Just-in-Time Learning

Tina Stavredes
Capella University, USA

INTRODUCTION

As the educational landscape is changing, more individuals are embracing the concept of lifelong learning. They are also looking for flexibility in how they learn, when they learn, and where they learn. The emergence of Web and Internet technologies is leading to the creation of distance learning environments that will allow for new ways of learning and opportunities to engage learners in meaningful learning experiences. In addition, technology is now seen as a tool for learning that allows for communication and collaboration through Web-based technologies to provide opportunities for challenge, guidance, empowerment, and support.

The concept of just-in-time learning has been defined as an approach to learning where knowledge and skills are acquired when, how, and where they are needed by the learner using various technologies to deliver the learning event. For the purpose of this article, I will be referring to just-in-time learning as a means for flexible learning with the following attributes (Collingridge, 1998):

- Learners assume control over how, where, and when they learn.
- Flexible learning components to match the diverse learner needs.
- Provision for seeking out and accessing a wide range of resources.
- Use of computer-based and other technologies.
- Teachers/instructors acting as facilitators with less direction/control of the learning process/task.
- Opportunities for teacher/student and student/student interaction.

In order to deliver on these attributes, institutions will need to re-conceptualize their paradigm of teaching and learning to move from standardization to a customization basis of production and delivery of learning events in the information-age economy (Reigeluth, 1999).

I will address some of the issues of just-in-time learning in this new paradigm of teaching and learning as they impact the needs of the learner, the roles of faculty, the instructional design process, and the technologies used to deliver learning events.

LEARNER-CENTERED MODEL

Just-in-time learning requires a new learner-centered model based on adult learning theories and new paradigms of learning that focus on the learner while moving the faculty into new roles that help facilitate learners' acquisition of knowledge and skills when they need it. This model acknowledges that learners learn in different ways and have a variety of learning needs, as well as acknowledging that learners bring with them history and experiences that impact new learning. Finally, there is an understanding that learners can be self-directed, take responsibility for their learning, and assume control over how, where, and when they learn (Collingridge, 1998). Caffarella, as cited in Slusarski (1994), describes self-direction as "a self-initiated process of learning that stresses the ability of individuals to plan and manage their own learning, an attribute or characteristic of learners with personal autonomy as its hallmark, and a way of organizing instruction in formal settings that allows for greater learner control" (p. 71). It is important to acknowledge that while learners have the ability to be self-directed that it is situational where a learner may be self-directed in one subject and a dependent learner in another (Grow, 1991, 1996). Susan Slusarski (1994) cites Caffarella's four variables that determine readiness for self-direction in learning: level of technical skills, familiarity with the subject matter, sense

of personal competence as learners, and the context of the learning event. She states: "By examining these four variables as possible reasons for resistance, techniques can be used to decrease resistance and enhance learner self-direction" (p. 74). Because of the situational nature of self-directedness, these variables need to be examined each time a learner enters a learning event to determine the appropriate type of learning event to deliver. This concept requires a wide range of learning opportunities be available that allow learners to select the appropriate level of self-direction. It also requires learner control that allows the learner to choose a path that fits their needs. Learners with little prior knowledge and low self-direction require more supplantive methods that explicitly direct the learner through the learning event. Learners with more prior knowledge and/or the ability for self-directedness require more generative strategies that allow learners to develop their own structure for acquiring the knowledge and skills. The key is understanding that learners need a variety of learning opportunities as well as control to select the appropriate one for their situation.

THE ROLE OF THE FACULTY

The role of faculty changes considerably when considering this new paradigm of teaching and learning. Up until now, the faculty role was exclusively that of content expert, and the faculty had responsibility for developing and delivering the entire learning experience (Slusarski, 1994). With distance education providing opportunities for just-in-time learning with the focus on the individual, the faculty role has to evolve. Opponents of just-in-time learning are concerned that learners will interact with content in self-directed activities that exclude the need for faculty interaction and support (Riel, 1998). However, if self-directedness is situational, then learners will be at different levels of self-directedness which will require faculty to interact in a variety of ways depending on the learners' needs. According to Grow (1991, 1996), faculty should determine the learner's level of self-direction and help the learner advance toward greater self-direction. The real challenge in delivering just-in-time learning is the need to develop faculty who are capable of determining a learner's level of compe-

tency and self-directedness, and interacting with learners in a variety of ways in order to assist them in advancing to higher levels of thinking and understanding. In response to this challenge, distance education personnel should be assigned to train faculty on what constitutes good instructional practice online (Laws, Howell & Lindsay, 2003). Paulson (2002) believes that new kinds of instructional staff are needed with distinct functions. Online learning environments need to be analyzed to determine the types of interactions that take place between learners and faculty. Faculty time should be moved away from administrative tasks, and course management to roles focused on assessing learning and providing just-in-time feedback to learners to lift them to higher levels of thinking and understanding. The administrative and management roles could be facilitated by a teaching assistant to provide process information and encouragement during learning. This restructuring of roles would allow learners the critical feedback needed for learning from faculty and to provide a supportive setting to help them thrive in the distance education environment.

INSTRUCTIONAL DESIGN ISSUES

The design of Web-based learning environments that allow for just-in-time learning requires a curriculum design that targets the specific needs of learners. Over the past few years, accreditation agencies have focused on learning outcomes as the best way to achieve a curriculum that is relevant, rigorous, and current. In addition, learners seeking higher education are interested in knowing what they are getting for their money; they want opportunities to build on the skills, knowledge, and attitudes they acquire through their education and that are associated with their professional field.

By reexamining curricula and courses, institutions can better align their learning outcomes to be based on competencies that are grounded in both general and specialized knowledge, and influenced by the evolution of specific fields. Because a competency-based approach to education is outcome directed and assessment oriented, it creates a closer fit between higher education and the needs of society (Evers, Rush & Berdrow,1998).

3 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/just-time-learning/12251

Related Content

Design Learning Environment Based on ISTE Standards
Magdy S. Aqel (2021). *International Journal of Information and Communication Technology Education (pp. 1-10).*
www.irma-international.org/article/design-learning-environment-based-on-iste-standards/273893

Riding the School Bus Called Technology
Augusta Drosteand Bruce Droste (2005). *Encyclopedia of Distance Learning (pp. 1581-1582).*
www.irma-international.org/chapter/riding-school-bus-called-technology/12317

Conceiving a Learning Organization Model in Online Education
Kam Hou Vat (2009). *Encyclopedia of Distance Learning, Second Edition (pp. 391-397).*
www.irma-international.org/chapter/conceiving-learning-organization-model-online/11786

An XML-Based Approach to Multimedia Software Engineering for Distance Learning
Timothy Arndt, Shi-Kuo Chang, Angela Guercioand Paolo Maresca (2003). *International Journal of Distance Education Technologies (pp. 40-62).*
www.irma-international.org/article/xml-based-approach-multimedia-software/1603

Social Recommender Systems: Recommendations in Support of E-Learning
Sheizaf Rafaeli, Yuval Dan-Gurand Miri Barak (2005). *International Journal of Distance Education Technologies (pp. 30-47).*
www.irma-international.org/article/social-recommender-systems/1651