A Learner-Centered Perspective on E-Learning

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INTRODUCTION

For the past decade, e-learning has emerged as a prominent delivery mechanism in educational settings. Now, it is not uncommon to find courses that are delivered fully online or in a **blended learning** (Bonk & Graham, 2006) mode. In addition, with the pervasive use of handheld, mobile, and wireless technologies, **mobile learning** (i.e., m-learning) and **ubiquitous learning** (i.e., u-learning) have received extensive attention as promising trends in the field of distance education. Indeed, our goals, related to the design of environments where learning happens at anytime and any place, seem more reachable with such emerging educational technologies that maximize mobility, connectivity, and versatility. Add to that options for learner participation and contribution within such an environment, as is seen with many online tools today, and there are many exciting opportunities for learner-centered online instruction.

Despite such significant shifts in technology, however, a pedagogical shift from instructor-centered to learner-centered learning has been slow. A traditional text- or instructor-centered paradigm for teaching and learning is still dominant in many e-learning programs, while learners enrolling in online and blended courses are expecting more inquiry-based activities and learner-centered approaches than in the past. As the adoption of Web-based instruction grows, understanding how to facilitate or moderate student learning in virtual spaces has become an important issue. Online instructors must create situations where students are building knowledge and sharing it with experts and peers who, in turn, offer authentic evaluation and timely feed-back. Online instruction, therefore, must fit into an education and learning paradigm that is increasingly learner-centric.

BACKGROUND

Learner-Centered Psychological Principles

What is a **learner-centered paradigm** and where did it originate? During the early 1990s, the American Psychological Association (APA) announced a set of 14 **learner-centered psychological principles** (LCPs) (Alexander & Murphy, 1994; APA, 1993) (see Table 1). These principles were derived after an APA Presidential task force reviewed previous research on learning and instruction, motivation, and development since the emergence of cognitive psychology in the 1970s and 1980s. The final set of psychological principles has been widely accepted and assisted many school and university reform and restructuring efforts. The LCPs address areas such as fostering curiosity and intrinsic motivation, linking new information to old in meaningful ways, providing learner choice and personal control, nurturing social interaction and interpersonal relations, promoting thinking and reasoning strategies, constructing meaning from information and experience, and taking into account learner social and cultural background.

Another seminal publication emphasizing a learner-centered paradigm is the National Research Council report on "How People Learn" (Bransford, Brown, & Cocking, 1999). Based on the science of learning research in various disciplines such as cognition, hu-

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Cognitive and Metacognitive Factors

1. **Nature of the learning process.** The learning of complex subject matter is most effective when it is an intentional process of constructing meaning from information and experience.
2. **Goals of the learning process.** The successful learner, over time and with support and instructional guidance, can create meaningful, coherent representations of knowledge.
3. **Construction of knowledge.** The successful learner can link new information with existing knowledge in meaningful ways.
4. **Strategic thinking.** The successful learner can create and use a repertoire of thinking and reasoning strategies to achieve complex learning goals.
5. **Thinking about thinking.** Higher order strategies for selecting and monitoring mental operations facilitate creative and critical thinking.
6. **Context of learning.** Learning is influenced by environmental factors, including culture, technology, and instructional practices.

Motivational and Affective Factors

7. **Motivational and emotional influences on learning.** What and how much is learned is influenced by the learner's motivation. Motivation to learn, in turn, is influenced by the individual's emotional states.
8. **Intrinsic motivation to learn.** The learner's creativity, higher-order thinking, and natural curiosity all contribute to motivation to learn. Intrinsic motivation is stimulated by tasks of optimal novelty and difficulty, relevant to personal interests, and providing for personal choice and control.
9. **Effects of motivation on effort.** Acquisition of complex knowledge and skills requires extended learner effort and guided practice. Without the learner's motivation to learn, the willingness to exert this effort is unlikely without coercion.

Developmental and Social Factors

10. **Developmental influences on learning.** As individuals develop, there are different opportunities and constraints for learning. Learning is most effective when differential development within and across physical, intellectual, emotional, and social domains is taken into account.
11. **Social influences on learning.** Learning is influenced by social interactions, interpersonal relations, and communication with others.

Individual Differences

12. **Individual differences in learning.** Learners have different strategies, approaches, and capabilities for learning that are a function of prior experience and heredity.
13. **Learning and diversity.** Learning is most effective when differences in learners' linguistic, cultural, and social backgrounds are taken into account.
14. **Standards and assessment.** Setting appropriately high and challenging standards and assessing the learner as well as learning progress, including diagnostic, process, and outcome assessment, are integral parts of the learning process.

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For a full text of the principles listed as well as additional rationale and explanation, refer to the APA Website: http://www.apa.org/ed/ lcp2/lcp14.html or write to the APA for the December, 1995 report The Learner-Centered Psychological Principles: A Framework for School Redesign and Reform. Permission to reproduce this list has been granted by APA. This document is not copyrighted.

man development, neuroscience, and technology, this report suggests that learning environments should be learner-centered and linked to larger communities beyond a single classroom or school. Teachers who are learner-centered recognize the importance of culturally relevant pedagogy (Ladson-Billings, 1995) that considers sensitivity to individual students' cultural practices and incorporate them into their instruction. Additionally, teachers with a learner-centered philosophy are well aware of the needs, interests, and epistemological beliefs that learners bring to educational settings, and use them to promote active learning for deep understanding, rather than passive learning with surface knowledge (Bereiter & Scardamalia, 2006).

Previous studies have indicated that the LCPs hold great promise for designing e-learning environments (Bonk & Cummings, 1998; Bonk & Reynolds, 1997; McCombs & Vakili, 2005). For instance, Bonk and Cummings (1998) document a dozen recommendations for designing Web-based instruction from a learner-centered perspective. Their guidelines describe the need for psychologically safe online environments, changes in the instructor role from sage to moderator or facilitator of learning, the emergence of new electronic mentoring practices, and other related ideas.

Similarly, McCombs and Vakili (2005) suggest that learner-centered principles can be applied to enhance

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