

Optimal Learning: From teacher-centered to student-centered education

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Abstract: The purpose of education and training is man making. Part of learning has been deposited to school and university. Among them, school and university play the most significant role and at last, this significant responsibility is devoted to teachers and instructors. They have to train learners accurately and prepare them to play a role in society. The aim of this paper is to introduce one of the most recent learning views called constructivism. This is a learning approach emphasizing on learner's activity to construct the knowledge and teacher has a guidance and facilitator role. Therefore, the most important kind of education based on construct-oriented theory is learning centered on learners. The author hopes this topic can help teachers to do their job in the best way.

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1. Introduction

Learning constitutes the basis of an individuals' behavior. An individual can be acquainted with his environment. The life of everybody is related to the power of an individual's learning socially, mentally, and bodily and depends on the changes a person can make through learning. Learning area is broad and contains educational and non-educational behavior and can occur at school or anywhere students may experience. Regarding learning principles in educational activities is the basic provision for teacher's success. Those teachers who are able to recognize the learning principles or fundamentals correctly can accept an individual's education and training.

1.1. Learning as information and skills acquisition

Common people and many teachers know learning as an acquisition of information, knowledge and skills. Teacher is usually defined as a person who teaches scientific and literal materials to learners or transfer them to their mind. Information and skills can be acquired through memorizing the materials. Teacher plays the main role in the process of learning. Students should listen to what their teachers express and memorize the materials. In other words, the class is teacher-centered in which lecture teaching method is used.

2. Teacher-centered education: Training through lecturing

Teacher-centered education is a method of education in which learning and training a educational activities and learning will be generally guided through teacher. The most famous method of teacher-center training is lecturing.

2.1. Lecturing method

Lecture contains class activities which is done for a group and it is mainly oral. According to this definition, lecture contains knowledge presentation and information gathered by teacher to learners. In lecturing method, teacher organizes the content of lesson and exposes to students and try to motive them to learn. This method is called lecturing because the major role of this educational method contains oral activities of teacher called lecture.

2.2. Learning as a change in behavior through experience

Learning is a permanent change process in behavior through experience. Through experience, thought, theories, tendencies and person's habit will change as well. Experience is the effect of the interaction between an individual and the environment together. John Dewey's in his view of education believes that education and training means rebuilding or reviewing the experiences and reconstructing them for more improvement. Therefore, a teacher tries to change their behavior rather than transferring the material to the learner's mind.

2.3. Previous experiences

The previous experiences of the learner form his conception. Based on this, what a learner learns today can put an influence on his future behavior, which is called "continuity basis" according to John Dewey. According to this principle, each experience is influenced by the previous experience and will be effective in future experiences. Development in experiences occur when there is a relationship between the experiences an individual acquires. According to the above principle, the class should be student-centered.

3. Student-centered education

Student-centered education is a kind of education through which learners are responsible for the apprehension of materials by the teacher's contribution. Indirect education is another name for student-centered education.

According to Festko and McClure, indirect education will be used for those teachers who prefer to get the material through students. Teacher never transfers the information individually, but lesson plans and educational activities will be designed and organized so that student can study and learn by himself. This method is a flexible method in which the students' needs and abilities are prioritized.

4. Constructivism

Human learning is one of the issues which have a significant role in cognitive psychology. In the beginning of psychological science in 1878 to the present, different psychological experts have investigated human behaviors in different angles to express the definition of learning through the theory of classical and action-oriented behaviorism, social learning, Gestalt psychology, cognitivism, and information processing. Among the recent approach in human learning is constructivism which was originated from Piaget, Dewey, Vygotsky, Bruner and others.

Constructivism is a general concept which has different meanings for different people. Some people bring up it as a philosophy while others consider it as a learning theory or a model for learning and is regarded as a branch in psychology for some scholars. In lexicology, "to construct" is originated from Latin word called "constructors" which means arranging, ordering or organizing. Construct-oriented approach is a novel word in psychology in which constructing the knowledge through learner can be regarded as its fundamental concept and in fact, a learner tries to interpret his previous knowledge and experiences and finally construct his knowledge. Constructivism is an old concept and dates back to Socrates, Plato and Aristotle's approach but its appearance dates back to the last 20 century and is resulted from the effort of some scientists such as Piaget, Bruner, Vygotsky, and Dewey as the architectures of this theory. This approach has practically represented its preference in comparison to the traditional approaches.

When we suggest "constructivism", it is necessary to accept three presuppositions" First, perception is established through our interaction with environment and we cannot talk about something has been learnt separated from how has been learnt.

Second, cognitive Conflict is stimulus for learning. Finally, knowledge will be established socially.

The design of learning environment based on constructivism includes six important elements such as situation, grouping, link (bridge), questions, presentations and interaction. These elements have been designed for stimulating and forcing teachers for curriculum and thinking about the students' learning process. The teacher creates a situation for the student for clarification, uses a process for dividing the materials and students, makes a bridge between what students know and what they want to know, predicts the questions will be asked by students and students present their thoughts and teacher requests the students to think about their learning. Teachers should be thoughtful and discuss lesson plans by considering the students' interests, change learning environments and adapt education with students' experiences and interests.

Teacher will adapt his strategies with learners' answers and will encourage them to analyze, interpret and predict information. He also intensively emphasizes open questions and interactions among learners.

Hanlry presented nine characteristics for construct-oriented teachers as follows:

- He should be mastered to one of resources through which students may learn .
- Learners should be involved in experiences through which they challenge their concepts and present knowledge.
- It allows learner to think about the question after raising and present his answers.
- While teacher is designing the assignment, he should use some cognitive expressions such as classification, analysis and creativity.
- The teacher should strengthen the sense of asking by asking open questions which need a lot of thinking if they want to answer and encourage a thoughtful discussion among learners.
- Students should be free to express their opinions
- The teacher should use raw data and main resources
- He should not separate knowledge from knowing process.
- He should emphasize clear expression on the part of the learners. When students are able to transfer their concept, they've really learnt.

According to Fink (2003), one strategy to increase learning among students is the integration of their previous knowledge with new knowledge. Teacher should help make a bridge between the students' previous knowledge and whatever they have learnt at the end of class. New knowledge and previous knowledge should be mixed in order to improve in their profession and use this knowledge to analyze and promote to higher levels (Bloom, 1956). Blai (2000) believe that using lecturing method in the classroom cannot be effective for stimulating thought, changing attitude, increasing interest and improving personally or socially or behavioral-educational skills. Teacher should spend more time in class in order to listen to students' previous experiences and everything they have learned in the classroom. Students usually have enough information, experience or view in their previous life which can be used as a bridge for making a relation between new and old materials. In this method, teacher can use some presuppositions in the class about the new subject to direct their thought and opinions toward the aim. By adding others' opinions by the teacher and modifying some wrong interpretations and discovering the problems, the subject of the lesson is expressed completely without considering the class as a teacher-centered class. In this way, the lesson is taught accurately and acquisition of new information is carried out. When the teacher is aware of students' knowledge, he can understand how to start. By correcting students' errors gradually and adding some explanation, the teacher tries to mix the previous and new knowledge without giving any speech during the class. Students are not obliged to listen to their teacher but they should listen to the discussion taking place in the classroom. This method can lead to an increase in interaction in the classroom that is resulted from effective learning (Chickring & Gamson, 1987, 2009). In other words, they have an opportunity to exchange their thought and interact with each other while the teacher is not the only person in the scene. Some discussions in the class are followed in the out-of-class environment. The fact is that the least knowledgeable students in the first grade are not considered as the students having blank mind. In order to start the lesson, teacher can consider the following methods:

The first method is pretesting through which the teacher understands the amount of students' knowledge available.

The second method is a two-person thought processing by which learners write any information about new material and ask their classmates' opinions. Then, they prepare a report. This method is effective when the students are expected to compare

what they have learned previously in last term and what they have learned now. Teacher recognizes the distance between students' previous knowledge and new material and knows how to guide their knowledge. When students express their opinions, teacher can write and categorize them. Teacher can divide the opinions into three groups including elementary, intermediate and advance in the right side, middle and left side of board, especially those materials need to be remembered represented with emphasis.

Teacher can help students to make their knowledge and use the instruments like solving the problem in order to learn the materials based on research.

5. Conclusion

Constructivism is based on the hypothesis that we make our life according to our experiences and conceptions. We create our mental models and learning is a match between our mental models with new experiences.

As mentioned before, according to construct-oriented approach, transferring meaning such as concept or concept structures from one person to another is impossible. In addition, teacher should know the students' imagination if he wants to change something in the learners' mind.

The main purpose behind constructivism is that human learning will be formed and learners make a new knowledge based on their previous learning. This view is opposite to the approach which considers learning as transferring the information from one person to another passively.

In other words, the person is responsible for interpreting the new situation according to his previous experience and knowledge and as a result, interaction with his new knowledge environment is formed. In the first process, the new information is added to cognitive structure and in the second process, the cognitive structure will be changed in order to attract the new information.

Education based on constructivist approach is concisely different from traditional approach according to the teacher-centered education based on lecturing. The research has shown more effectiveness of construction-oriented approach in comparison to traditional approaches. Caprio (1994) has compared constructivist-oriented approach with traditional approaches in education like lecturing method. Generally, we can take into account the following materials as some advantages of teachers following constructivist approach and his role in training constructivist learners:

- When learners are involved in any activities, they learn more and enjoy their learning.
- While learners are trying to understand the material rather than spending a lot of time on memorizing, they can improve their learning. Constructivist teachers focus on how to think and understand to learn.
- Constructivist learning can be transferred. In this classroom, learners learn the materials so that they can use them in other situations.
- When learning is based on students' questions and investigations and they play a role in designing and evaluation, they learn better.
- Constructive-oriented teachers can involve the students in learning process and motivate the students' basic learning activities in the real world.
- A constructive-oriented teacher emphasizes on the class environment based on interaction and participation.

Finally. Paying attention to constructivist approach in all levels from school to university as a basic principle can play a significant role in creating an effective learning .

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