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Final Project – Option 2

EDCI 531

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Learning Theories Aid for Teachers

As teachers, we get ourselves into a rut of a routine in the classroom. A routine provides consistency, predictability, and security in knowing what comes next for the students and the teacher. That routine becomes routine because it works so well for so many students in the class year after year, and then comes that one student or class where the routine just does not work for them. No matter what the teacher does, the class flow will not work that year. What should the teacher do? Continue with the routine or change things up to help the class? Now most teachers will agree that something needs to be changed, but sometimes figuring out what to change or how to change the routine can be daunting, exhausting, and frustrating with all the time looking for new projects, assignments, activities, etc. that would be helpful for the students. This paper is meant to be a reference for teachers about the different learning theories and which may be the most useful for the struggles of the class. There will be a brief description of each theory, the major contributors of the theory, the focus of the theory, and applications of the theory.

**Behaviorism**

Behavioristic theory is a conditioning theory, and conditioning theories “explain learning in terms of environmental events” (Schunk, 2020, p. 79). They also work to change or condition behaviors based on environmental stimuli being added or removed from the environment. The goal of conditioning behavior is to develop good habits for the students that they might not develop themselves, or the students might develop bad habits that need to be broken to develop better habits. “Behavioral theory influenced early conceptions of instructional feedback” (Reiser & Dempsey, 2013, p. 53). The feedback was immediate and designed to instill a behavior that the instructor wanted to see regardless of whether the behavior was beneficial or harmful to the learner.

**Major Contributors**

|  |  |
| --- | --- |
| Theorist | Work |
| John Watson | * Considered the founder of the theory * Believed that research methods of the mind were unscientific, to make psychology to be scientific there needed to be measurable and observable phenomena |
| B.F. Skinner | * Operant Conditioning   + Behavior is strengthened through reinforcement (Schunk, 2020, p. 95)   + Reinforcement * Behavior Modification |
| Ivan Pavlov | * Classical Conditional * When a stimulus occurs, a conditioned effect occurs.   + Pavlov’s Bell |
| Edward Thorndike | * “Learning often occurs by *trial and error*” (Schunk, 2020, p. 80)   + Connections are made through sensory experiences * Law of Effect   + Rewarding consequences produce learned behaviors   + Punishment produces unlearned behaviors * Law of Readiness   + “When one is prepared (ready) to act, to do so is rewarding and not to do so is punishing” (Schunk, 2020, p. 81). |
| Edwin Guthrie | * Continuity   + Visual stimuli and body movements connected to learned behaviors increase habit formation |

**Application of Theory**

Many applications could be used in the classroom for each theory. Some will have a monetary cost, while others may cost time that is spent on the process.

|  |  |
| --- | --- |
| Basic | * Practice then reward with play/game * Create a fun, warm, and inviting atmosphere on the first day of school to calm nerves and fears.   + Open house or fun visit before school starts. * Verbal praise for answer correct (vary praising words so it is personal and not robotic) * Ignore unpleasant behaviors and praise someone else in the class for doing what was instructed |
|
| Advanced | * Integrate lessons across multiple subjects   + Themed Days - we learn all about \_\_\_\_\_\_ in every subject * Dress Rehearsals and practice on the performance stage to calm stage fright. |
|
| Application | * After teaching a skill, show the students how to apply the skill to a real-life scenario. * Incorporate videos, demonstrations, and practice of skill into lessons for more feedback for students |

**Social Cognitive Theory (Cognitivism)**

Cognitivism covers many facets of learning theories that work with learning through environmental factors. The social cognitive theory “stresses the idea that much human learning occurs in a social environment” (Schunk, 2020, p. 125). People especially children learn by copying those around them and gauging whether their actions are acceptable or not by the reactions they receive. “Social cognitive principles have been applied to the learning of cognitive motor, social, and self-regulation skills, as well as to the topics of violence (live, filmed), moral development and behavior, education, health, societal values, and terrorism” (Schunk, 2020, p. 126). Cognitivism also focuses on problem-solving and critical thinking and helps distinguish basic and specific skills needed for different tasks, but understanding changes as children develop and grow as well as gain life experiences (Schunk, 2020 p. 269).

**Major Contributors**

|  |  |
| --- | --- |
| Theorist | Work |
| Albert Bandura | * Written several books dealing with cognitivism and learning through social environments. * Human behavior is a combination of reciprocal actions (Schunk, 2020, p. 127) * Self-regulation - intentional controlling of events or responses to personal events * Modeling   + Response facilitation   + Inhibition/disinhibition   + Observational learning |
| Richard Walters | * Helped Bandura write *Social Learning and Personality Development* |
| Jean Piaget | * Schemes (schemas)   + “Cognitive structures that underlie and make possible organized thought and action” (Schunk, 2020, p. 131). |
| Jerome Bruner | * Three stages of cognitive development   + Enactive   + Iconic   + Symbolic |

**Application of Theory**

|  |  |
| --- | --- |
| Basic | * Vicarious learning   + Models   + Cartoons - tv or comics   + Electronics - games, tv, movies   + Books * Rehearse information that was learned to increase retention * Goal-setting   + Reasonable   + Timely   + Expectations * Work with memory and retention   + Tell/read a story     - Ask questions     - Have students retell the story |
| Advanced | * Demonstrations - model skills for students to mimic later * Demonstrate/present math problem   + Have students guide the class through similar problem   + Individual/guided practice at seat or board |
| Application | * Internships with experts in the field * Reciprocal teaching – after instruction and practice, students come up and teach the concept |

**Cognitive Learning Processes and Cognitive Information Processing**

Both cognitive learning processes and cognitive information processing (CIP) focus on how information is learned, retained, and retrieved. In other words, these theories work by getting information from short-term memory into working memory and long-term memory. These theories have several methods to aid in the retention of the information presented in class some of these methods include: repetition, associations, importance, etc. There will even be some influence of Gestalt theory which worked with perceptions. This theory presents good principles to build on, but the theory itself is no longer viable. To keep information retained information must be rehearsed through review and practice which takes information from short-term memory to long-term. The rehearsing brings the information into working memory and goes back and forth between working and long-term memories.

**Major Contributors**

|  |  |
| --- | --- |
| Theorist | Work |
| John Atkinson & Richard Schriffin | * Proposed multistage and multistore memory theory * Short-term and long-term memory   + Stimulus occurs (seen or heard)   + More senses are used and the brain makes associations |
| Hermann Ebbinghaus | * Verbal Associations * Memorizing Lists   + Meaningfulness   + Degree of similarity   + Length of time between study times |

**Application of Theory**

|  |  |
| --- | --- |
| Basic | * Make text bold, italicized, or underlined in printed materials to draw learner’s attention to important information (Reiser & Dempsey, 2018, p. 54). * Mnemonic devices * Hand motions to accompany information or poems * Continue learning by watching YouTube or other instructional videos |
| Advanced | * Create charts and diagrams or bring in pictures for students to associate terms or lessons with things they are seeing. * Periodic review of material * Create homework assignments that review older information as well as recent information * Use songs to remember poems or lists * Create review games * Have students play computer games to help remember and retrieve information |

**Constructivism**

Constructivism is so different from the traditional classroom. The traditional classroom has an instructor who guides the class makes the decisions about the lessons to be learned and passes the information on to the students. Constructivism switches the roles and the instructor is more of a guide while the students take on the responsibility of their education. “Instruction is not so much *done to* learners, rather it *engages* learners in a process of inquiry and meaningful activity” (Reiser & Dempsey, 2018, p. 61). This theory allows learners to dive into the topics that they want to learn about as well as promotes understanding and retention. But if not guided properly, it can cause holes in a student’s education that do not follow state standards. Many constructivists believe that “people construct knowledge based on their beliefs and experiences in situations, which differ from person to person” (Schunk, 2020, p. 315). With learners taking an active role in their education, this allows students to open up and ask more questions about their topic of study instead of feeling vulnerable that they lack understanding of the material. Constructivism has also spun off into other learning theories like problem-based learning (PBL), connectivity, flipped learning, and interactive learning environments.

**Major Contributors**

|  |  |
| --- | --- |
| Theorist | Work |
| Jean Piaget | * Cognitive development   + stages based on age, physical, or cognitive development   + Keeping students active |
| Lev Vygotsky | * Sociocultural Theory   + Zone proximal development (ZPD)   + problem-solving through adult or capable peer’s guidance (Schunk, 2020, p. 333)   + Reciprocal Teaching   + Apprenticeships |
| Jerome Bruner | * Knowledge representation   + enactive   + iconic   + symbolic * Spiraled curriculum   + information presented in many developmental stages   + difficulty of material dependent on the developmental stage |
| John Dewey | * Considered the founder * *Experience and Education*   + insisted “on curriculum planning beginning with the experience of the child” (Flinders & Thornton, 2022, p. 4) |

**Application of Theory**

|  |  |
| --- | --- |
| Basic | * Class discussions/debates * self-verbalization - students silently or quietly (to themselves) talk through steps of skill |
| Advanced | * Field trips * Reciprocal teaching - once the instructor is done with the lesson, have a student come up and present the math problem and talk through the steps of solving * Tutoring * Group projects - groups are assigned topics to research and study, then make a presentation of what they learned * Discovery learning - teacher presents objects or topics and lets students come up and discover differences or similarities of animals on their own |
| Application | * Apprenticeships - kids get hands-on experience at jobs |

**Gagne’s Theory of Instruction**

Gagne’s Theory shows teachers how to present their lesson or material. This theory can be used with any of the other theories since this is more on presentation and organization of the content. It is also important to note that depending on the content some steps may not be used. Gagne’s theory has three components: taxonomy [classification] of learning outcomes that define human capabilities; internal and external learning conditions; and nine steps of the instructional process (Reiser & Dempsey, 2018, p. 56). Gagne’s nine steps and their applications are in the following table which will follow Burns's (n.d.) article on Gagne’s events of instruction.

**Application of Theory**

|  |  |
| --- | --- |
| **Step** | **Application** |
| Gain Attention | * Tell a story * Show a picture * Give a demonstration of the concept * Identify the importance of the concept to their immediate or future needs |
| Provide Objectives | * Gives learners a direction or goal for their learning for that chapter or project. * Creates motivation to complete the project or lesson (Kruse, n.d.) |
| Recall Prior Knowledge | * Review * Scaffolding – take what students already know and build upon that foundation * Link new information to personal experiences |
| Present Material | * Sequence information * Chunk lesson by difficulty level * Keep information organized |
| Provide Guidance for Learning | * Examples, Case Studies, Graphs, and Mnemonics (Kruse, n.d.) * Practice skills the right way for retention * Coach |
| Performance | * Learners practice new skill * Learners model instruction |
| Feedback | * Specific verbal guidance to learner * Test/Quiz – These should not count for a grade or if counted a smaller percentage of the overall grade than the final * Rubric with objectives |
| Assess Performance | * Post-test or final assessment – no coaching * Promotion or mastery when the learner achieves a certain score (Kruse, n.d.) |
| Enhance Retention and Transfer | * Provide more practice * Provide practical applications of knowledge * Review lesson |

**Theory Overlap**

|  |  |
| --- | --- |
| Concept | Theories |
| Memory | * Behaviorism * Cognitivism * Cognitive learning processes * CIP * Gagne |
| Problem Solving &  Critical Thinking | * Cognitive learning processes * CIP * Constructivism * Gagne |
| Behavior modification | * Behaviorism * Gagne |
| Teacher – lead instruction | * Behaviorism * Social Cognitive Theory * Gagne |
| Student-lead instruction | * Constructivism * Social Cognitive Theory * Gagne |

References

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Kruse, K. (n.d.). *Gagne’s nine events of instruction: An introduction*. Retrieved January 2008 from http://www.e‐learningguru.com/articles/art3\_3.htm.

Reiser, R. & Dempsey, J. (2018). *Trends and issues in instructional design and technology*   
(4th ed). Pearson.

Schunk, D. (2020). *Learning theories: An educational perspective* (8th ed.). Pearson.

Rubric

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Requirements | Points Explanation | | | | Points Earned/Available |
|  | Exceeds Standard | Meets Standard | Needs Improvement | Unacceptable | Points |
|  | 9-10 | 7-8 | 5-6 | 0-4 |  |
| Context clearly identified | The student clearly identifies their target audience and context, and all language and terms are appropriate for that context | The student clearly identifies their target audience and context, and most language and terms are appropriate for that context | The student identifies their target audience and context, but more detail is needed, or the language and terms are vague or general | The student does not identify their target audience and context, or the language and terms used are inappropriate or incorrect | /10 |
| One page visual | The visual is the correct size/length, it is well-designed and visually pleasing, and it is easy and intuitive to understand how to use this visual to choose a given theory for a particular project | The visual is the correct size/length, it is well-designed, and it is easy or requires minimal instruction to understand how to use this visual to choose a given theory for a particular project | The visual is the wrong size/length, is visually confusing or confusing to use, and does not clearly help choose a given theory for a particular project | The visual is too long or too short, does not include all the learning theories, is difficult to use, or does not allow members of the target audience to choose a given theory for a particular project | /10 |
| Paper | The paper is in a reader-friendly academic tone, it is well-organized, and provides a good foundation for all 7 of the learning theories | The paper is in a tone that is mostly read-friendly or academic, it is organized in a way that makes sense, and adequately explains the foundation for all 7 learning theories | The paper is sometimes too academic or too colloquial, is confusing, or is missing some depth and information to adequately explain the foundation for all 7 learning theories | The tone of the paper is entirely academic or entirely colloquial, is poorly organized, is missing one or more of the learning theories, or does not provide sufficient depth to explain the foundation for all 7 learning theories | /10 |
| Differentiation of learning theories | The entire project highlights similarities and differences in a way that is intuitive, helpful, and clear | The project highlights similarities and differences in a way that is helpful and clear, but may require some explanation or exploration to fully understand | The project highlights some similarities and differences, but may miss key differentiations or create differentiations that are not part of the theories, or the differentiations are indicated in a way that is confusing | The project does not highlight similarities or differences for 2 or more learning theories, the differentiations are inaccurate, or the differentiations are very confusing | /10 |
| Research and Conventions | Sources are from reputable places, are correctly cited, and the minimum number of citations was included. There are no spelling or formatting errors | Sources are from reputable places, are cited with 1-2 minor errors, and the minimum number of citations was included. There are a few minor spelling or formatting errors | Sources may not be from reputable places, there may be more than occasional errors, or the student missed 1-2 of the required number of citations. There are several spelling or formatting errors that are occasionally distracting | Sources are not reputable, there were consistent errors in citation, there was evidence of plagiarism, or the student was missing more than 3 of the required number of citations. There are multiple distracting spelling or formatting errors | /10 |
| Comments |  |  |  |  |  |
| Total |  |  |  |  | /50 |