

Cognitivist view of education in lesson planning



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The cognitivist theory began the shift away from the use of behavioral models to a strategy that depended on theories and models from cognitive sciences. Educators began to realize that observable approaches to learning did not stress the importance of complex cognitive thinking. Some of these approaches included thinking, problem-solving, language, concept formation, and information processing. Cognitive orientation places an emphasis on promoting mental processing. This has created procedures that direct student processing and interaction with the design of the curriculum.

Cognitivists relate learning to the discrete changes of knowledge and how a student's mental capacity grows. Educators who follow a cognitivist view of learning focus on their students' learning processes, as well as a student's values and attitude. They are concerned with how their students receive, organize, store and retrieve information they have been taught. As a future educator, I hope to follow a cognitivist view of education and focus on how my students acquire knowledge rather than what actions they do.

Lesson plans create the outline for how a school week will play out. Fourth grade mathematics relies heavily on environmental conditions in facilitating learning. For my students to efficiently learn mathematics, I will use strategies such as instructional explanations, demonstrations and illustrative examples. These strategies will help guide students' learning as well as monitor their behavior. These approaches will also allow myself, as an educator, to practice corrective feedback when necessary. In addition, they will allow me to be able to guide my students to focus on their mental strategies while solving problems. The students that begin to fall behind will catch my attention quickly, allowing me to step in and give the help that is

needed. With hands-on activities, or environmental stimuli, my students will begin to learn how to mentally plan, set goals, and organize their strategies. Lesson plans should also contain motivational goals for students. Students' thoughts, attitudes, and values influence their learning processes. By including motivational assessments throughout the day, a student's self esteem could begin to rise. Different approaches to learning the mathematical material will encourage my students to use appropriate learning strategies when needed.

Cognitivism

My lesson plan contains different objectives for each day; each reflecting back on the unit topic. The unit I have chosen for this specific lesson plan is addition and subtraction. The main objectives for the week consist of calculating differences of multi-digit numbers using different mathematical strategies. At the end of the week, the students will demonstrate their knowledge of skills they have learned within this unit during a short quiz. The strategies I will teach are the partial difference algorithm, the standard algorithm, and the model technique. Teaching different strategies to solve one equation is a cognitivist approach. Different methods promote mental processing. It allows students to understand material from different perspectives, causing their cognitive thinking to expand. By using different systems, a student is able to choose the procedure that best suits his attitude. Every student learns differently. It is important to allow students to strive in a way they know best while listing other opportunities of growth. The students will be allowed to choose from two versions of quizzes, giving them the opportunity to choose the assessment that will enable them to be

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successful. The quizzes will still cover the material from that week but allow the students to take a different approach. By using this method of quiz choice, I will gain a better understanding of how my students comprehend the material I am teaching them and which methods work best for them.

Within my lesson plan for the week, I will include learning activities that allow the students to become more involved with the material. Each day the students will be introduced to a new activity while still building on the lesson from the previous day. The first activity I will incorporate are building blocks. Students will be given base ten blocks to begin to learn how to subtract while also learning about place value and borrowing. The next activity is modeling. Modeling is an example of the Social Cognitive Theory created by Bandura. This theory hypothesizes that learning occurs in a social context with a reciprocal interaction of a person, an environment, or a behavior. Bandura explained how this theory creates an emphasis on social influence, as well as external and internal social reinforcement. The goal of this theory is to explain how students regulate their behavior through control and reinforcement to achieve a goal-directed behavior. Modeling is made up of the components of reciprocal determinism, behavioral capability, and observational learning. As a teacher I will show my students how to solve a problem and explain each step, pertaining to the observational learning component. I will then have the class complete another problem step by step, relating to the reciprocal component. Modeling is a useful activity to use as an educator because students reflect the behavior of their teacher. By showing my students a step by step process in a math equation, I am hoping to reflect my behavior on them. Another activity I will use is a bar model. To

allow my students to be creative and involved, they will each create their own bar model that will help them explain certain answers to a subtraction problem. A bar model displays a cognitivist form of teaching because it displays how a learner organizes new information. Students are able to build upon connections they have already made to use their creativity for this activity. Models allow a student to process new information in ways they may already understand. This method may relate back to Vygotsky's theory. Vygotsky explained how a teacher was only a model or a guide for the students, and the students were the active thinkers and interpreters. Lastly, I will allow my students to use each method to complete a problem while teaching them how to solve word problems. They will each be allowed to use the method of their choice while using the technique that best suits them. In the cognitivism theory, learning is defined as the way brains make connection as they learn new things. This strategy allows students to find different solutions to a single problem due to the method they choose. It also asks for a student to justify their choice of method and explains they way they are thinking. Different methods pursue students to explore and understand how ideas are connected. By including many different activities, I am challenging my students' cognitive thinking. They have to use each strategy while solving a problem, and each strategy consists of different steps. This helps the growth of their cognitive state. Once a student learns information in different contexts, transfer continues to occur, allowing the information to be stored in their memory. Not only does it improve their thinking, it also helps strengthen their attitude and mood towards the lesson. If they are able to choose which technique best fulfills their way of learning, they will have a better attitude when learning the material.

One of the last items I include in my lesson plan are small group instruction. Students will break into small groups and lean on their classmates for help. This encourages problem-solving, concept formation, and information processing. Each student may interpret information learned differently. This gives the students a chance to tackle a problem from a different perspective. As an educator, this would be my time to see how well my students comprehend, analyze, and retrieve the information I have taught them. This also allows me to focus on each student rather than the group as a whole and distribute corrective feedback. Small group instruction also allows students to get a better idea of the information presented to them. They are able to explain the concepts to other students, strengthening their retrieval of information. It is as if they become the teacher to their peers. This activity can also boost the morale of the classroom, bettering the attitudes of the students. Instead of having them sit in a desk all day, they will be able to move around to different sections and interact with their peers. These activities not only help grow students' cognitive thinking, but also create a community within the classroom.

To make sure I reach each objective goal within the class, I will conclude the day with essential questions. Although these are not graded questions, it gives me a better insight on how the class went and allows me the opportunity to reflect on my lesson. Students must be able to answer each question in order to properly understand the material. If the class does not understand the objective, I may need to reevaluate my lesson plans in order to best suit their needs. If I were to continue with my plans for the week, some students may be left behind and become frustrated. If this were to

happen, their attitude towards the class will drop, causing their cognitive thinking to stop growing. If a student starts to give up in a subject area, this stops their mind from thinking in different perspectives. As an educator, it is my job to motivate my students to do well in all subject areas. I must keep in mind their values and elements that may affect their thinking. By incorporating different teaching methods, I am tending to the needs of each student while still increasing the growth of their cognitive thinking.

Behaviorism

If I were to create my lesson plans based on a behaviorist view, they would be slightly different. In the behaviorism theory, learning occurs when a proper response is demonstrated when being given a specific environmental stimulus. This method uses association, or a certain reaction presented by a stimulus. Behaviorism focuses on the importance of reoccurrence in the future. When presented the same stimulus, the same behavior should reoccur (Ertmer, P. A., & Newby, T. J.). There are a few types of conditioning that behaviorists focus on. Classical conditioning is not really taught by an educator, but an automatic reflex that they bring into a classroom. But throughout students' educational years, classical conditioning is improved and those automatic reflexes become lessons that have been learned in a classroom. For example, when a student first enters school, their classical conditioning may be manners. Whereas, as the student enters higher level grades, their automatic reflexes may increase to adding items when seeing an addition sign. Operant conditioning is where an educator can shape a behavior. Here, a child may be given a reward or a punishment for a specific

reason. These conditionings would need to be added into my lesson plans to be considered the behaviorism theory.

From a behaviorist view, my lesson plans would include instructional cues, practice and reinforcement. My goal would be to get my students to elicit a desired response when I present a stimulus. I would not take into account the cognitive process in which they go through. Instead of many hands-on activities, I would focus my class time on lectures and modeling. This would be to show the students the appropriate response for the presented stimuli. I would then have the class practice their reactions by continuously showing them stimuli. I may also include rewards throughout lessons and punishments for those who do not follow directions. This would allow me to shape my students' attitudes and how they feel towards lessons. Adding positive and negative reinforcement allows operant conditioning to take place. Although my objectives would not change, the way I present the material will change.

Socio-Culturalism

The sociocultural theory of learning stresses the interaction between developing people and the culture and society they live. This theory is said to be mostly a social process. Students have to adapt to the different cultures around them while maintaining their own beliefs and values. If my lesson plans were based upon a socio-culturist point of view, my focus would be the zone of proximal development. The zone of proximal development is the gap that exists between a student's possible educational development and the development that actually takes place (Ertmer, P. A., & Newby, T. J.).

Each student has a different zone of proximal development. This would allow me to place each student on a spectrum based on their learning habits. This teaching style allows educators to focus on each student rather than a class as a whole.

But this learning style is also concerned with the interaction students have among their peers and society. Everything around them gives them an opportunity to acquire knowledge. To create lesson plans based on this learning theory, I would need to have more group assignments rather than individual assignments. By creating more group assignments, I am allowing the diversity of different cultures and beliefs to interact within a classroom. Each classmate will be able to learn about different cultures, causing their knowledge of the world to increase. I would also incorporate pen pals into my lesson plans so my students will be able to interact with students from other parts of the country. I could also have guest speakers attend classroom meetings to encourage social interactions between learners and adults. This theory focuses solely on the interaction between people and the knowledge that is learned by each.

Although each learning theory has its own benefits, the cognitive learning theory has a little bit of behaviorism and sociocultural theories combined. The cognitive learning theory takes into account the environmental stimuli as well as the mental capacity of the students. It takes into account the student's beliefs and attitude while still expanding their cognitive thought process. As an educator I want to be able to connect with my students and make them feel comfortable in the classroom. I want them to know that they are able to express how they feel and what they feel is the best way to learn

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in my classroom. Not only do I want my students' knowledge to grow when learning new material, I want them to grow as individuals.

References

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