



INQUIRY-BASED EDUCATION AS THE BASIS OF CONSTRUCTIVIST PHILOSOPHY

Yoldosheva Sevara Alisher qizi

PhD student of Urganch State University, Uzbekistan

ABSTRACT

Inquiry-based education is founded on constructivist philosophy, which emphasizes the importance of students' own skills, talents, and past knowledge when learning new material. This article aimed to provide an overview of the history of Constructivism and Inquiry-based education, as well as their relevance in the classroom.

KEYWORDS: Constructivism, inquiry, collaboration, traditional approach, critical thinking.

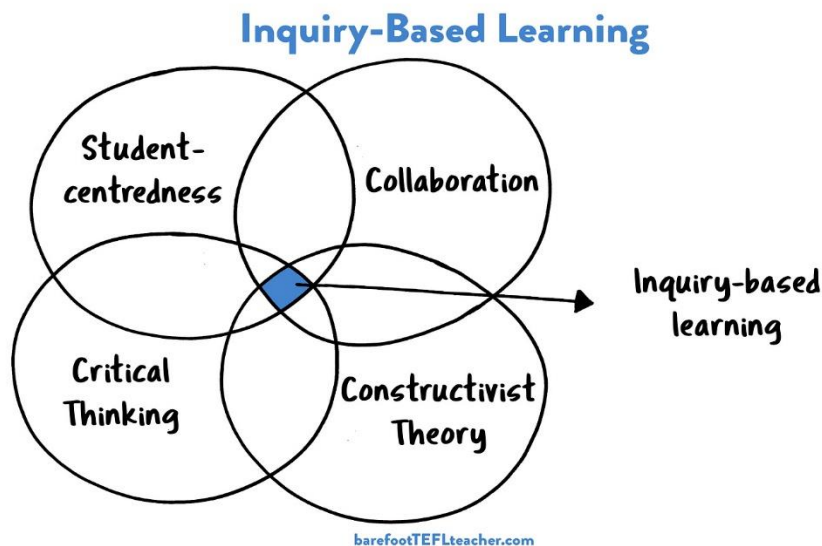
INTRODUCTION

Inquiry-based teaching believes that empowering students to own their learning experiences leads to more real learning and knowledge building. Educators struggle to shift away from the conventional paradigm of teaching and learning, which relies on instructors' expertise and control over delivery techniques to promote student learning.

Working with the inquiry-based teaching paradigm requires certain considerations. Inquiry-based education, which integrates new and existing knowledge, complements constructivism's emphasis on students' past knowledge.

According to Abdul-Haqq (1998), constructivism is an epistemology that explores the origins of knowledge and the process of creating meaning throughout learning. Constructivists think that people make sense of their surroundings by combining new and past knowledge, as well as engaging in new experiences and activities. Abdal-Haqq (1998) suggests that combining new and past information leads to stronger connections in the learning process. Constructivism emphasizes that learning is an active, not passive, process. According to McLeod (2019), active participation in the learning process, such as problem solving and experimentation, reflects a constructivist perspective. Social interaction also contributes to learning. Constructivist education encourages students to integrate new information with past knowledge to build new perspectives and understandings of the world. Constructivist philosophy challenges existing teaching approaches and redefines learning.

Richardson (1997) argued for constructivist-based teacher education to address educational change and accomplish shared social goals. In 1997, Richardson wrote: "Most constructivists would agree that the traditional approach for teaching—the transmission model—promotes neither the interaction between prior and new knowledge nor the conversations that are necessary for internalization and deep understanding". He argued that the constructivist theory of learning should be prioritized in new teacher training to foster strong thinking and learning abilities among students.



Picture 1. Key principles of IBL.

The Four Pillars of Inquiry-Based Learning

Constructivist learning philosophy enables students to acquire information via investigation and discovery. IBL presumes that this is correct.

Student-centered: IBL puts the learner in control, providing them autonomy and allowing them to choose their own learning journey (within certain boundaries).

Collaborative: IBL encourages cooperation and involvement in issue solving.

Critical thinking: IBL promotes higher-order thinking abilities that are necessary for success in the twenty-first century.

Constructivist theory addresses two fundamental ideas (Schiro, 2013). The first principle suggests that past information has a significant influence on learning. The second premise involves addressing real-world challenges in the classroom. In constructivist education, teachers provide student-centered learning opportunities and serve as subject matter experts to facilitate students' learning. According to Brooks and Brooks (1993), the teacher acts as an expert by organizing, asking questions, and designing resources to enhance learning and engagement.

Inquiry-based teaching aligns with constructivist theory by allowing students to determine how they learn, incorporating authentic tasks, making learning a social experience, and fostering curiosity through the inquiry cycle (Honebein, 1996).

Epistemology explains how humans know what they know. Lamont (2020) emphasizes the importance of individual problem solving in learning. Students actively build their own meaning of learning, resulting in personal growth and development. Students' thoughts and application of knowledge to new settings indicate this transformation. To fully comprehend constructivist learning theory, three fundamental educational theorists' works are essential: (a) Dewey's (1899) "The School and Society", (b) Vygotsky's (1934) "Thinking and Speech", and (c) Piaget's (1971) "Biology and Knowledge". Each theorist proposed a component of the larger constructivist framework.

According to Flinders & Thornton (2017, p. 35), Dewey (1899) believed that education should be a process of living rather than preparing students for the future. He proposed incorporating real-world circumstances into the classroom. Dewey believed that education should align with

the learner's worldview. According to Flinders and Thornton (2017), Dewey felt that education should prepare students to think freely and apply new knowledge to changing demands in society.

According to Vygotsky (1934, referenced in Lang, 2002), learning and transformation are influenced by the learning community. According to Clabaugh (2010), Vygotsky identified two types of learning: social interaction and language usage. Vygotsky's concept of the "Zone of Proximal Development" (Vygotsky, 1934, as stated in Zhou & Brown, 2015, p. 32) refers to the view that learning happens just beyond the student's present level of understanding.

Vygotsky felt that a student's existing knowledge served as a foundation for acquiring, comprehending, and assimilating new information. Much like Piaget and Vygotsky's theories of learning emphasize the need of scaffolded education and directed learning (Clabaugh, 2010).

Piaget created a lasting philosophy of thought and learning. According to Cohen and Waite-Stupiansky (2017), this hypothesis is still widely used in education today. Piaget's (1971) theory of thinking and learning posits that knowledge is created via continuous interactions between individuals. Human thinking and learning include absorbing new knowledge and integrating it with previous knowledge in a continuous cycle of balancing and integration. Piaget felt that instructors demonstrated ways of thinking and learning for pupils, empowering them to think independently and apply their knowledge to their surroundings. Piaget (1971) believed that learning is a process of inquiry that leads to autonomous understanding of the world.

CONCLUSION

As a conclusion Inquiry-based education blends Dewey, Vygotsky, and Piaget's theories to define work, identify student needs, and implement the model across disciplines. It is an attitude towards life that implies students' involvement in facing and solving a problem and the search for realistic and strategic solutions. This model requires students to think in a systematic way in order to reach reasonable solutions. It is also student centered and promotes collaboration among the students.

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