Chapter V

Constructivism Online: Vygotskian Applications for 21st Century Learning in Higher Education

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Abstract

In higher education, the use of constructivist approaches in online learning reflects agreement with educators who stress that good teaching is both a collaborative and a highly individual process. Online constructivist application also suggests congruence with adult learning theory and educational programming designed for experiential and inquiry-based learning. The objective of this chapter is to investigate perceptions of teaching and learning in online instruction guided by the Vygotskian perspective of constructivist theory. The chapter first focuses on current research studies of online constructivist-based course development and application and then proceeds to the authors’ practical inquiry project, which examined (1) instructor perspectives on creating and facilitating online learning communities and (2) students’ perceptions of their online constructivist experiences. The authors conclude with a discussion of their findings, contributions to the field and suggestions and challenges for the principled use of a constructivist approach to online teaching.

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Introduction

In higher education, instructors/researchers who explore the uses of constructivist approaches in online learning for the acquisition of knowledge are in agreement with educational philosophers such as Noddings (1992) and Palmer (1998) who stress that good teaching is a complex and highly personal process. For example, according to Palmer (1998), “to educate is to guide students on an inner journey toward more truthful ways of seeing and being in the world” (p. 6). The same instructors/researchers also find themselves in accord with educational reformers (e.g., Merriam & Caffarela, 1991; Richardson, 1999) who suggest that constructivist-based programs are more congruent with adult learning theory and that educational renewal is possible only if educational programs are designed to be experiential, inquiry based (Norlander-Case, Reagan, & Case, 1999) and achieved through dialogue (Vella, 2002).

Practitioners of constructivist approaches in online program design and implementation understand that while higher education faculty can design a successful curriculum, students must be directly involved in guiding and understanding their own journeys toward learning. By creating such experiences, higher education faculty are able to develop principled forms of instruction guided by a process first suggested by Vygotsky in his design of learning within a zone of proximal development (ZPD) (Collins, Brown, & Newman, 1989).

The following Vygotskian concepts are particularly germane to building online coursework: (1) collaborative experiences among students or between students and teachers are necessary for students to advance through their individual ZPD (Vygotsky, 1978); (2) social interaction as a cognitive amplifier (Bruner, 1966) transforms socially shared activities into internalized cognitive processes; and (3) the most efficient instruction is when students engage in activities within a supportive learning environment and receive appropriate guidance (Vygotsky, 1978). Additionally, these concepts resonate with the following interdependent themes of Vygotskian theory as applied to technology-based learning: “reliance on a developmental method, the association between higher mental processes and their origin in social processes and the idea that mental processes can be understood if we understand the tools and signs that mediate them” (Dixon-Krauss, 1997, p. 176).

The objective of this chapter is to investigate perceptions of technology-based learning opportunities (i.e., online instruction in higher education) in terms of instructional design and application guided by principles of Vygotskian constructivist theory that consistently focus on building student-centered and collaborative learning communities. The chapter consists of two sections. The authors first review research studies of perceptions of constructivist online design and application, concluding with a synthesis of issues, best practices, and challenges as reflected by the literature review. For the second section, the authors discuss their own twofold inquiry project which