

EDCI 531 Final Paper

Applying Positive Lasting Instruction Within Special Education

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Abstract

Within special education, educators often argue over the proper teaching method to utilize when educating individuals with neurodevelopmental delays, including those with autism. A majority of the field has adopted behavioral instruction, while a small majority utilizes the Developmental, Individual Differences, and Relationship based model (DIR Floortime) which was developed by the late Dr. Stanley Greenspan. There is an even smaller circle of educators who utilize a merged methodology of behavioral & cognitive (DIR Floortime) instruction. However, this paper aims to develop and define a theory that is indicative of constructivist, cognitive, and behavioral instruction. By combining various portions of instruction from each respective theory allows for the development of a new versatile learning theory that focuses on positive lasting instruction. This new theory is aimed at helping students move up and sustain levels of the developmental capacities, eventually leading up to less scaffolding and instruction.

Applying Positive Lasting Instruction

Instruction and learning within the special education community has often created much frustration for students, educators, and families. There is not one unified theory of education for students with special needs and many institutions employ methodologies that are almost the polar opposite of each other. The New York City Department of Education focuses on keeping students with special needs in typical classroom settings. Of course, this can be detrimental to all students involved, depending on the developmental capacity of the said student. In other words, higher functioning students will see a variety of success in these settings, but many who are functioning at lower developmental levels may be referred to a District 75 school or to a school that specializes in teaching students with special needs.

Instructional designers within this population have mainly supported behavioral methodologies, the most utilized being Applied Behavioral Analysis (ABA). Many of the students who are referred to ABA institutions are found to have their behaviors reinforced using stickers, school currency, etc. Again, for students who are operating within lower developmental levels of functioning require the proper scaffolding and support to understand why certain behaviors are not accepted and many also find it difficult to understand why they should care for monetary reinforcements. As an example, say a student's parents prepare their lunch daily. With a lunchbox packed with various snacks and other foods, there is no need to care about monetary incentives as the student knows their current needs are being met.

This is where other methodologies such as the Developmental, Individual Differences, Relationship model (DIR Floortime) comes into utilization. Through discovery learning students are tasked with different objectives and must work together with their classmates. This helps students to problem solve and interact with others. Interacting with others is key within this

model as students learn what is socially acceptable and what is deemed as inappropriate. This is a higher-level cognitive approach than other models as students learn the “why” part of what is and isn’t acceptable.

These three serve to represent cognitive (NYC department of education), behavioral (ABA), and constructivism (DIR Floortime) methodologies within the special education community. The issue that lies within a methodology that is solely based on a theory of instructional design is that, no matter the theoretical foundation, they are each absolute in their teachings. Within ABA, students perform tasks and academic activities with the hope of a reward at the end. Within DIR Floortime, unacceptable behaviors such as self-harm and harming others are dealt with through ineffective approaches such as telling the child why it isn’t appropriate to harm others. This doesn’t account for the fact that a student may be hitting others as a way of obtaining a desirable end result.

The way to solve each of the issues that exist within current theories and methodologies is to create an instructional theory that utilizes the most important aspects of each of the former theories. By first taking an Empiricist approach to the foundation of the theory and using behavioral approaches to condemn undesirable behavior such as harming self or others, instruction will be able to be outfitted to each individual student’s needs. Ertmer and Newby (2013) argued:

“The designer must have the ability to diagnose and analyze practical learning problems. Just as a doctor cannot prescribe an effective remedy without proper diagnosis, the instructional designer cannot properly recommend an effective prescriptive solution without an accurate analysis of the instructional problem” (p. 44).

Now that the time has been taken to explain the instructional issues within each current theory, a focus can be placed on this new instructional theory: Applying Positive Lasting Instruction or APLI.

Literature Review

In Ertmer and Newby (2013) article in which they explain the three fundamental learning theories that shape the foundation of instruction, these theories are distinguished through Schunk (1991) list of five questions as well as Ertmer & Newby's (2013) two additional questions. The article provides the instructional designer with three distinct viewpoints on how each learning theory is applied and why they are important to their design. There is an emphasis on the designer being able to properly analyze and diagnose learner issues within their educational setting (Ertmer & Newby, 2013). Also, in respect to diagnosing a learner's needs, no theory reigns supreme and instructional designers must learn how to apply each theory in respect to the needs of each individual learner (Ertmer & Newby, 2013).

Ertmer and Newby (2013) briefly touch upon levels of required cognitive processing learners need in order to perform tasks from each theoretical standpoint. Constructivism requires the highest level of cognitive processing (Ertmer & Newby, 2013). In regard to any constructive processes, particularly problem based learning and inquiry learning, a level of scaffolding must be provided to learners (Silver, Duncan & Chinn, 2006). Scaffolding is what helps guide learners through the complex tasks that exist within constructivist instructions (Silver et al., 2006). The article provides a powerful foundation as to the effectiveness of problem based and inquiry-based learning, while also establishing goals for learning and instruction within this theory. Following the flow of Ertmer & Newby (2013); instructional designers must remind themselves as to who the instruction fits and not whether the instruction will work.

Understanding what theory fits a learner's needs is an important aspect to understand as no individual theory fits every learner's specific needs. Tying these together, Driscoll (2005) explains that, under constructivism, "learners test their own understandings against those of others, notably those of teachers or more advanced peers" (p. 388). Under constructivist instruction learners must experience complex environments, have the ability to engage in social negotiation, listen to multiple different perspectives, have an ownership in their own learning, and obtain self-awareness in how their knowledge contributes to the construction process (Driscoll, 2005). Driscoll (2005) provides these conditions for learning which are fundamental in creating goals for constructivist learning and instruction.

The most difficult part of instruction is keeping students motivated. This is where Keller (1979) and Keller (1987) study on motivational models come into play. Keller focuses on helping designers keep students motivated while incorporating different theories of instruction. The Arcs Model helps to address how to create instruction that can help stimulate learner's motivation for learning (Keller, 1987). Lastly, Solomon, Van Egeren, Mahoney, Quon Huber, and Zimmerman (2014) help bring light to how constructivist theories, such as DIR Floortime, can be beneficial for students with neurodevelopmental delays, all while Carr & Durand (1985) explain how applied behavioral analysis can solely be used to reduce negative and harmful behaviors.

Discussion

Rather than attempting to create a single theory which will dictate how instruction should be designed, it is more valuable to develop a learning theory that adapts to each instructor and learner. Within the domain of special education there aren't many options for instruction for those with neurodevelopmental delays. Furthermore, the available theories of instruction for this

field leaves the instructor with little room to adapt and help foster high cognitive processing in learners. The proper approach to fostering higher levels of cognitive processing is through problem-based and inquiry learning while also utilizing behavioral techniques in order to reduce problems with unwanted and serious misbehavior. By also following through with motivational group work, learners will be more inclined to actively participate. The theory, which combines the fundamental instructions of dual theories, shall be referred to as Applying Positive Lasting Instruction or APLI. Using Schunk (1991) questions that distinguish each learning theory as well as Ertmer & Newby (2013) additional questions, it will be proven that APLI can serve to be the theoretical instruction of choice for the special education community.

How Does Learning Occur?

One can equate learning within this theory with many constructivist theories in that a learner's knowledge is open to change, but it differs in that the change is finite in the sense that there are absolutes in regard to knowledge. Much like cognitive theories, the APLI theory sees learners as empty vessels who will be filled with the knowledge that they obtain. Learning is channeled through problem-based learning and discovery learning. It has been proven that constant play and interactions have helped foster higher levels of cognitive processing, with the exception of vocabulary (Solomon et al., 2014). By providing these same environments with the addition of academically appropriate problem-based situations learning within these communities can occur. Driscoll (2005) provides a perfect example of the use of construction kits. Construction kits are motivational for learners as they are forced to wonder about the end result. These are even more important as, within the foundations of this theory, learning is also fostered through instruction which causes the students to engage within social interactions. Social interactions are an important aspect within this population as the sole focus of play studies

were to increase engagement due to the fact that many students within this population have issues in regard to interacting with others (Solomon et al., 2014). After fostering social interactions and fostering the higher cognitive processing of relating to others, there is a focus on multiple perspectives. Building upon the case of the construction kits, learners with proper scaffolding, can be supported to understand the multiple perspectives of other learners. This is the key to the APLI theory, which is to continue to foster higher levels of cognitive processing through developmentally appropriate academics.

Which Factors Influence Learning

Using instruction that is motivational, with proper scaffolding, and the use of behavioral techniques for diminishing misbehavior, the factors which influence learning are multifaceted. Social learning is motivational in the sense that learners are intrigued as to what comes next in respect to what problem-based situation they are attempting to solve. Much to the observations of Keller (1987), expectancy plays a large role within motivation. Along with motivational learning, different levels of scaffolding will be applied. In the beginning of the learner's journey, instructors will begin with a maximal effort of scaffolding in order to introduce learners to complex ideations. As the learner's journey continues, instruction shall require less scaffolding as the learners have moved up cognitively. Lastly, through constant communication, instructors will come to understand the behavioral aspects of their students. Understanding this is key as educators will want to learn patterns of unwanted behavior and, through proper communication, work to minimize it.

What Is The Role Of Memory?

Memory plays a key role within this theory as students must retain the information they've learned and use it to build upon future projects. In order to retain and process memory

designers must help learners in organizing and establishing the information. Much like constructivism, memory will be established through analogies, matrices, and hierarchical relationships (Ertmer & Newby, 2003).

How Does Transfer Occur

Again, much to the credit of constructivism, “when a learner understands how to apply knowledge in different contexts, then transfer has occurred” (Ertmer & Newby, 2003). Formerly obtained knowledge will be used to establish connections between previous knowledge and new information.

What Types Of Learning Are Best Explained By This Position?

This learning theory focuses on higher levels of cognitive processing, so the types of learning are best explained through complex forms such as problem-based, inquiry learning, and discovery learning. However, unlike cognitivism or behaviorism, the goal here is to transfer knowledge to the learner, not directly, but through scaffolding and the learner’s experiences. All knowledge is relevant and must be transferred within each group learning experience.

What Basic Assumptions/Principles Of This Theory Are Relevant To Instructional Design?

There are specific instructions within this theory that are relevant to all instructional designers. Designers must structure, organize, and sequence proper forms of scaffolding which, in turn, takes a proper amount of self-planning on the designer’s part. Environments must also be designed in a way that promotes students to use their ability to connect previously learned information (Ertmer & Newby, 2003).

How Should Instruction Be Structured

Although learning within this theory is constructivist in nature, designers are advised to take cognitive strategies towards forming instruction. Designers must understand that individual

students bring different experiences to each group and can impact learner outcomes (Ertmer & Newby, 2003). This leads into an evolving instruction where designers must create subject matter that adapts to the new addition of students. An instructional designer must also be able to develop and foster meaning within each interaction, as well as “monitor, evaluate, and update constructions” (Ertmer & Newby, 2003).

Conclusions

A theory should not expect a learner to fit themselves to it. Learners are individually different and bring varying factors to a designer’s instruction. A theory should, instead, be able to adapt itself to each individual learner. By developing a theory that can adapt, we create inclusion amongst learners, which is the goal of every instructional designer. By carefully piecing together the different aspects of other instructional theories, new theories can be developed. This creative process is not new in the sense that each theory has been founded from the instructions of previous theories (behaviorism led to cognitivism, which led to constructivism). By creating a theory which continuously fosters higher cognitive processing we give learners the chance to be able to challenge and increase their knowledge as well as their peer’s knowledge.

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