further search what they already knew. To go a step further, the teacher asked students whether one state could move to another, they now had the opportunity to display their analytical thinking skills. They were divided into groups to discuss these changing states of matter. Teachers have the responsibility of creating an atmosphere where learners will not fear making enquires due to embarrassment (Ruggs & Hebl, 2012). Interactive discussions ensure that students remain interested and learn to work in teams. There are instances where children understand better through discussions with their peers as opposed to the instructors. In a classroom, students can be encouraged to complete their projects in groups as a way of reducing boredom and tension associated with lectures.

Limitations and challenges

The main limitation is that it could only work on students that have prior knowledge of the topic, if a student has not, it makes teaching the topic that much more difficult. The teacher will then have the challenge to engage everyone (Xenos, 2018, p. 947), including the ones that do not have the needed background information or experiences. This would mean that the teacher would need to take time out to help those students get acclimated with the topic. This could also cause a challenge as the students could take that time as an opportunity to disrupt the class and the teacher could lose control of the class. Therefore, it is imperative to ensure that all variables are taken care of before introducing a topic.

Another limitation is that, teachers may also have a difficult time monitoring and supervising teams to ensure that all learners participate as expected (Strangman et al., 2004). Learners have different needs which may not be addressed effectively in a peer dominated method of teaching.

K-W-L grid

The K-W-L grid is also a great way to find out what students already know about a topic, what they want to know, and what they have learned. Taking the same topic as above, students engage in an oral discussion with the teacher and the class. They will then be able to complete the first two steps. This allows students to reflect on their knowledge of States of Matter, brainstorm lists of ideas on states of matter, and identify the three categories (solids, liquids, and gases) (Strangman et al., 2004). The teacher then scaffolds by highlighting gaps and inconsistencies within their knowledge and students can now mention

what they want to know about States of Matter (p. 12). Ogle (1986) indicates that the K-W-L grid method increases retention of knowledge as well as improves students' ability to make connections (p. 569).

An example of a K-W-L grid is shown below:

States of Matter		
K (know)	W (want to)	L (learned)
a)	a)	a)
b)	b)	b)

Limitations and challenges

One of the main limitations is that it can be quite time-consuming to complete, especially if students do not have prior knowledge of the topic (Kusumaningrum & Widiyanto, 2018, p. 93). Thus, students would find it difficult to write what they know and want to know but could possibly answer what they have learned after the lesson. It limits students learning and their ability to make genuine connections. The teacher would have a great challenge in keeping students entertained as they could get bored easily and stray away from the task at hand.

In addition, it is not effective for reading fiction materials. Also, it is not appropriate for readers who are not active thinkers.

Conclusion

No matter what instructional approach we use to activate the prior knowledge of students, the fact remains that it needs to be done. The K-W-L grid and interactive discussions are only two of the many that can be utilized. They do come with their limitations as well as challenges for the teacher, but they can be overcome to ensure that students get the best out of their learning.

CONCEPT 6: INSTRUCTIONAL MODEL

Introduction

There are various number of philosophies related to education. From the teacher- centered Essentialism and Perennialism, the student centered, Progressivism, Humanism and Constructivism, and the socially centered philosophies of Reconstructionism and Behaviorism. Latterly, learning about the critical pedagogy championed by Paulo Freire.

One could be of the view that a universal teacher should draw elements from each of these and in doing so should be capable of ensuring their students get a rich and varied educational experience. It is also relevant to place into context several factors such as how long you have been teaching, where you teach (geographically), the type of education system you work in, what freedoms do you have as a teacher, the subject you teach and, the most important element – the students that you teach.

PHILOSOPHY THAT SURPRISED ME

There were several of these theories that surprised me. My perception about Teacher Centered philosophy was totally inaccurate.

Initially, my thought was of classrooms from years gone by with students sitting at individual desks and the teacher “lecturing” to the class, with dialog very much teacher driven. I was of course wrong. Essentialism equips students with basic skills that are key to a successful society. However, these skills

change over time as new ways of doing things and new industries/sectors emerge. But, have these essential skills developed and moved with the times? Perennialism was to a large extent, the least applicable to me at first glance. However, having studied, a little further there is some merit to looking at great works of philosophers in relation to the past. Some, in fact have had a great impact on the world we live in today. A note of caution though, they must be placed in the context of when and where they were written.

PHILOSOPHY THAT SPOKE TO ME

The theory or philosophy that on initially seeing spoke the loudest to me was that of critical pedagogy. The very word critical suggests negativity, the exact opposite of what an educator should be. However, having read the works of Freire, I strongly agreed with almost all of what he says. I would suggest that since his works were first produced, great strides have been made to address inequalities in education and society. The gap may be getting greater but those at the top are contributing more and having a positive influence on the masses.

CHANGES IN THE INSTRUCTIONAL MODEL

Socially centered philosophies have had a significant impact on education over recent years. Re-constructivism looks at ways to solve social problems. Students are now far more aware of social issues that are occurring locally and globally. War, famine, political unrest, environmental issues are reported upon on a daily basis. News is available 24 hours a day, 365 days a week. The internet has given the world's opportunity to a whole host of issues. Social media is a powerful platform for highlighting a range of social issues. For example, we only knew about the horrors of famine in Ethiopia in the 80's because a rock star highlighted it to the world and took action.

Behaviorism arguably has had a significant impact on education by cultivating behaviors that are beneficial to society.

Developing what are known as character traits have become far more important in education, certainly over the past 20 years. Employers are now looking at traits being as important as academic brilliance. How we develop these are vitally important components of any 21st century education system. Arguably the most relevant philosophies in 21st century education are those that are student centered. Progressivism develops a student's moral compass and is a key component of the IB learner profile (Principled).

Humanism focuses on ensuring students reach their full potential. As a teacher, how we do this is central to a teacher's role. This has certainly evolved over time. From the days of fear and punishment being a motivating factor, to the need to get a job – in some cases any job – to the point where we are today where a large number of students want to get good jobs and have high aspirations. Teachers fulfill a number of roles in education today: a motivator, a counsellor, a parent, a listener, a source of knowledge, a source of advice to name but a few. The role has changed significantly over the years and this theory certainly will have impacted that.

Finally, Constructivism focuses on using education to shape a student's world view. This has certainly changed a great deal over the years. 30 years ago, teachers and books were the source of pretty much all the information

students had of the world around them. Now students have access to a vast array of information and different views about a whole host of issues. The IB promotes the cause for students becoming global citizens that can make an impact. Very different from my experience of education were merely leaving my little town was seen as radical.

The world is always changing and so is education. It's for the better but there is still much more that can and will be done.

HOW LEARNING THEORIES COULD INCREASE MY INCOME

The goal of many professionals is to climb the academic ladder to a point where they can attain a status that breeds high financial returns. Learning about Learning Theories places an educator in a position where he understands education to a level that guarantees a financial return on investment. The following are ways by which this course can increase income.

Enhancing Teaching Skills:

Learning about different educational theories and philosophies provides educators with a deeper understanding of various instructional pedagogies, which they can incorporate into their teaching. If educators apply the principles of these theories in the classroom effectively, they can improve their teaching methods as (Wilson & Peterson, 2006) argue, leading to better student outcomes. As a result of higher outcomes, students' satisfaction levels would increase, which may affect the educator's reputation positively, and increase demand for his services. Since the demand for the educator's services is high, all other things being equal, it can potentially lead to opportunities for higher-paying teaching positions.

Professional Development:

Embarking on further studies as an educator such as studying the theories of learning means investing in continuous professional development, which also proves an educator demonstrates a commitment to professional growth and improvement. Undoubtedly, this can make educators more attractive to potential employers who value lifelong learning and development. This may produce opportunities within schools or educational institutions that offer higher salaries for educators with advanced qualifications. It may also project the educator as one of the best among his peers, earning him leadership roles that come with financial benefits leading to increased income. With this as the basis, I will be able to confidently conduct educational researches for my organization which comes at a cost.

Specialization and Expertise:

All over the world, educational institutions develop philosophies that guide their operations as educational bodies. These philosophies are, in most cases, heavy towards some theories. For example, some administrators may believe in Piaget's cognitivist philosophy. As educators develop expertise in any of the areas such as cognitive or behavioral theories as they learn the theories. This specialization can make most of the educators' valuable assets to schools or organizations seeking educators with in-depth knowledge in the application of any of the philosophies. As a result, they may be offered specialized roles or positions such as educational consultants, trainers, or curriculum developers,

which often come with higher salaries and compensations.

Publishing and Presenting Research:

Educators that deepened their knowledge of the theories can join research institutions to conduct studies in the learned philosophies for publication. Deepening one's understanding of learning theories can inspire educators to engage in research and contribute to the field of education. By publishing research papers, presenting at conferences, or participating in educational symposiums, educators can gain recognition, build professional networks, and potentially receive grants or funding. These activities can also lead to additional income through honorariums, royalties from book publications, or speaking engagements.

INCREASING MY INCOME

Learning as the ability to acquire and modify knowledge, skills, strategies, beliefs, attitudes, and behaviors. All these are lifelong learning acquisitions that a learner must have to survive in life. Knowing the importance of understanding learning in this definition, it is then imperative to reflect on teaching itself.

According to Schunk (2012), learning involves the ability to acquire and modify knowledge, skills, strategies, beliefs, attitudes, and behaviors. As Leo Buscaglia indicated in his quote, "Change is the end result of all true learning." For this reason, when assessing what has been learned, it should not focus on only what a learner can do on paper, but rather his/her life in general including his/her attitudes, beliefs, and behavior.

As Schunk (2012) explained it, a learner should be able to acquire knowledge and also modify it to fit into this changing world. According to (Bransford, Brown & Cocking, 2000), "Learning theory does not provide a simple recipe for designing effective learning environments; similarly, physics constraints but does not dictate how to build a bridge

As a teacher, I should be thinking of how I can maximize on my impact to improve or achieve the kind of learning I have described (Calnin, n.d.). You can then only predict teaching strategies if you know how learners learn. (Calnin, n.d.). Contextual teaching and learning is one of the strategies that I have learned to reflect on intentionally in my teaching and learning going forward. Hudson & Whisler, (2018) elaborates that "Contextual teaching and learning is a conception of teaching and learning that helps teachers relate subject matter content to real world situations; and motivates students to make connections between knowledge and its applications to their lives as family members, citizens, and workers; and engage in the hard work that learning requires." (p.1). Whenever I try to recall myself in school, anything I learned related to real life context and also had a chance to put it in practice, (hands-on), I easily remembered. Up to date, I remember a science fair project which I did and presented to parents in my last year of primary education. It was about 'mulching' and I had a small garden outside the classroom with banana plants with my mulches covering the garden. Up to date I still even remember the spelling of the word 'mulching' even when I read it after all these years. This emphasizes the importance of contextual learning and teaching.

Often times I relate my reasoning in my assignments to the philosophy of my choice, Existentialism. During my initial teaching years, I faced challenges with the notion that my students were following a very linear path towards education. This was because in my school, most of the teachers were young fresh college graduates with overseas credentials like me. We were all silently discontented. There were obvious inequalities in the education system. But to me, it's not so much a disadvantage in terms of the social and material aspects of it. What my successes and failures as a teacher tells me is that the biggest problem it poses is in the student's psyche. This is why to me it is important that we keep reaching out to our students until they discover who they are as individuals, rather than whom they are in society. One cannot be stringent and stick with one philosophy, instead rather be open minded and adapt to philosophies that may be suitable per the situation. That makes a teacher dynamic and effective.

Previous readings helped me to better understand the fact that, teachers should take on a multifaceted approach to learning and embrace each students' successes and failures, we need to observe and adapt. No single lesson will be the same, and we should be aware of this and seek to meet the needs of the students.

I had a lot of confidence when I studied more about constructivism. Constructivism taught me that "learning exists in the mind" (McLeod, 2019). It is not something that is implanted but rather assembled, or "constructed, rather than innate, or passively absorbed" (McLeod, 2019). In medical analogy; the person already has the antibody, and I use supplements and antibiotics simply to try to enhance what is already there. Constructivism tells me that I need to keep asking my students thought provoking questions, not just fill in the blanks type of questions if I wanted them to build that sense of self-discovery.

My Pedagogical Philosophy

My personal teaching philosophy has strongly been influenced by the works of John Dewey. Dewey introduced many experimental modals such as PBL (Problem Based Learning). Cornell University (n. d) highlights this as a "student-centered approach in which students learn about a subject by working in groups to solve an open-ended problem. This problem is what drives the motivation and learning." This approach provides students with the opportunity to develop skills such as working in teams, leadership skills, oral, listening and written communication and self-directed learning to name a few. When I evaluate my teaching pedagogy, I feel the essence of highly considering this approach to teaching and learning. Every lesson plan should have a bigger goal in mind and should be able to relate to real life scenarios. Learners should be able to know why they are learning what they are learning.

In my teaching, I consider the Seven Principles of Learning; "1. Learning with understanding is facilitated when new and existing knowledge is structured around the major concepts and principles of the discipline. 2. Learners use what they already know to construct new understandings. 3. Learning is facilitated through the use of metacognitive strategies that identify, monitor, and

regulate cognitive processes. 4. Learners have different strategies, approaches, patterns of abilities, and learning styles that are a function of the interaction between their heredity and their prior experiences. 5. Learners' motivation to learn and sense of self affects what is learned, how much is learned, and how much effort will be put into the learning process. 6. The practices and activities in which people engage while learning shape what is learned. 7. Learning is enhanced through socially supported interactions." as mentioned by (Gollub, Bertentha, Labov & Curtis, 200. p.119).

Proper teaching strategies also consider the brain development of the learner which is something that should highly be prioritized by the teacher. Going forward, I am going to invest in myself understanding how the brain of learner's functions to derive which strategies I can incorporate in addition to experiential and contextual teaching and learning approaches. My assessments will be more of projects, essay writing (to a grade six level). Schwartz, (2012, p.5.) gives us the Wurdinger guide which I would consider when assessing learners going forward as follows;

- Use a major project or field experience to guide learning over the entire course. Having one major task to work on all semester motivates students to keep moving forward, gives them a clear goal to focus on, and becomes the "driving force behind everything the student does in the class, when students know what they are aiming toward, they understand that each class has a purpose because it provides a stepping-stone toward that overall aim."
- Use a combination of projects, classroom activities, and external experiences to keep the course interesting and engaging while adding value to the overall process.
- Tie everything together. The class readings and lectures should be directly related to any experiential activities. The readings and class activities should all be thought of as resources that will help the students complete their major project.
- Ensure activities are challenging, yet manageable. When students are given the responsibility of devising their own projects, the instructor must then make sure that they are able to complete them.
- Provide clear expectations for students. This could include assessment criteria, or examples of completed projects and activities from previous courses.
- Allow students the necessary time to "identify, clarify, and keep focused on their problem." Prepared by Michelle Schwartz, Research Associate, for the Vice Provost, Academic 6
- Allow students to change direction midstream. The most important thing is that the students are working on projects that are meaningful and relevant to them. If they lack interest, the learning will also be lacking (Wurdinger, 2005, p. 63).

In addition, I now consider keeping an "inclusive" curriculum that will tolerant all differences. A culturally responsive program ensures that all students are represented in all facets of the school and respects the unique distinctions

that students may have. A culturally responsive teaching curriculum also facilitates teachers' awareness and appreciation of each student's non-school cultural life and history. It helps me to integrate this knowledge into the curriculum.

Finally, I have come to the understanding that, there are some barriers that will influence my lessons. Some of these factors may include race, gender, socioeconomic status, social symbolism, stereotype among others. It is up to me to acknowledge various barriers and how I can deal with that in the classroom in order to ensure each child receives equal education. Barriers should not affect a child's educational experience and everyone should receive equal education. Teachers can mitigate some of these barriers and provide a classroom experience that is most conducive for growth.

Conclusion

Teachers need to educate themselves and let go of their implicit biases, embedded attitudes, or stereotypes towards certain groups of people due to their age among others.

The need to be a component of critical thinking to understand where these assumptions come from, and why we accept them, this way we can know more about our students and their ability to learn and offer the support they deserve ("Stereotype Threat," 2021). According to research (Care, et al., 2017), "21st century skills are featured as contributors to success for the more distant stakeholder groups." and "non-government and government personnel emphasized communication, social skills, critical thinking, and technology and computer skills." I agree with this thought. From this viewpoint, "Information literacy" and "ICT literacy" are the most critical for students to learn in order to be successful. Wherever the next generations will be as labor forces, they need information literacy. For example, even farmers or fishermen need to have not only the ability to grow or catch their harvests but also how to sell them. All logistics will use technologies in the future. All people must gain this skill to live and be successful. Studying the course and learning theories give an educator an urge over others in the field, which places her in a position to carry out educational duties professionally. This creates an opportunity to have a high reputation leading to high demand for one's services. It is an undeniable fact that when the demand for one service increases, it would lead to high salary offers. It is also important to note that while studying the theories of learning can have the potential to increase an educator's income, issues such as the job market, geographical factors, and individual circumstances can influence income. Nevertheless, gaining knowledge in this field can undoubtedly enhance an educator's expertise and professional opportunities, which may positively impact their income over time.

REFERENCES

- Abtahi, Y. (2017). The 'More Knowledgeable Other': A necessity in the Zone of Proximal Development? For the Learning of Mathematics, 31, 35.
- Admin. (2014, July 9). Studies confirm the power of visuals to engage your audience in eLearning. Shift Learning. <https://www.shiftelearning.com/blog/bid/350326/studies-confirm-the-power-of-visuals-of-elear>
- Bansal, S. (2018). A constructivist perspective towards collaborative learning. International Journal of Research in Social Sciences, 8(5). https://www.ijmra.us/project%20doc/2018/IJRSS_MAY2018/IJMRA-13836
- Barron, B., & Darling-Hammond, L. (2008). Teaching for meaningful learning: A review of research on inquiry-based and cooperative learning. Edutopia: George Lucas Educational Foundation. <https://files.eric.ed.gov/fulltext/ED539399.pdf>
- Bell, S., Power, T., & Rich, S. (2019). A teacher's guide to visible thinking activities. <https://www.inquisitive.com/blog/2019/03/27/visible-thinking/>
- Berkeley Lab. (n.d.). Robert Gagné's nine events of instruction. <https://training.lbl.gov/Resources/NineSteps.html>
- Bodrova, E., & Leong, D. J. (2007). Tools of the mind: The Vygotskian approach to early childhood education. Pearson.
- Brain-based Learning. (2017, January 28). ETEC 510. http://etec.ctlt.ubc.ca/510wiki/index.php?title=Brain-based_Learning&oldid=63508
- Bransford, J. D., Brown, A. L., & Cocking, R. R. (Eds.). (2000). How people learn: Brain, mind, experience, and school. National Academy Press. <https://www.nap.edu/download/9853>
- Bransford, J., Brown, A., & Cocking, R. (2000). How people learn (p. 131). National Academy Press.
- Bruner, J. S. (1981). The social context of language acquisition. Language & Communication, 1(2-3), 155-178. [https://doi.org/10.1016/0271-5309\(81\)90010-5](https://doi.org/10.1016/0271-5309(81)90010-5)
- Caban, H. L. (2003). Rater group bias in the speaking assessment of four L1 Japanese ESL students. Second Language Studies, 21(2), 1-44. https://scholarspace.manoa.hawaii.edu/bitstream/10125/40655/1/Caban%20%282003%29_WP21%282%29.pdf
- Calnin, G. (n.d.). Establishing the conditions for student learning growth [Ebook]. <https://www.studiosity.com/hubfs/Studiosity/Downloads/Research/Establishing%20the%20Conditions%20for%20Student%20Learning%20Growth%20-%20Review%20by%20G.%20Calnin.pdf>
- Catio23. (2015). Robert Gagné [Video]. YouTube. <https://youtu.be/FgDcUnObLqI>
- Cherry, K. (2020, May 15). The David Kolb theory of how experience influences learning. Verywell Mind. <https://www.verywellmind.com/experiential-learning-2795154>
- Cornell University. (n.d.). Center for Teaching Innovation: Problem-based

learning. <https://teaching.cornell.edu/teaching-resources/engaging-students/problem-based-learning>

Debroy, A. (2018). Realities and challenges to inquiry-based learning—Snippets of research reports. EdTechReview. <https://edtechreview.in/research/3325-realities-challenges-toinquiry-based-learning-research>

Derman-Sparks, L., & Edwards, J. O. (2010). Anti-bias education for young children and ourselves. National Association for the Education of Young Children.

Exploratorium. (2020, July 1). Science talk: A tool for learning science and developing language. <https://www.exploratorium.edu/education/ifi/inquiry-and-eld/educators-guide/science-talk>

Fontana, T. D. (n.d.). Influential philosophies in education. SlidePlayer. <https://slideplayer.com/slide/5806725/>

Global Inequality Facts. (n.d.). Global inequality facts. <https://inequality.org/facts/global-inequality/>

Gollub, J., Bertentha, M., Labov, J., & Curtis, P. (2002). Learning and understanding (p. 119). National Academy Press.

Growth Engineering. (2019, December 5). What are Gagné’s nine levels of learning & why are they so important. <https://www.growthengineering.co.uk/gagnes-nine-levels-of-learning/>

Guido, M. (2021). 20 classroom management strategies and techniques [Downloadable list]. Prodigy. <https://www.prodigygame.com/main-en/blog/classroom-management-strategies/>

Herr, N. (n.d.). Learning environments. <https://sites.google.com/site/elps710/readings---learning/how-people-learn/learning-environments-ii>

Hudson, C., & Whisler, V. (2018). Contextual teaching and learning for practitioners (6th ed.) [Ebook]. Valdosta State University. [http://www.iiisci.org/journal/cv\\$/sci/pdfs/e668ps.pdf](http://www.iiisci.org/journal/cv$/sci/pdfs/e668ps.pdf)

Jones, M. G., & Brader-Araje, L. (2002). The impact of constructivism on education: Language, discourse, and meaning. <https://ac-journal.org/journal/vol5/iss3/special/jones.pdf>

Kahoot! (2019, March 8). Kahoot! | Learning games | Make learning awesome! <https://kahoot.com/>

King, A. (1994, June 1). Guiding knowledge construction in the classroom: Effects of teaching children how to question and how to explain. SAGE Journals. <https://journals.sagepub.com/doi/10.3102/00028312031002338>

Ktheuer. (2008, December 2). Social-cognitive theories of learning [Video]. YouTube.

Kurt, D. (2021, January). Gagné’s nine events of instruction. Education Library. <https://educationlibrary.org/gagnes-nine-events-of-instruction/>

Kusumaningrum, I., & Widiyanto, W. W. (2018, February). The use of K-W-L (Know-Want-Learn) strategy to improve students’ reading skill in descriptive text for the eighth grade students of SMPN 1 Pecangaan Jepara in academic year of 2017/2018.

Liberto, D. (2020). Top 10 U.S. billionaires that donated to charity in 2018.

Investopedia. <https://www.investopedia.com/top-10-billionaires-that-donated-to-charity-in-2018-45871>

Marenus, M. (2020). Gardner's theory of multiple intelligences. Simply Psychology. <https://www.simplypsychology.org/multiple-intelligences.html>

McLeod, S. (2019). Constructivism as a theory for teaching and learning. Simply Psychology. <https://www.simplypsychology.org/constructivism.html>

Mind Tools. (n.d.). Gagné's nine levels of learning. <https://www.mindtools.com/pages/article/gagne.htm>

Northern Illinois University. (n.d.). Gagné's nine events of instruction. NIU. <https://www.niu.edu/citl/resources/guides/instructional-guide/gagnes-nine-events-of-instruction.shtml>

Ogle, D. M. (1986, February). K-W-L: A teaching model that develops active reading of expository text. JSTOR. <https://www.jstor.org/stable/pdf/20199156.pdf>

Pearson Education, Inc., publishing as Allyn & Bacon. (n.d.). [Publication information]. 501 Boylston Street, Boston, MA.

Project Zero. (n.d.). PZ's thinking routines toolbox. Harvard University. <http://www.pz.harvard.edu/thinking-routines>

Reading Rockets. (2013, March 19). Jigsaw | Classroom strategy. <https://www.readingrockets.org/strategies/jigsaw>

Resilient Educator. (2020, May 21). Bringing brain-based learning theories into the classroom. <https://resilienteducator.com/classroom-resources/bringing-brain-based-learning-theories-into-the-classroom/>

Ruggs, E., & Hebl, M. (2012). Literature overview: Diversity, inclusion, and cultural awareness for classroom and outreach education. In B. Bogue & E. Cady (Eds.), Apply research to practice (ARP) resources. http://teach.ufl.edu/wpcontent/uploads/2016/07/ARP_DiversityInclusionCulturalAwareness_Overview

Schunk, D. (2012). Learning theories: An educational perspective (6th ed., p. 2). Pearson.

Sieberer-Nagler, K. (2016). Effective classroom-management & positive teaching. English Language Teaching, 9(1). <https://files.eric.ed.gov/fulltext/EJ1087130.pdf>

Strangman, N., Hall, T., & Meyer, A. (2004). Background knowledge instruction and the implications. CAST. <https://web.archive.org/web/20210224031539/https://aem.cast.org/about/publication>

Talebi, K. (2015, September). John Dewey—Philosopher and educational reformer. European Journal of Educational Studies. <https://files.eric.ed.gov/fulltext/ED564712.pdf>

TeachThought. (2015, November 21). How the brain works—and how students can respond. <https://www.teachthought.com/learning/how-the-brain-works-and-how-students-can-respond/>

Teaching Tolerance. (n.d.). Five standards of effective pedagogy. <https://www.tolerance.org/professional-development/five-standards-of-effective-pedagogy>

Teaching Tolerance. (n.d.). Five standards of effective pedagogy. <https://www.tolerance.org/professional-development/five-standards-of-effective-pedagogy>

The adolescent brain—Learning strategies & teaching tips. (n.d.). Sun Protection Outreach by Students. <http://spots.wustl.edu/SPOTS%20manual%20Final/SPOTS%20Manual%204%20Learning%20Strategies.pdf>

Timmons, G. (2018, January 29). Hands-on learning: A quick summary of everything you need to know. Social Studies. <https://blog.socialstudies.com/what-is-hands-on-learning>

V_Anu. (2021, April 27). Pros and cons of visual learning style for students. Embibe. <https://www.embibe.com/exams/visual-learning-benefits-and-strategies-for-students-teachers>

Wilson, O. L. (n.d.). The second principle. <http://thesecondprinciple.com/wp-content/uploads/2016/10/The-Three-domains-of-learning-10-2016>

Wilson, S. M., & Peterson, P. L. (2006). Theories of learning and teaching: What do they mean for educators? National Education Association. <https://files.eric.ed.gov/fulltext/ED495823.pdf>

Xenos, M. (2018). The future of virtual classroom: Using existing features to move beyond traditional classroom limitations. arXiv. <https://arxiv.org/abs/1805.11694>

Yao, K. (2018, January 17). Wangari's Trees of Peace [Video]. YouTube. <https://www.youtube.com/watch?v=o8PbLwOtZJA>

Zhou, M., & Brown, D. (2017). Educational learning theories (2nd ed.). Educational Psychology. <https://oer.galileo.usg.edu/cgi/viewcontent.cgi?article=1000&context=education-textbooks>