Conference Paper

Constructivist Learning Theory: The Contribution to Foreign Language Learning and Teaching

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Abstract

This study deals with John Dewey's constructivism. Dewey's theory in Jia (2010) is the main idea or theory of conducting this study. The idea of using constructivism theory is not a new theory in educational teaching and learning in Indonesia. The Dewey's theory states that constructivism can build individual and social knowledge and it is then the result of this study. The essence contained in constructivism theory is the meaning of a learning process. Dewey in Jia (2010) claims that knowledge is uncertain. Knowledge must be applied because it is an interpretation of reality. Case study is the approach used in this study to ensure the validity of the research result (Kothari. 2004). Thus, the purposes of this study are: (1) to shed the light on the schools of constructivism, and (2) to clarify the principles of constructivism in general and language teaching in particular as its contributions in the classroom activities. The result shows that constructivism contribute positive impact on educational progress as to improve students ability because constructivism opens the learner's curiosity about something new. Students can also build their knowledge to create, and design something related to their needs.

Keywords: constructivism, language learning, language teaching, constructivism principles

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1. Introduction

The development of pedagogy has undergone significant changes since the birth of constructivism. Constructivism had an impact on the intellectual learner in the mid 90s. Constructivism was born on the basis of Piaget's cognitive development and Vygotsky's structural theory in which constructivism has an impact on the development of both micro and macro world technology. Constructivist thinking also extends to the field of linguistics as well as general literal learning and learning approaches in particular.

In the last few decades, many researchers and scientists have provided an understanding of this constructivism theory. They have proved that constructivism arises from the shift of behaviorism thinking to cognitive. In addition, constructivism can extend classroom-based research, especially language classes so that constructive thinking can open up new avenues for language teachers to research classes in various disciplines. However, constructivism, until now, does not play a visible role in language pedagogy and teacher education, although an important notion for constructivism has been integrated into language education through other pedagogical models (Jia. 2010: 197-199).

In fact, language learning has used a variety of instructional approaches according to the diversity of learners and their involvement in learning activities. Indirectly that activity has been mixed with constructivism thinking. Based on the above thought, this study aims to find out whether the flow of constructivism has changed the basic paradigm of learning and to clarify the basic principles of constructivist learning in general and in language teaching in particular.

2. Literature Review

2.1. The nature of constructivist learning theory

The basic premise of constructivist theory is that people are said to learn when they have gained experience from what they learn. That is, people create their own meaning through experience. Constructivist thinking is rooted in several aspects of Piaget and Vygotsky's cognitive theories. From Piaget, we learn actively, create schemes, assimilate and accommodate all forms of science, etc. From Vygotsky, we get social constructivism, group work, internships, and so on. Thus, we can say that the "top-down" and "bottom-up" learning methodology is born of constructivism thinking. This means that the teacher will give the main idea then the students will get the details. In this thinking, the teacher does not teach the detail so that students will find it difficult to find an understanding of the details (Aljohani, 2017: 98).

Scientists and philosophers like Dewey (1916), Piaget (1973), and Vygotsky (1978) have different perspectives and ideas about constructivism especially around its epistemology and ontology (Gul. 2016: 76). In other words, they have interpreted constructivism according to their own experience. In relation to that, the conclusion is that the learners' knowledge is their own life, their style and their life is an experience they get. Therefore, the teaching and learning process must be related to the practical real

world so that the classroom is designed and shaped in such a way that teacher and students can share their knowledge and experience actively.

Constructivism views the formation of knowledge as an active subject that creates cognitive structures in their interactions with the environment. Cognitive interaction will occur as far as reality is structured through the cognitive structure created by the subject itself. The cognitive structure must always be altered and adapted according to the demands of the environment and the changing organism. The process of adjustment occurs continuously through the process of reconstruction (Amineh and Davatgari. 2015: 9-16).

The most important thing in constructivism theory is that in the learning process; the learner should get the emphasis. Learners must actively develop their knowledge, not others. Learners must be responsible for their learning outcomes. Their creativity and liveliness will help them to stand alone in their cognitive life.

Learning is directed at experimental learning which is a humanitarian adaptation based on concrete experience in the laboratory, discussions with classmates, who then contemplated and made ideas and developing new concepts. Therefore, the accentuation of educating and teaching is not focused on the educators but on the learners.

Finally, it can be concluded that some of the things that concern constructivist learning are: (1) prioritizing real learning in the relevant context, (2) giving priority to the process, (3) inculcating learning in the context of social experience, (4) learning is done in order to construct experience.

Related to the above description, the nature of constructivist learning by Brooks & Brooks (1993: 5) says that knowledge is non-objective, temporary, constantly changing, and uncertain. Learning is seen as the compilation of knowledge from concrete experiences, collaborative activities, and reflections and interpretations. Teaching means organizing the environment so that learners are motivated in exploring meaning and appreciating uncertainty. On this basis the learner will have a different understanding of the knowledge depending on his experience, and the perspective used in interpreting it.

2.2. Methods in constructivism theory

In the perspective of constructivism theory, students are motivated and directed to learn the main idea through discovery learning. For example, learning about vocabulary by playing word strips; learning about additions and subtractions through manipulative use; or learning about the effects, impacts, and relationships of subjects with objects

through experiments with different sizes and shapes of objects are motivated students in learning.

The above statement shows that students' own ideas about how things work play a big part in constructivism because they will try to explain what they encounter and fix it if they find mistakes. This constructivist strategy emphasizes conceptual understanding rather than rote learning. With this kind of activity, we come to the conclusion that Piaget, in his constructivism theory, encourages learners to be active, have schemes, assimilate and ultimately accommodate everything they learn. Meanwhile, Vigotsky advises students to study together in one group and practice their knowledge. This means that, teachers should teach students to find the main idea of what they are learning and then get the details "top-down".

Piaget and Vogotsky's theory is supported by Bruner's cognitive theory which says that learning is an active process in which learners build new ideas or concepts based on their current and past knowledge. He also added that learners can choose and change information, construct hypotheses, and make decisions, depending on their knowledge and experience (cognitive) so as to gain new knowledge and information.

Korpershoek et. al (2014: 11) states that in a teaching, teachers must apply four main aspects: (1) develop caring: Here students must get a refresher of learning so that students will be willing to accept lessons to be learned. (2) organize and implement instruction: in this phase, the teacher must arrange the material to be studied systematically so that it can be understood best by learner. (3) encourage students' engagement in academic tasks: In this phase, the teacher must be able to sort the most effective methods for presenting the material. (4) promote the development of students' social skills and self-regulation: In this phase, the teacher must be able to organize knowledge well so as to produce simplifications, new propositions, and improve information.

3. Research Method

Case study is the approach used in this study to ensure the validity of the research result. The data for the study are always collected with the aim of tracing the history of learning theory and its relation to the social, philosophical, and physical factors of today's learning in addition to the forces involved in its environment. Thus, researchers who conduct research using case study methods try to understand the complexities of the factors that operate within the social unit, philosophy, and educational physics as a whole that is integrated. Kothari (2004) illustrates the importance of case studies

in understanding complex behavior and situations in detail. In the context of social research, he calls this data a social microscope.

4. Discussion

4.1. Constructivism contribution to foreign language learning

As the father of constructivism theory, Piaget constructed a major principle in his constructivism theory. The main principle in Piaget's theory is that knowledge must be built by students as the active creator of that knowledge. This means that students must be active in all their learning activities; they should be able to pick up and dig new information and process it according to their needs. They are not expected to be passive. Such learning activities gradually become popular in the school system in Indonesia.

In connection to Piaget's constructivism, Jerome Bruner in 1915 developed constructivism with an interactions approach to language development that explored themes such as acquisition of communicative ideas and the development of their language expressions, the interactive context of language use in childhood, and the role of parents input and behavior of scaffolding in the acquisition of linguistic forms. The constructivism idea developed by Bruner illustrates that constructivism involves interpersonal, inter-subjective, collaborative processes to create a shared meaning. The explanation of this process became the focus of Bruner's next work. Then David Ausubel (1918-2008) also considered one of the subsumption of the theory in which he introduced the double loop learning popularized by Chris Argyris in 1923 (Aljohani, 2017: 98). This double loop learning controls system and manage individuals in leaning. Every student should control and manage their learning process to the principles they need. This is the result of the collaborative learning process to achieve the rational thinking.

Another contribution is to Vygotsky theory. An important contribution to Vygotsky's theory is the emphasis on the nature of socio-cultural learning. Vygotsky's core theory is to emphasize the interaction between internal and external aspects of learning and its emphasis on the social environment of learning. According to Vygotsky's theory, human cognitive function comes from the social interaction of each individual in a cultural context. Vygotsky also believes that learning occurs when students work on uncharted tasks but those tasks are within reach of their abilities or they are in their zone of proximal development. Zone of proximal development is a real-life inter-development area defined as the ability to solve problems independently and the level

of potential development defined as problem-solving abilities under the guidance of more capable adults or peers.

Knowledge and understanding are constructed when one is socially engaged in dialogue and active in experiments and experiences. The formation of meaning is interpersonal dialogue. In this case learners not only need access to physical experience but also interaction with the experience possessed by other individuals. Cooperative learning (cooperative learning) is emerging when students work together to achieve the desired learning objectives by students. Classroom management according to cooperative learning aims to help students to develop intentions and tips to work together and interact with other students. There are three important things to consider in classroom management: grouping, co-operative learning and class arrangement.

In relation to the development of constructivism above, many theories arise: David Kolb Learning Styles: here, Kolb explains that different people naturally prefer a certain single different learning style; John Flavell Meta-cognition (1971-1987), in this theory, Flavell used the term meta memory in regard to an individual's ability to manage and monitor the input, storage, search and retrieval of the contents of his own memory (Cooper. 2016: 56). Roger Schank's contextual dependency Script Theories (1970), addresses the structure of knowledge with particular interest on language understanding and higher thinking skills.

4.2. Constructivism contribution to foreign language teaching

Constructivist learning has now developed as a substantial teaching approach. Over the past few decades many researchers and scientists have outlined the history of precedents for constructivist learning theory. In this view, constructivism represents a shift from education to behaviorism, to education based on cognitive theory (Giridharan, 2012: 733-739)

Thus, the essence of behaviorist epistemology is based on intelligence, goal domain, knowledge level and reinforcement, but in the case of constructivist epistemology, learners who build their knowledge based on interaction with the environment. The main message of constructivism is that active learning will enable students to build their own knowledge and make their own sense of what they think.

5. Principles of "Constructivist" in FLT

1. Constructivism in language teaching is based on action-oriented and cooperative learning, creative classroom work, and project completion.

2. Student autonomy is more concerned in constructivism.
3. Awareness of learning, language awareness, and inter-cultural awareness is very important in the class of constructivism.
4. In language classes, holistic language experiences that depend on content-oriented, an authentic and complex learning environment are the soul of this theory

One of the most important principles of a constructivist approach in language teaching is action-oriented. Creative and active participation in classroom activities, learning by preparing various projects as well as learning by teaching is highly treated in this approach.

The second substantial principle in FLT's constructivism is the individualization of student-centered learning. Dieter Wolff, the leading German FLT researcher claims that learning can only be influenced by teaching in a very limited way. This opinion explains that learners can use their knowledge and experience to develop something autonomously which is certainly consistent with the instructions given. Teachers only consider the strategies and techniques chosen and applied during the learning so that learners' learning awareness can complement their language awareness and intercultural awareness.

Another constructivism principle refers to a content-oriented, holistic language experience and usually takes place in a bilingual class or project instruction. According to this approach, acquiring a foreign language will be effective in an authentic and complex learning environment or environment. This explanation is in accordance with the opinion of Reinfried (2000) who says that radical constructivism will not serve as a methodological meta-theory for language learning because it has a number of weaknesses at the explanation level and also the degree of inconsistency. He argues that a realistic constructivist theory defies a student-centered theory that takes an absolute position in language learning. In addition, Gul (2016: 80) reviewed several studies and showed that constructivist teaching is better when compared to traditional approaches. Constructivist techniques help students improve reading comprehension more than traditional English teaching methods.

In applying constructivism theory, students can make additional knowledge such as writing poetry, short drama, scenarios, and so on because this theory of constructivism opens the learner's curiosity about something new. In other cases, students can also build their knowledge to create and design something to their liking.

6. Conclusion

Like other instructional theories, Tam (2000: 4) argues that constructivism cannot be a panacea for all instructional problems. This theory also has its own limitations and problems to apply to all learning situations so that teachers and instructors should be able to reduce their application.

Constructivism plays an important role in interpreting learning outcomes and designing environments to support learning. According to the constructivist view of learning, individuals must have a background of knowledge, experience, and interests so that they can create a unique relationship in building their knowledge.

Students and teachers play a role in facilitating and producing knowledge. Students are encouraged to broaden their own understanding and explain their own perspectives so that they are responsible for what they do.

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