

研究ノート

The English Classroom and Constructivism: Ideas for Teachers of English as an Additional Language

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要 旨

英語教室では、よく使われる方法の多くに構成主義的な見方が潜在している。

コミュニカティブ・アプローチは教諭をステージの中心から引き離し、学習者にリスクを負わせ、必要な時に臨機応変な対応をとる機会を与える。共同学習はヴィゴツキーの唱える知識の社会的構成を促すものである。

自律的語学学習は、学習者が新しく遭遇した言語の構成要素を吸収し、新しい状況で上手く適用できるようになるための教育手法を設計する上で、構成主義の教訓に依存する。そして課題や問題・計画にもとづいたアプローチは、構成主義の社会的・認知的な姿勢を組み合わせ、教室内外での関連した有意義な活動に応用する。今日の教室では構成主義の影響が広がっているため、このアプローチを理解することが教育者および教育手法の設計者双方にとって有益である。本稿では構成主義的な見方を理解するための基礎として、構成主義の思想の歴史的背景について説明する。また、今日の教育上の課題に対しても、構成主義がいかに関連するかを検討する。最後に、英語の教室に構成主義を取り入れた場合の影響についても検討し、探求する。

キーワード：構成主義、構成主義教育、教育デザイン、追加言語としての英語、Piaget, Vygotsky

Abstract

The constructivist perspective underlies many popular methodologies in the English classroom.

The communicative approach moves the teacher away from center stage and allows learners opportunities to take risks and improvise when necessary. Collaborative learning encourages the social construction of knowledge in the spirit of Vygotsky. Autonomous language learning relies on the precepts of constructivism in designing instruction that allows for learners to assimilate newly encountered linguistic components and apply them successfully in new contexts. And task and problem/project based approaches combine social and cognitive constructivist orientations and apply those to relevant, meaningful activities within and beyond the classroom. Because of the prevalence of the constructivist influence in today's classrooms, an understanding of this approach is beneficial for both educators and instructional designers. This paper describes the historical context of constructivist thought as a foundation for understanding the constructivist perspective. It examines the relevance of the constructivist approach to today's educational challenges. And finally, the implications of applying constructivism in the English classroom are discussed and explored.

Keywords: constructivism, constructivist education, educational design, English as an additional language, Piaget, Vygotsky

I think that human knowledge is essentially active I find myself opposed to the view of knowledge as a copy, a passive copy, of reality To my way of thinking, knowing an object does not mean copying it—it means acting upon it. It means constructing systems of transformations that can be carried out on or with this object. (Piaget J., Genetic Epistemology, 1968)

Constructivism is a learning theory that posits that knowledge is constructed by the learner through a process of integrating the new into a personal framework of previous knowledge and experience. The constructivist orientation is learner centered; the teacher takes on the role of facilitator rather than being a dispenser of knowledge. The audiolingual and situational approaches to language learning, which were popular in the mid-twentieth century, were primarily teacher centered (Hussain & Sajid, 2015). Today, due to changing perspectives and the influence of the constructivist mindset, classrooms are more likely to be decentralized and learners more actively engaged.

This paper will describe the historical context of constructivist thought as a foundation for understanding the constructivist perspective. It will examine the relevance of the constructivist approach to today's educational challenges. And finally, the implications of applying constructivism in the English classroom will be explored.

Piaget

Jean Piaget's work is often cited as the foundation of constructivist thought. Piaget studied natural sciences and then developed an interest in philosophy and Jungian psychoanalysis. These interests merged and informed the work he undertook with children, work to which he gave his attention for the rest of his life. Piaget described this lifelong pursuit as the search for "the biological explanation of knowledge" (*A science odyssey: People and discoveries*, 1997).

Piaget was born in 1896 and pursued his education in Switzerland. After completing his Ph.D. in zoology there, he traveled to Paris where he was engaged in administering tests to the students at the Ecole de la rue de la Grange-aux-Belles, a school for boys (Smith, 2017). Rather than concern himself with whether the students answered the test questions correctly, Piaget was interested in the reasoning behind incorrect responses. He began to see patterns in reasoning based on age, which ultimately led to a theory he called genetic epistemology. Epistemology has to do with the study of knowledge, and Piaget used the term *genetic* to indicate his belief in a biological foundation for knowledge, that is, a biological foundation for stages of development.

Genetic epistemology argues that children typically proceed through stages of development which are biologically determined. Although biological maturation is integral to the learning process and, according to Piaget's observations, its order is

consistent from one society to another, the rate at which maturation takes place varies a great deal (although within certain general constraints) (Piaget, *Development and learning*, 1997, p. 21).

In addition to biological maturation, experience and what Piaget terms *equilibration* contribute to the learning process (Piaget, *Development and learning*, 1997). Here Piaget is talking about a biological/cognitive equilibrium in contrast to the concept of equilibrium in physics (Piaget, *The essential Piaget*, 1995, pp. 838–841). While equilibrium in physics denotes a static state, Piaget’s use of the term *equilibration* denotes an active process of creating coherence as new kinds of knowledge are incorporated into previously constructed models. As Fosnot and Perry (2005) point out, this is not a linear process but “a nonlinear, dynamic ‘dance’ of progressive equilibria, adaptation and organization, growth and change (p. 18).

Piaget describes two kinds of experience: physical and logical-mathematical. Physical experience, as one would expect, involves physical interaction with objects and gaining understanding through such interactions (Piaget, *Development and learning*, 1997, p. 22). What Piaget calls logical-mathematical experience might also be termed abstract thought (see Piaget, *Development and learning*, 1997, pp. 22–23 for an excellent example of this). This logical-mathematical experience leads to an understanding of actions upon objects in contrast to an understanding of the properties of the objects themselves (Piaget, *Genetic epistemology*, 1968).

According to Piaget’s view, the child is engaged in a continual process of creating a model of the world based on the incorporation of new concepts into those previously constructed. He uses the terms *assimilation* and *accommodation* to describe the fundamental processes involved (Piaget, *The essential Piaget*, 1995, p. 216). Assimilation has to do with incorporating new ideas, concepts, and experiences into the child’s internal model of the world. Accommodation refers to the process of overcoming resistance to the incorporation of such new information into the existing model. The ability to effectively assimilate new concepts depends on the intellectual developmental stage of the child as well as the child’s previous experience.

While the creation of new models depends in part on the biologically based stage of development, this very action, itself the result of interaction with the environment, contributes to the progression of the developmental stage. As Piaget (1923) explains,

The structures are not preformed within the subject but are constructed gradually as needs and situations occur. Consequently they depend partly on experience. . . . In short, the dualism of subject and object is brought back to a simple progressive differentiation between a centripetal pole and a centrifugal pole in the midst of the constant interactions of organism and environment. Also, experience is never simply passive receptiveness[,] it is active accommodation, correlative to assimilation. (p. 426)

Piaget's description of the interactions between the learner and the environment quoted above bear a striking resemblance to a description of complex adaptive systems. A complex adaptive system is a self-organizing system that has stability in spite of the constant change experienced by components of the system (Holland, 1995). A complex adaptive system "vacillates between states of order and disorder" and "responds to information by changing" (Bucsis, 2014). This vacillation is characterized by phase transitions, or states of dynamic disequilibrium. How interesting that Piaget describes the process of learning in just this way. The concept of equilibration contains within itself the learner's process of disequilibrium, followed by assimilation and, finally, accommodation.

This view has significant implications for the teacher's role. If knowledge is viewed as external truths to be imparted to learners via lecture and repetition, the teacher's mind is seen as the vessel containing such knowledge and the teacher's role is to impart that knowledge to the learner, to move knowledge from the outside in. But if the learner is actively constructing knowledge based on experience, learning from the inside, the teacher's role becomes that of facilitator, helping to guide the learner via questions and encounters, in that construction.

Vygotsky

Lev Vygotsky was a Russian contemporary of Piaget, also born in 1896. He died young, in 1934, of tuberculosis. Vygotsky was incredibly productive during his lifetime, making contributions in the fields of both literature and psychology (Luria, 1978). Today, Vygotsky's influence on learning theory is often cited in terms of his views on the social aspects of learning and for his concept of the zone of proximal development.

Although they were both psychologists who studied learning, Piaget and Vygotsky

never met. Vygotsky was familiar with Piaget's research, though, and they had a mutual friend in Alexander Luria. In fact, Vygotsky frequently referred to Piaget's theories in his writing. However, Piaget did not have a chance to read Vygotsky's work until 1962. At that time, Piaget expressed regret that they had not had a chance to meet and discuss their differences in person as he felt their approaches shared more common elements than Vygotsky realized (*Comments on Vygotsky's critical remarks concerning The Language and Thought of the Child, and Judgment and Reasoning in the Child, by Jean Piaget, 1962*).

When we talk about the work of these early twentieth-century researchers, it makes sense to consider the context in which their work was conducted. Both Piaget and Vygotsky believed that the behaviorist model of stimulus-response was too simplistic to accurately represent the learning process in humans. They both worked to demonstrate that human learning is a constructive process that involves complex interactions between the learner and the environment. In addition, while Piaget focused primarily on the individual child, Vygotsky's outlook was grounded in Marxist philosophy and so included more consideration of social and historical influences.

To Vygotsky, the missing link in the stimulus-response model was the human use of tools and especially *signs*, by which he meant such tools as language, writing, and numbers (Cole & Scribner, 1978, p. 7). Vygotsky argued that these auxiliary systems were created by human societies and were integral features of the human learning process, a process which differentiates humans from other animals (Vygotsky, 1978, pp. 28–29). Thus, for Vygotsky, the importance of society in human learning and development could not be understated.

As an example, in *Mind and Society*, Vygotsky (1978) summarizes the relationship of language to action in a child's development thus:

From the very first days of the child's development his activities acquire a meaning of their own in a system of social behavior and, being directed towards a definite purpose, are refracted through the prism of the child's environment. The path from object to child and from child to object passes through another person. This complex human structure is the product of a developmental process deeply rooted in the links between individual and social history. (p. 30)

In this context, Vygotsky seems to refer to the socio-historical origin of the signs

and symbols the child uses, particularly language, as well as to interactions with the people in the child's immediate environment. The social component of learning is vital to Vygotsky's overall theory of child development. The child does not learn in a vacuum; even very early learning experiences are mediated by interaction with others.

Vygotsky was particularly interested in the development of language in the child and on the influence of language in the child's intellectual development. For Vygotsky, speech enabled children to not only function effectively in the environment by analyzing options and enabling planning for the future but also to become "both the subjects and the objects of their own behavior" (Vygotsky, 1978, p. 26), an ability, he believed, that was uniquely human.

Based on his study of the work of others, including Piaget, and his own research, Vygotsky devised a developmental learning theory that was dynamic and interactive and that had clear implications for pedagogical practice and instructional design. Vygotsky, much more than Piaget, was concerned with school learning and its effect on child development as well as its effectiveness overall.

One of Vygotsky's most well known contributions to learning theory is the idea of the *zone of proximal development*. From Vygotsky's perspective, other learning theories focused too much on stages of development as prerequisites to learning. He felt that such an approach in instructional design could actually be an impediment to learning (Vygotsky, 1978, p. 89). Instead, he proposed that, in the case of "higher mental functions" (by which he means intrapersonal actions such as metacognition and internalized speech), learning actually precedes development. This is a fundamental tenet underlying the concept of the zone of proximal development. As Vygotsky (1978) explains:

[A]n essential feature of learning is that it creates the zone of proximal development; that is, learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers. (p. 90)

The zone of proximal development is defined by Vygotsky (1978, p. 86) in terms of the learner's problem solving ability. The current developmental level is indicated by the learner's ability to solve a problem independently, whereas the zone of proximal development lies just beyond and is indicated by problems that may be solved by the learner with assistance. The assistance may be provided by a teacher or other adult, by

more proficient peers, or, presumably, by a combination of these.

The concept of the zone of proximal development is crucial to the application of Vygotsky's theory in the classroom. He sees the teacher's role as that of guiding the learner from the current developmental stage into the next. This potential next stage—and actually, stage may not be the best term to use here as it suggests a static state when Vygotsky is describing a dynamic process—is the zone of proximal development. Vygotsky believes the focus on areas of potential development supports the intellectual growth of the child and the child's developmental maturation in a way that a focus on the current developmental stage cannot.

Vygotsky also calls attention to the fact that two learners who are currently at similar developmental stages may not share the same zone of proximal development, that is, they may not progress equally under the same guidance from the teacher (Vygotsky, 1978, p. 86).

Piaget + Vygotsky: Fundamentals of Constructivism Summarized

Although there were differences between Piaget's and Vygotsky's work and conclusions, their perspectives were by no means contradictory in their fundamental tenets. They were both convinced that human learning is an active process, a dynamic construction of effective models of thought and action based on interactions between the learner and the environment. These interactions require the learner to adjust and adapt, with the result that the biologically based cognitive structures are changed even as learning occurs. Piaget used the term *constructivism* (1995, pp. xxxviii–xxxix) to describe this process and it is this term that is widely used to convey the idea today. When applied to classroom learning, the constructivist approach moves the teacher off center stage, maintaining the essential importance of the teacher while simultaneously redefining the teacher's role (Piaget, *The essential Piaget*, 1995, p. 712).

Vygotsky contributed two additional tenets to the conversation: 1) the importance of social interactions and cultural/historical influences on learning, and 2) the concept of teaching in the zone of proximal development to support and extend individual learning.

Constructivism and Implications for Teaching

As Fosnot and Perry (2005) point out, constructivism is a theory of learning, not a theory of teaching (p. 33). As such, there is no constructivist template that can be applied to instructional design or teaching techniques. Instead of a template, constructivism provides a lens for viewing the learning environment and interactions within it. This change in perspective necessarily engenders a different approach to all aspects of the formal learning experience: the physical environment, roles within learning encounters, and desired outcomes and assessment. This approach is not easy. It requires paradigmatic shifts in all of these areas. Fosnot and Perry (2005) list some general principles to consider when re-designing learning experiences from the constructivist perspective (pp. 33–34):

- Learning is not the result of development; it *is* development.
- Disequilibrium facilitates learning.
- Reflective abstraction is the driving force of learning.
- Dialogue within a community engenders further thinking.

They summarize the intersection of Piaget’s concepts and the theory of complex adaptive systems nicely when they say, “Learning is the result of activity and self-organization and proceeds toward the development of structures” (p. 34).

Constructivism and English Language Learning

Should Fosnot and Perry’s principles be applied in the English as an alternative language classroom and, if so, how? What might the productive application of these principles look like in actual practice? What difficulties might be encountered?

The first tenet in Fosnot and Perry’s list, that learning is development, comes from Vygotsky’s view. It is important to note that Vygotsky was specifically referring to research on child development—the focus of both his and Piaget’s work. It isn’t clear whether this applies equally to development in adults as, although current research suggests that brain structures are more flexible throughout life than was previously thought, the fundamental developmental stages studied by Vygotsky and Piaget typically occur in childhood. However, the concept of the zone of proximal development may be applicable to learning in any field and at any age. In classroom practice, this means

actively assessing the current understanding of learners and designing activities that are just out of reach, activities that require the aid of a mediator to complete but whose completion may be clearly understood by the learner. In other words, designing experiences that foster “Aha!” moments in learners.

How are such moments achieved? Through disequilibrium. Real progress takes place beyond or outside of the comfort zone of the current level of mastery. The community of learners should both encourage and productively challenge one another to take chances and make mistakes. This requires a high degree of trust and an understanding of the importance of risks and mistakes in actualizing learning. Creating such an environment requires a great deal of advance planning on the part of the teacher and constant reinforcement by the community itself.

Reflective abstraction requires time—time for both thinking autonomously and for the community dialogue mentioned by Fosnot and Perry. This may be difficult in environments where learners are expected to proceed according to a set schedule if reflection and discussion are not built into the schedule from the outset.

Not mentioned in Fosnot and Perry’s list are some other common elements which result from the application of constructivist principles. Piaget stressed the importance of active learning, and relevant, genuine activities are often a feature in the constructivist classroom. Our interconnected world offers more opportunities than ever before for learners to engage in meaningful, real-world learning activities that are technologically mediated. They can participate in online discussions and classes in areas of interest; they can publish online and read the written work of others, both native and alternative English users; and they can communicate using video conferencing software, to name just a few possibilities.

Constructivist based activities certainly have a place in the English classroom. Their inclusion can help to make learners’ experiences more authentic and productive, can help build confidence, and can support genuine development and fluency. At the same time, the constructivist lens ought to be considered just one tool in a well-stocked toolbox of educational strategies—to be used in conjunction with experience and reflective practice. Jan Terwell (1999) cautions against relying too heavily on a single perspective in curriculum design (pp. 196, 197), advice supported by the constructivist mindset and worth keeping in mind as we work toward designing more vibrant, inclusive learning experiences for our students.

The constructivist perspective underlies many popular methodologies in the English classroom. The communicative approach moves the teacher away from center stage and allows learners opportunities to take risks and improvise when necessary. Collaborative learning encourages the social construction of knowledge in the spirit of Vygotsky. Autonomous language learning relies on the precepts of constructivism in designing instruction that allows for learners to assimilate newly encountered linguistic components and apply them successfully in new contexts. And task and problem/project based approaches combine social and cognitive constructivist orientations and apply those to relevant, meaningful activities within and beyond the classroom. These topics will be covered in greater detail in future articles.

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