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Epistemological and Pedagogical Underpinning of

Westward Expansion: Looking at the Past to Understand the Present

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Social constructivism purports that students construct knowledge in a multimodal, multidimensional way. It recognizes that knowledge and learning are relative to an individual's interpretation of information and sensory experiences which become integrated into existing knowledge structures. Knowledge is, therefore, always evolving. Dabbagh and Bannan-Ritland (2004) describe learning as a social process of enculturation, wherein, knowledge is relative to the activity and exploratory context. They go further by saying,

> There is social framework or culture surrounding a learning context and its constituents
> are the learners, the interactions that those learners engage in, and the tools that enable
> those interactions. This social framework forms a community of practice in which
> knowledge is shared and distributed amongst its constituents (p. 9).

Driscoll (2000) defines the goals of constructivism as: "problem solving, reasoning, critical thinking, and the active and reflective use of knowledge" (p. 382). She goes on to identify five constructivist conditions for learning that will enable these goals as:

- Embed learning in a complex, realistic and relevant environment.
- Provide for social negotiation as an integral part of learning.
- Support multiple perspectives and the use of multiple modes of representation.
- Encourage ownership in learning.
- Nurture self-awareness of the knowledge construction process (p. 382-383).

Yore and Craig (1992) counsel on the process of constructing meaning, "This process is clearly an internally regulated personal process enhanced by external supportive scaffolding,

influenced by context, affected by prior knowledge, and related to specific intellectual processes"

(p. 2). Shuell (1993) points out, "meaningful learning of complex material may be characterized

as being active, constructive, cumulative, self-regulated and goal-oriented" (p. 296).

Vygotsky, in arguing for the cooperation of adults with children to develop progress in

concept formation, coined the term zone of proximal development (ZPD) as the discrepancy

between a child's actual mental age and the level he reaches in solving problems with assistance.

Moreover, according to Vygotsky (1986), "the only good instruction marches ahead of

development and leads it … [for] what the child can do in cooperation today he can do alone

tomorrow ... instruction must be oriented toward the future, not the past" (p. 189). Bockarie

(2002) cites Wells (2000, 1999, 1994):

> In describing the Vygotskian concept of the teaching and learning process,
>
> learning takes place in the context of a purposeful and meaningful activity as learners and
>
> teachers work together to create a product that has its own intrinsic value. This
>
> purposeful and meaningful activity is viewed as a social process, with the students
>
> bringing to the process their own lived experiences as grounded in their own socio-
>
> cultural contexts (Literature Review section, ¶ 1).

Vygotsky's conceptual development and ZPD theory, then, offer further support for

pedagogical prescriptions, to include: facilitative instruction, collaborative learning, multimodal

interaction, and reflective thinking. Tasks in the ZPD require the aid of peers and the instructor,

or what Vygotsky termed the social other. Bruner coined the term *scaffolding* to describe the

function Vygotsky saw for adults or capable peers in the development of children's thinking and

problem solving. Bockarie (2002) shares that "the role of the adult or capable peer is to build

scaffolds, or provide a series of leading activities, which guide the learner's development process

from where he is to, as Wertsch (1985) describes it, 'what he not yet is'" (p. 67). Bruner's spiral

curriculum also speaks to this issue, "Curriculum should be organized in a spiral manner so that

the student continually builds upon what they have already learned" (Tips, Constructivist Theory

J. Bruner section). Learning, then, in the zone of proximal development, can be interpreted as

the construction of knowledge and best practices in the context of an authentic environment with

"reified processes and artifacts" (Wenger, 1998) while being nurtured and scaffolded around an

activity of mutual engagement. Social constructivism is the underpinning of the instructional

theory supporting the aforementioned attributes, commonly known as situated cognition theory.

There are a number of pedagogically distinct models to support the theory of situated

cognition, to include: "microworlds, simulations, virtual learning environments, cognitive

flexibility hypertexts, cognitive apprenticeships, case-based learning, problem-based learning,

and situated learning" (Dabbagh et al., 2004, p. 20). These models, in turn, have concomitant

associated learning technologies and theoretical constructs. Yet, at the heart of each model, one

will find a learner-centric environment offering authentic, self-directed learning.

Westward Expansion: Looking at the Past to Understand the Present is a situated

learning model. Also known as anchored instruction, Dabbagh et al. (2004) share,

> Situated learning environments provide instruction through the exploration of authentic
>
> scenarios, cases, or problems…. across several domains and skill sets.… [using] rich
>
> media (graphics, video and audio) … to contextualize the scenarios and embed relevant
>
> resources and data…. Most importantly, students work in groups to solve the case or
>
> problem at hand and reflect on their solutions and learning activities with the help of the
>
> teacher (p. 7).

Brown et al. (1989) believe that the closer the situated learning environment matches the workplace, the more likely the transfer of skills and knowledge to new contexts. Gordin et al. (1996) outline five types of interactions "designed to describe increasing levels of interaction or participation: access to published works; access to raw data, and analysis tools; dialogue or communication avenues with collaborators, peers and mentors; joint coordinated activities; and publishing to a knowledge repository (Role of Communications in Learning Communities section, ¶ 3). *Westward Expansion: Looking at the Past to Understand the Present* provides all these levels of interaction. Based on Dabbagh et al. (2004), the key instructional characteristics of situated learning are supported in this online project, as shown below:

- Promote authentic learning- through three alternative scenario challenge choices
- Provide opportunities for the student to internalize learning- through the application of a framework applicable to the evaluation of any society's development; hence, a flexible mental model whose constructs will grow as the student matures and integrates more complex material.
- Provide the opportunities to develop self-monitoring and self-correcting skills- through the use of online journals, synchronous and asynchronous communication tools, and the incorporation of a simulation in the unit.
- Support exploration and interaction- through selected multimedia and text hyperlinks to understand the interconnection of governmental, economic, geographic and cultural factors on societal development, as well as group workspace to share discovered resources and construct a presentation for their chosen challenge
- Support inter and multi-disciplinary learning- through resources pertinent to the social sciences, as well as resources for learning about technological innovations.

- Allow learners to seek information- through embedded data in the scenario to include: timeframe, a major historical event, geographic reference, economic dilemma (how you will earn a living).

- Promote articulation, reflection and critical thinking skills- through the development of a solution to their scenario using communication tools to collaborate with their teams, the workspace for uploading guided questioning responses to in-class discourse, keeping notes in an online journal daily as they examine materials for the solution plan, and completing a graphic organizer (components/factors of the graphic organizer are derived in the first class meeting as a whole group exercise) to demonstrate an understanding of an event relative to the factors affecting societal development.

- Promote collaborative learning- by working with one set of team mates to devise the scenario plan and presentation for the class and a second team to problem-solve through *The Oregon Trail* simulation. Journal entries will include reflection on the team dynamics and decision-making processes on a weekly basis. Understanding where communication breaks down among team members is an important life skill as is learning from mistakes.

- Promote transfer to real life problem solving- through the practical experience of forming a mental model and using it to analyze and synthesize complex, interrelated material in the social sciences. This mental model, in turn, may be used and improved upon in subsequent societal studies.

Westward Expansion: Looking at the Past to Understand the Present, an online situated learning environment, was designed to offer a global, complex and sustained authentic task that causes the learners to explore and reflect using resources and tools in context.

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