

**Constructivism and Situated Learning
in Virtual Lithuania**

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Constructivism defined

Constructivism is a theory of learning that focuses on how learners construct knowledge rather than how they acquire it. Jonassen asserts that learners' construction of knowledge is a function of their "prior experiences, mental structures, and beliefs that one uses to interpret objects and events" (p. 10). He makes a distinction between solipsism and constructivism by emphasizing our ability to recognize other interpretations of reality. Jonassen further elaborates that constructivism is fundamentally different from objectivism which emphasizes the object of our knowing; constructivism is primarily concerned with our construction of knowledge.

Ertmer and Newby define constructivism further by pointing out that learners do not take knowledge from the world into themselves; rather, personal interpretations of the world are constructed internally (p. 63). Because of this, that internal representation of knowledge is constantly open to change and is dependent on the context in which it was learnt.

Context is very important to the constructivist viewpoint. As opposed to objectivist learning theories, where knowledge and learning can be removed from realistic use and presented in a decontextualized manner, constructivism requires that knowledge be acquired in authentic contexts (Ertmer & Newby, 1993).

Duffy and Cunningham examine constructivism within the "mind as rhizome" metaphor which posits that "thinking is not an action that takes place within a mind within a body, but rather at the connections, in the interactions" (p. 177). In other words, minds do not function outside of the context in which they reside – knowledge is distributed in social-cultural contexts. This metaphor provides the basis for several implications for teaching and learning which inform constructivism as a whole. Duffy and Cunningham outline these implications as follows:

All knowledge is constructed and all learning is a process of construction

Rather than presenting facts as separate from learners' experience, constructivism provides opportunities for learners to construct knowledge based on their prior knowledge and experience.

Many world views can be constructed so there are multiple perspectives of knowledge or truth

As opposed to objectivist learning theories and strategies, in constructivist learning environments there is seldom one correct answer. Learners are encouraged to explore multiple perspectives and make their own determinations of truth.

Knowledge is a consensus of belief

Again, constructivism steers away from claiming black and white versions of truth or fact. What we decide is truth is what the community believes and determines is the truth.

Knowledge is context dependent

According to constructivism, knowledge cannot be decontextualized; all that we know is determined and influenced by the context in which we learn it.

Learning is mediated by tools and signs, and tools change the ways in which action occurs

The tools we use to accomplish tasks change the manner in which we do things. The example Duffy and Cunningham use of how the hammer helps determine the structure of our buildings is apt (p. 180). Taken further, the tools we use in learning change the ways in which we learn. Books and the affordances of the printed word created literacy on a grand scale. Computers and the literacy they afford create a different literacy that we have perhaps not realized fully yet.

Learning is inherently social and dialogic

Learning cannot be taken out of its social and dialogic context. Duffy and Cunningham base this assertion on Vygotsky's claim that language is "the mediational means above all others" (p. 180). In other words, to speak the language of a field or community is to know a field or community. When a learner can speak the language or jargon with confidence and ease, that learner knows the field.

Knowing how we know is the most important thing

It's not what you know but how you know it (and knowing how you know it) that is most important in education. Learners need to know how to learn to continue learning. Duffy and Cunningham claim this at the "most important but least controversial" tenet (p. 181).

Situated learning

The model used for the constructivist learning environment Virtual Lithuania is situated learning. Situated learning is one of the many pedagogical models that are afforded by the constructivist viewpoint. Situated learning provides learning opportunities through the exploration of authentic scenarios and is based on four beliefs 1) learning arises from actions in everyday situations 2) knowledge is gained in context and transfers to similar situations 3) learning is acquired through social interaction and negotiation 4) learning is not separable from action (Dabbagh & Bannan-Ritland, 2005). Dabbagh and Bannan-Ritland further elaborate that learning environments that utilize situated learning should provide the following key features. Virtual Lithuania attempts to meet these criteria.

Learning is embedded in authentic contexts and activities

The information learners need to complete tasks should be embedded in realistic ways in realistic environments. The learning environment should be recognizable, and activities should be repeatable in similar situations. Virtual Lithuania provides an immersive virtual world in which learners attempt to reach realistic goals. Information and clues about how to do this are embedded in the scenario.

Support for collaboration and social negotiation

Learning takes place as a negotiation within social groups. Virtual Lithuania provides a user community for learners to discuss language learning issues. Also, other learners populate the immersive world; learners are encouraged to collaborate with other learners to achieve goals.

Ownership in learning

It is important that learners take ownership for their learning. This improves motivation and drive to achieve. Learners are encouraged to be self-directed in their path through Virtual Lithuania. They determine areas of further study and choose the level of preparation they may need. Learners can use the numerous areas to prepare for the immersive environments or go straight to the virtual world to attempt to achieve goals.

Opportunities for reflection and articulation

As a part of their ownership in their learning, reflection and articulation are important. In Virtual Lithuania, learners are encouraged to reflect on their language learning at all steps in the process. They self-assess at the completion of virtual world activities and are given numerous opportunities for further study and reflection.

Language learning

Constructivism as a theory of learning and the situated learning pedagogical model are particularly appropriate in the domain of language learning. According to Gardner (2007), motivation is a crucial component of Second Language Acquisition (SLA). Gardner defines four stages of SLA to be elemental, consolidation, conscious expression, and automaticity and thought. Virtual Lithuania was designed with target learners who are at the intermediate or conscious expression stage of SLA.

Conscious expression is defined as the stage at which learners can use the language but with a great deal of conscious effort, with great reliance on the first language (Gardner, p. 12). This level of language learning process relies on the learner's interlanguage, or the linguistic system that learners create while learning second languages (Interlanguage, 2009). In other words, learners construct a new language that consists of their native language structure and grammar tied to the new language's vocabulary.

Blake (2000) argues that in order to reach greater fluency, language learners must focus on their deficiencies in the target language and that providing scenarios to negotiate meaning will stimulate this. "These negotiations often result in the correction of specific mistakes and promote the evolution of the [second language] learner's interlanguage toward the target" (p. 121). This is further substantiated by Long and Robinson's (1998) Interaction Hypothesis, which posits that second language acquisition is enhanced when learners negotiate meaning with other speakers.

Virtual Lithuania is an attempt to create a constructivist learning environment using situated learning. This theory of learning and corresponding pedagogical model coincide closely with the interlanguage and Interaction Hypothesis theories of SLA.

In Virtual Lithuania, learners have opportunities to use many situated learning activities. Authentic learning contexts are provided in the immersive virtual world scenarios. Learning is self-directed, and learners determine the preparation and study they undertake. Exploration is supported and encouraged through rater feedback and access to a rich resource center. Activities are constructed around reflection on skills and exploration of solutions. Data that is required to solve problems is embedded in the scenarios and in the people who populate the scenarios –negotiation, a crucial part of language learning, is embedded as well. Learners cannot complete tasks without it. Opportunities for collaboration are provided in both the user community and the immersive scenarios. Other learners as well as native speakers are available to help.

Finally, this constructivist learning environment can be used for any language and at any language level with little change in construction. It was designed to encompass grammar, vocabulary, and four skills practice that are essential to the learning of any language and to provide authentic scenarios in the immersive world to solve real-life problems and accomplish realistic goals. Modifications to the this environment for different languages would revolve around specific language information, of

course, but also must be contextualized to actual places in which language activities might take place. However, the way in which the environment is structured would not need to change.

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