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Review

Teaching students with intellectual disabilities: Constructivism or behaviorism?

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Many teaching strategies have been postulated over the past years by various scholars in an effort to enhance the education system among students with intellectual disabilities. There is much debate on the application of constructivist and behaviorist perspectives for teaching students with intellectual disabilities as addressed in this paper. Many scholars have advocated for exclusivity with regards to the use of the two approaches. However, this work recommends a combination of principles from the two approaches to best structure instructions and teaching. This paper includes a brief explanation of intellectual disabilities, a summative brief of major constructivist and behaviorist perspectives, and their implication in students with intellectual disabilities. Finally, the paper offers summary of the approaches and provides a number of recommendations for teaching intellectually challenged children in a school setting.

Key words: Constructivist, behaviorist, students, intellectual disabilities, teaching strategies.

INTRODUCTION

With regards to special education, a plethora of controversies exist on the two main perspectives of teaching: constructivism and behaviorism. While some scholars propose the use of one specific approach to teaching, effective ways of give instructions in the classroom setting integrate concepts from different perspectives (Alnahdi, 2015). It is normal in the education field to challenge a position, dismiss it, and embrace the latest trend as though there were no important ideas in the original point of view. In most cases, however, effective strategies in the field of education integrate ideas from different perspectives. It is important to use ideas from both the constructivism and behaviorism approach to attain the best results in the teaching and learning process. Still, it is advisable to structure the curriculum and instructional methods according to the individual learner, the activities, and the learning environment as opposed to exclusively relying on one approach. As such, incorporating elements from both the constructivism and behaviorism perspectives could assist special education instructors to teach learners with intellectual disability (Benitez and Domeniconi, 2016). Correspondingly, this paper focuses on intellectual disabilities and some of the learning challenges

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associated with students who fall under this category. The paper's objective is to determine whether constructivism or behaviorism is the best approach to teaching intellectually challenged students. It also seeks to understand the implication of intellectual disability and the characteristics associated with intellectually disabled students through classical research. The paper concludes by summarizing both constructivism and behaviorism and outlines the various techniques a teacher can engage to include all students with intellectual disabilities in the learning process.

INTELLECTUAL DISABILITIES

Intellectual disabilities, previously referred to as “mental retardations,” cannot be intrinsically attached to any person. However, they are associated with a group of disorders in the psychological functioning and adaptive characteristics. The levels of severity of intellectual disabilities depend on the differences between people’s abilities to learn and the expectations of the society within a social setting. People who are perceived to suffer from intellectual disabilities have an IQ that ranges from 50 to 70. Scholars argue that there is no particular known cause of delay development in people with intellectual disabilities (Gibbons et al., 2015). It is widely agreed that all people with intellectual disabilities have deficits in intellectual functioning and face challenges in adaptive behavior.

When it comes to challenges in intellectual functioning, learning is a slow process because these people find it hard to recall, generalize activities and skills, and they are less motivated. On the other hand, adaptive problems include challenges with social skills, conceptual skills and practical skills. Therefore, in the learning setting, people with intellectual disability find it hard to socialize and master concepts. Moreover, people with intellectual disabilities often show discrepancies in self-determination skills and problems in skill areas like decision-making, setting goals and solving problems (Haegele and Park, 2016).

As established in classical theories by Baker et al. (2015), learners in a classroom setup, with intellectual disabilities can attain a high quality of life in diverse aspects of life with an appropriate support provided. The curriculum and instructional methods for such students should be modified to help them attain their potential in academic and functional areas of life like independent living. The classical research further established that although such learners exhibit adaptive characteristics, the shortcomings exist alongside various strengths in other areas of life. Therefore, the instructional strategies for students with intellectual disabilities should focus on improving independence and self-reliability. Since learning for intellectually disabled students is challenged because of their difficulties in generalizing concepts, making decisions, solving problems and setting goals, teachers should provide information on small bits. This will help the students internalize the concept easily before moving to another.

Constructivist theory and practice

Constructivism is a teaching technique as opposed to a theory. The model combines new ideas by interpreting new experiences in line with previous knowledge so that learners can make sense of new concepts. The advantage of the constructivist model is in the method of constructing knowledge and the implication to both teachers and students. The role of the teacher in the classroom situation is critical considering the fact that knowledge is not transferable from one person to another like a commodity. Recent research by Akpan and Beard (2016) demonstrated that it is important for educators to structure their instructions to be student-oriented, particularly when it comes to students with intellectual disabilities. The authors argue that apart from ensuring that the learning process is established in the social context, collaboration and student-to-student interactions are inevitable. Through such interactions, every learner makes meaning at individual level to connect with existing knowledge.

Instructions that are in line with the constructionist perspective are recommended for general education classes in most educational institutions around the world. The most important aspect about constructivism is that learning should make sense and contextual to the problems of life (Parker et al., 2015). For instance, as opposed to compelling learners to master problems in economics like making change for the dollar, the constructivist model advocates that students are given actual money to use in class or at the school store. Students with intellectual disabilities have a problem when it comes to memorizing ideas. Taking an example of social studies, constructivist theorists recommend that teachers have their students to play role as judges, lawyers and the jury for a simulated court case. They can also carry out elections for their classroom leaders as opposed to memorizing information on the process of carrying out elections. Therefore, students with intellectual disabilities will benefit from the strategy because they have a challenge when it comes to generalizing concepts in the classroom setting. Through realistic examples integrated in the instructional methods, the students with intellectual disabilities will have specific practice with the generalization. The strategy will help them in developing practical skills, which have been known to be a challenging area of learning.

The constructivist theory encourages teachers to give instructions from the known to the unknown. Before introducing a new concept, the teacher should discuss related concepts first so that students learn new information based on what is already familiar to them. It is recommended that teachers use techniques like mapping and brainstorming to improve the learning experience for students with intellectual disabilities. For instance, when introducing a topic American Literature, the teacher can ask students to brainstorm some of the renowned writers in America. Students can make a map of the American literature writers according to the years they first published their work. Students with intellectual disabilities will benefit from such an approach whereby teachers move from the known to the unknown so that they can master concept stepwise. It is suggested that students with intellectual disabilities have low self-esteem and take long to master concepts. Moving from the known to the unknown will improve their self-confidence, especially after repeated learning and realizing that they can make sense out of the curriculum content (Räty et al., 2016).

The constructivist theory as well emphasizes on active learning when teachers give instructions. Active participation by students in the lesson helps them to learn and retain information. Most subjects like languages, social studies and sciences involve a high level of student engagement. Teachers, for example in languages, can use literature-related themes to keep students focused on their areas of interest. When students with intellectual disabilities are provided with materials that interest them during the learning process, there are high chances that they will master the content (Saad et al., 2015). Teachers should consider teaching students with disabilities the techniques of summarizing, paraphrasing, predicting and using visual images. All these skills involve active learning that is essential when it comes to mastery and remembrance of ideas. Therefore, besides active participation of students in the class, it is advisable for teachers to focus on areas of interest for students.

Available information also indicates that students with intellectual disabilities have challenges in areas of problem solving and evaluation. However, these areas are important in the constructivist-oriented curriculum. With extra guidance and preparedness, students with intellectual disabilities can acquire and benefit from these skills in their practical life (Spooner, 2015). For this reason, teachers can take an active role in engaging students with intellectual disabilities in complex writing assignments, study tasks and research projects among other assignments.

BEHAVIORIST THEORY AND PRACTICE

It is evident that Watson (1913) on The Behavioral Learning Theory, engineered the movement inclined towards behaviorism and a drift away from functionalism. Using findings from Pavlov on animal response to stimuli, Watson was able to establish a relationship between animals and their environment. It was deducted that if animals like the dogs could be conditioned and trained to respond to stimuli then human beings equally had the capacity to be conditioned to respond to similar behaviors (Overskeid, 2008). Although, conditioning is quite limited with regards to shaping behavior since a response must exist, use of a reward can be effective. This is termed positive operant conditioning where a reward is provided when an individual behaves in a certain way. In the case of a student, for example, to ensure they do their homework, the teacher can use rewards such as giving sweets.

The behaviorist theory also focuses on giving explicit and direct instruction in the classroom situation. This approach has faced a lot of criticism in the general education field, but it is promising when used with students with intellectual disabilities. Instead of looking at the negative aspects of the approach as indicated in the general education setting, it is important to consider the positive part of the behaviorist theory so that it can be used to improve the learning experiences of students with intellectual disabilities (McMahon et al., 2016).

An approach associated with the behaviorist theory is breaking down activities into smaller tasks that can be managed by students with intellectual disabilities (Aykut et al., 2014). As opposed to teaching a general topic in science about sound, the teacher can divide sections of the lesson to teach smaller parts. For instance, the teacher can introduce a single activity of the scientific method such as the statement of the problem before following up with other steps one at a time. The technique is beneficial for students with intellectual disabilities because they are known to have problems when it comes to mastering complex material. Overwhelming information makes them frustrated and slows down the learning process.

Regarding handling complex assignment like writing, the teacher can use modeling, which is one of the approaches used by behaviorist proponents (Giust and Valle-Riestra, 2017). For example, in the written assignment, the teacher can decide to explain and illustrate every step for the learners to understand the requirements and major concepts. Behaviorists believe that it is not enough for only name and provide few examples of the pre-writing approaches or proofreading. Apart from demonstrating for the entire class, the teacher can go a step further to illustrate each step to individual students. For instance, when writing an essay on “My First Day in School,” the teacher can ask students to brainstorm for ideas about what transpired during their first day in school and draw a graphic representation. The

modeling strategy concerns the teacher giving examples of events that are likely to occur on the first day of school and use the same examples in sentences to construct a coherent paragraph. Students with intellectual disabilities will use such illustrations to think about their own experiences and write connected ideas about experiences on the first day of attending school.

Explicit instructional methods require a great deal of practice and assessment of new knowledge until students master new concepts. Direct instructional methods offer extensive drill and practice for learners until they acquire new knowledge. Students with intellectual disabilities have shortcomings when it comes to remembering things and processing information. Therefore, explicit instruction is the best strategy to ensure that these students remember concepts and process information to make sense of abstract ideas. In addition, the approach requires organization and systematic planning. The teacher-directed and managed lessons are beneficial for students with intellectual disabilities because of their problems with processing information, paying attention and recalling ideas. Most students achieve best results during the learning process when they know what to expect from a lesson or topic. Their focus then shifts to new information conveyed so that they can be related to what is already known.

The integration of constructivism and behaviorism influences the learning experience owing to its holistic nature and teachers can completely address the shortcomings in cognitive functioning and adaptive characteristics. This is achieved through the provision of directive instructions in several skill areas besides the general curriculum (Giangreco, 2017). Although such skills are more functional in nature, they are very important for the prospective independence of students with intellectual disabilities (Epps, 2016). The extra skill areas include knowledge in handling money, time management, independent living, hygiene and self-care, recreational activities, community engagement, and vocational training. Integrating constructivism and behaviorism enables students with intellectual disabilities to master concepts in these areas effectively through a structured setting based on the skill sets being taught. Learners with intellectual disabilities acquire skills effectively in practical areas that can be used in their real-life situation through this learning approach. After the skills are acquired, the teacher can include extra settings to focus on generalization.

Summary of major concepts for teaching students with intellectual disabilities using constructivist theory

1. Information should be related to real life situations so that it will be more meaningful for the students. For instance, teacher should supervise an enactment of court ruling where different students assume various roles. This will not only improve concentration of the student, but will also involve them in situations related to real life.
2. Teachers should move from the known to the unknown, incorporating examples and illustration. In teaching, for instance literature, the teacher should start with simple stories such as those of ‘Shaka Zulu’ that almost all students understand. The teacher can even start with a bible story before proceeding to more complex literature like that of Shakespeare. Illustrations such as cartoon magazines of the stories should be provided when possible.
3. Concentration on a few major concepts in each lesson that comprise of various topics and subject areas. Concentrating on a few concepts is appropriate because it will allow students to internalize information easily without complication. Teachers should teach in a ‘one step at a time’ manner.
4. Structure tasks that trigger active participation of the students. Students, for example, should be given an opportunity to narrate their stories for the whole class. Each student should play a certain role.
5. Incorporate high level thinking capabilities through clear explanations and guidance. For intellectually disabled children, teaching using illustrations is the best way to offer clear explanations. Children love graphical illustrations and presentation and is a sure way to capture and retain their attention.

Summary of major concepts for teaching students with intellectual disabilities using behaviorist theory

1. Breakdown of activities into small parts. Since students cannot digest a single or complex topic easily, it is appropriate to divide the materials into sections and each taught at a time.
2. Model, illustrat, and explain every step in a process or new activity. This will not only make it clear, but it will allow a student to remember what they learnt a long time ago. Students are more likely to remember a concept taught by use of a model or illustration than when taught without them.
3. Employing reward in order to reinforce appropriate learning behavior by students. This can be in form of sweets, toys and cartoon magazines.
4. Use as much additional practice and assessment as possible to ensure maximum mastery of concepts. If possible, students should be allowed to replicate simple models made by the teacher. This will ensure that as they are learning, they are also practicing various concepts. Modelling also improves art skills and enhances creativity.

5. Integrating organized and predictable activities into the lessons. Organized activities are related to following a concept one step at a time. When this is done starting with the simplest to the most complex, children are likely to follow. Predictable activities are those engagements known to students and whose performance ensures the students' concentration is checked.
6. Providing direct instructions for students. This involves telling a student what to do, when to do it and how to do it. Direct instructions can be very effective when analyzing the intellectual development of a student since a teacher can gauge their ability to follow instructions. It also offers extensive drill and practice for learners until they acquire new knowledge.

CONCLUSION

Students with intellectual disabilities require teachers to use unique approaches in the teaching process because of their deficiencies in the processing and academic areas. To ensure maximum mastery of concepts, teachers should familiarize themselves with the patterns of strengths and weaknesses of students with intellectual disabilities. Generally, these students have problems with their intellectual functioning and adaptive behavior. Teachers can combine strategies from the constructivism and behaviorism models to meet the needs of students with intellectual disabilities. The two models advocate for teachers to structure the curriculum and instructions based on the needs, subject area, and the setting of the learning process. The most effective way of achieving maximum results is to divide complex parts of the subject into smaller parts to eliminate the difficulty associated with generalization. Students will also benefit more from the learning process when teachers relate the information to real life situation, in addition to moving from the known to the unknown as observed earlier. Because of the limitation of students with intellectual disabilities, it is recommended that teachers should focus on few ideas for lessons that involve complex topics. They should also structure the tasks to be included in the learning process so that they can encourage active participation of the students. For example, this can be by using models or illustrations that are very effective in explaining easy and complex concepts.

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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