Constructivism learning theory: A Paradigm for Teaching and Learning English in secondary education in Vietnam

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Abstract- In recent years, constructivism is regarded as one of the great ideas in education. Its implications for the way teachers teach and learn how to teach are enormous. If our efforts to reform education for all are to be successful, then we must focus on the student. By far, the focus on student-centered learning may be constructivism's most important contribution. Therefore, within this article, constructivist learning theory is discussed as a paradigm of teaching and learning at high schools in Vietnam. Constructivism is a learning theory found in psychology that explains how people can acquire knowledge and learn, thereby directing application to education. Conceptual understanding of the theory as well as the basic characteristics of constructivist learning environments was discussed in more depth. Five basic principles of constructivist teaching, twelve characteristics of a constructivist teacher and six constructivist benefits have been outlined in this article. Furthermore, the significant differences between the traditional classroom and the constructivist classroom were highlighted and several implications of constructivism for teaching and learning were reviewed. Therefore, the study draw a conclusion that high-school teachers need to think about their practices in order to apply these ideas to their work, and constructivist teachers encourage students to continually assess how the activity helps them understand.

Index Terms- Constructivism, Learning theory, Constructivist teaching, Paradigm, Teaching and Learning.

I. INTRODUCTION

Nowadays, it is essential to organize the learning environment in a student-centered and democratic way that facilitates the development of students in many fields. Traditional learning environments in which students memorize information without questioning and researching lead to negative consequences. In recent years, constructivism has attracted the attention of scholars in the field of education. Contrary to previous learning theories, constructivist theories engage learners participate more in the learning process. Since teachers are an important lever in education, they must adapt to new reforms and change the classroom environment accordingly.

Constructivist teaching is a strategy that can enable all learners to construct valid knowledge and also enable them to transmit that knowledge in different contexts. It often means encouraging students to use active techniques (experiments, real-world problem solving) to generate more knowledge and then reflect and speak about what they are doing and how their understanding is changing.

In this article, we discuss constructivism as a theory of learning in which principles of constructivist teaching, benefits of constructivist teaching and the roles of constructivist teachers are mainly focused on.

II. LITERATURE REVIEW

Constructivism as Theory of Learning

Constructivism is considered as an educational theory because it provides a framework for how students learn. The framework is similar and learning is similar for students regardless of race, cultural background or language. However, there are many educators who believe that learning is intrinsically cultural. In this article, we are concerned with constructivism as a theory of learning. Hence, we are interested in how people construct meaning and knowledge.

In constructivist educational theories, learners not only absorb information inertly, but also participate in the learning process and form new knowledge and new experiences based on existing knowledge. Constructivism stands in contrast to traditional methods where learners absorb information word-by-word from their teachers. New constructivist teaching methods have shifted understanding of the learning process to an essential form, where learners take the new ideas they have acquired in the classroom and share them with their peers. classmates. In a constructivist learning environment, learners learn best by forming their own knowledge.

Constructivist experts believe that knowledge should not be implanted in the learner's mind, but constructed through their experiences and activities. Here, teachers should inspire higher-

level thinking, where learners are encouraged to summarize concepts by analyzing, predicting, moderating and preserving their ideas (Hajal Chibani, 2017).

In the study of learning theory, Hajal Chibani (2017) summarizes the primary concepts of this theory as follows:
As learning is based on child-centered approach, students have background knowledge of the content, and they build on previous background to construct new ones. Knowledge is perceived only if the person is ready to acquire it as declarative based on tasks, concepts, vocabulary, and other information stored in the memory, procedural based on when the learner combine, incorporate or assimilate, and strategic based on when the learner knows how to use the first two knowledge. Remembering is very important in order for new knowledge to be acquired (p. 67).

Constructivism is a learner centered educational theory which is a view of learning based on the belief that knowledge is not a thing that can be simply given by teacher. In such context, students are actively engaged in doing something like group work, hands on, talk, project and so on.

Difference between Traditional Classroom and Constructivist Classroom

A comparison of instruction in a traditional and a constructivist-learning environment is presented in Table 1 (Brooks & Brooks, 1999).

Table 1. Comparison of Traditional and Constructivist Instruction/Teaching

Traditional Instruction/Teaching	Constructivist Instruction/Teaching
Curriculum is presented part to whole focusing on basic skills.	Curriculum is presented whole to part focusing on big concepts.
Strict adherence to fixed curriculum is highly recommended.	Pursuing student questions is appreciated.
Textbooks and workbooks are primary sources for organizing curricular activities.	Flexible manipulative materials are main sources for organizing curricular activities.
Students are considered "empty buckets" on which information is filled by the teacher.	Students are considered as thinkers with emerging theories about the world.
Teachers generally behave in a didactic manner, disseminating information to students.	Teachers generally behave in an interactive manner, mediating the environment for students.
Teachers seek the correct answer to validate/monitor student learning.	Teachers seek the students' viewpoint to understand students' present conceptions for use in subsequent lessons.
Summative assessment of student learning is focused on (mainly through mid-term tests, final tests…)	Formative assessment of student learning is focused on (mainly through student activities e.g, discussions, presentations, reports, seminars, portfolio…)
Students primarily work alone. (Individual activities are highly recommended)	Students primarily work in groups. (Collaboration activities such as group work, pair work are highly recommended)

As stated in table 1, the traditional view of knowledge is based on the common sense belief in the existence of a real world whether we notice it or not. in the Traditional teaching method, classes are usually dominated by lecture or direct instruction. The idea is that there is a fixed body of knowledge that the student must come to know. Students are expected to blindly accept the information they are given without questioning the instructor. The teacher seeks to transfer thoughts and meanings to the passive student leaving little room for student-initiated questions, independent thought or interaction between students. This teacher-centered method of teaching also assumes that all students have the same level of background knowledge in the subject matter and are able to absorb the material at the same pace. In contrast, in the constructivist model, teachers do not need to feed students information; teachers should encourage students to use their own thought processes to construct knowledge and solve problems.

Principles of Constructivist teaching
Constructivism is a theory about learning and knowledge. It does not provide strategies to teach but principles in teaching. Brooks and Brooks (1999) urged that constructivist practice in classrooms is imperative. They suggested teachers need to respect and encourage student autonomy and initiative, listen to student responses and teach accordingly, encourage students to ask questions, create opportunities for conversations and communications among students, and promote students to explore uncertainty of knowledge.

Figure 1 below depicts Brooks and Brooks' five central tenets of Constructivist teaching (CT), which parallel the five principles of constructivism and all of which were utilized as the underpinnings regarding CT throughout the current study.
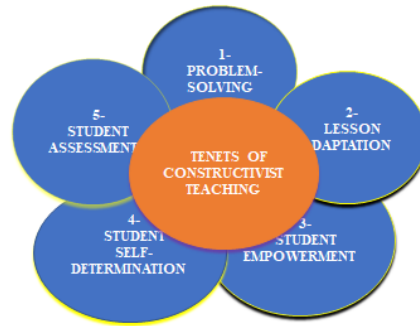
Figure 1. Dimensions of constructivist teaching

Table 2 below explains 5 central tenets of constructivist teaching in more details.

Table 2. *Five central tenets of constructivist teaching*

Five central tenets of constructivist teaching (CT)

Principles	Tenets of CT	Detailed explanation
Principle 1	Posing Problems of Emerging Relevance to Students **(Problem Solving)**	Constructivist teachers recognize that students must attach relevance to the content and curriculum. As students see relevance in assigned activities, their interest in learning grows.
Principle 2	Structuring Learning Around Primary Concepts: The Quest for Excellence **(Lesson Adaptation)**	Constructivist teachers structure lessons around big ideas, not small bits of information.
Principle 3	Seeking and Valuing Students' Points of View **(Student Empowerment)**	Constructivist teachers seek and value students' points of view.
Principle 4	Adapting to Curriculum to Address Students' Suppositions **(Student Self-determination)**	Constructivist teachers structure lessons to challenge students' suppositions. When educators permit students to construct knowledge that challenges their current suppositions, learning occurs.
Principle 5	Assessing Student Learning in the Context of Teaching **(Student Assessment)**	Constructivist teachers assess student learning in the context of daily classroom investigations. Students should demonstrate their knowledge every day in a variety of ways.

(Adapted from Brooks and Brooks, 1993)

Basic characteristics of a constructivist teacher

Constructivist teaching is based on the belief that learners actively create, interpret and reorganize knowledge. They are practically involved in a process of meaning, ideas and knowledge construction as opposed to passively receiving information. It fosters scientific critical thinking, and creates motivated and independent learning.

The following represents a summary of some suggested characteristics of a constructivist teacher (Brooks & Brooks, 1999, p. 103-118).
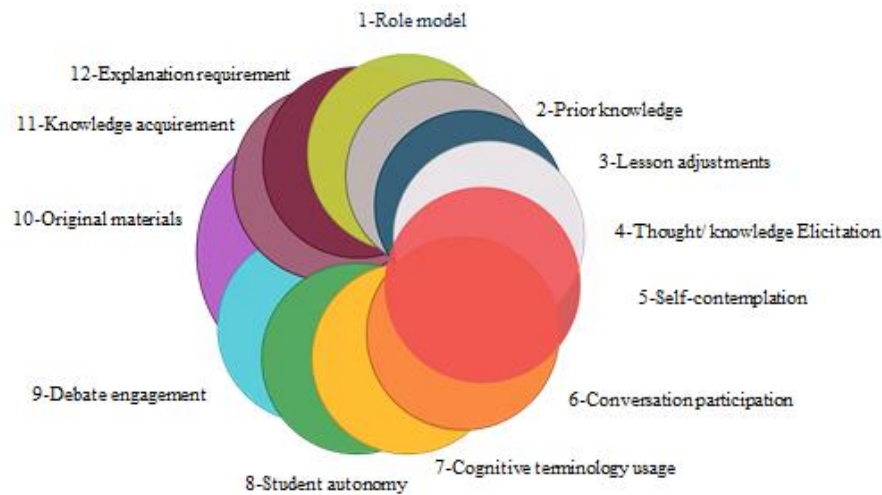
Figure 2. Basic characteristics of a constructivist teacher

The following table depicts a brief explanation of twelve characteristics of a constructivist teacher in terms of Role model, Prior knowledge, Lesson adjustments, Thought knowledge/elicitation, Self-contemplation, Conversation participation, Cognitive terminology usage, Student autonomy, Debate engagement, Original materials, Knowledge acquirement and Explanation requirement.

Table 3. Characteristics of a constructivist teacher

No	Characteristics of a constructivist teacher	Detailed explanation
1	**Role model**	Become one of many resources that the student may learn from, not the primary source of information.
2	**Prior knowledge**	Engage students in experiences that challenge previous conceptions of their existing knowledge.
3	**Lesson adjustments**	Allow student responses to drive lessons and seek elaboration of students' initial responses. Allow student some thinking time after posing questions.
4	**Thought/ knowledge Elicitation**	Encourage the spirit of questioning by asking thoughtful, open-ended questions. Encourage thoughtful discussion among students.
5	**Self-contemplation**	Enquire about students' understandings of concepts before sharing their own understandings of these concepts.
6	**Conversation participation**	Encourage students to engage in dialogue, both with the teacher and with one another.
7	**Cognitive terminology usage**	Using cognitive terminology such as "classify," "analyze", and "create" when framing tasks.
8	**Student autonomy**	Encourage and accept student autonomy and initiative. Be willing to let go of classroom control.
9	**Debate engagement**	Engage students in experiences that might engender contradictions to their initial hypotheses and then encourage discussion.
10	**Original materials**	Using raw data and primary sources, along with manipulative, interactive physical materials.
11	**Knowledge acquirement**	Don't separate knowing from the process of finding out.
12	**Explanation requirement**	Insist on clear expression from students. When students can communicate their understanding, then they have truly learned.

Benefits of Constructivism

The effect of constructivist teaching can be explained in terms of the influence of constructivism on education. Constructivism has become the leading theoretical view in education and has become a powerful force in science education (Steffe & Gale, 1995; Tobin & Tippins, 1993). The appeal of constructivism is that it provides a logically functional framework for understanding and interpreting learning and teaching experiences; In this way, constructivism serves as a powerful theoretical reference "to construct a classroom that maximizes student learning" (Tobin & Tippins, 1993, p. 7).

Constructivism has had a strong international impact on education over the past 20 years. In particular, science educators have been interested in teaching strategies based on constructivist concepts that attempt to improve students' conceptual understanding in science subjects. In many cases, these concepts have been used as basic frameworks for reforming traditional methods of education.

Bada, S. (2015) suggests the six following benefits of constructivist teaching which are summarized in table 4.

Table 4. Benefits of constructivist teaching

	Benefits of constructivist teaching	
1	**Creating active learners**	Children learn more, and enjoy learning more when they are actively involved, rather than passive listeners.
2	**Enhancing critical thinkers**	Education works best when it concentrates on thinking and understanding, rather than on rote memorization. Constructivism concentrates on learning how to think and understand.
3	**Developing flexible decision-making**	Constructivist learning is transferable. In constructivist classrooms, students create organizing principles that they can take with them to other learning settings.
4	**Providing student empowerment**	Constructivism gives students ownership of what they learn, since learning is based on students' questions and explorations, and often the students have a hand in designing the assessments as well.
5	**Promoting knowledge building**	By grounding learning activities in an authentic, real-world context, constructivism stimulates and engages students. Students in constructivist classrooms learn to question things and to apply their natural curiosity to the world.
6	**Fostering collaboration skills**	Constructivism promotes social and communication skills by creating a classroom environment that emphasizes collaboration and exchange of ideas. Students must therefore exchange ideas and so must learn to "negotiate" with others and to evaluate their contributions in a socially acceptable manner.

Implications of constructivism for teaching and learning

With the development of constructivist philosophy, a teacher of any subject can create a pleasant classroom environment in which learners can become constructive learners. Constructivist teachers develop skills and abilities to empower learners and make them feel competent and important. It encourages active and meaningful learning and promotes accountability and autonomy. This learning is beneficial in achieving desired educational goals and objectives, and it is important for teachers to develop expertise in a way that constructs practice.

Undoubtedly, constructivist learning has evolved as an important approach to teaching. Over the past decades, many researchers and scholars have built historical precedents for constructivist learning theory. In this view, constructivism represents a transition from behaviorism-based education to cognitive theory-based education. The main message of constructivism is that active learning allows students to construct their own knowledge and make their own sense of what is being thought.

Table 5 below suggests some constructivist activities for language teaching:

Table 5. Constructivist activities for language teaching

	Constructivist activities for language teaching	
No	**Kinds of activities**	**Examples**
1	Designing and pursuing research and projects	Eg. Cultural project, Magazine project,
2	Role playing	Eg. Drama or Dialogue activities
3	Necessitate multiple learning environments	Eg. Inside and outside classroom activities
4	Situational and Contextual	Eg. Problem solving activities
5	Theme and Content based	Eg. Topic analysis activities
6	Oral presentations	Eg. Collaboration activities
7	Critical thinking	Eg. Debate activities

III. CONCLUSION

Like other teaching theories, constructivism cannot be "the key to all doors". However, constructivism plays an important role in interpreting learning outcomes and designing environments that support learning. According to the constructivist view of learning, individuals must have a background of knowledge, experiences, and interests so that they can create unique relationships in the construction of their knowledge.

Students and teachers play the role of facilitating and creating knowledge. Students are encouraged to expand their understanding and explain their own perspectives so that they are accountable for what they do.

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