Chapter 8

Wikis as Tools for Enhancing Interaction and Fulfilling Expectations of Modern Learning Theories

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ABSTRACT

Modern learning theories focus on the importance of social interaction as a means of facilitating and enhancing learning. In this context, an aspect of importance is the creation of learning communities (i.e., groups of persons with common learning goals). ICT tools are frequently used to create and maintain online learning communities by overcoming geographical and time restrictions as well as motivating learners and retaining a high degree of interaction among them. To achieve these goals, researchers adjust previous and propose new learning theories taking into consideration human, social, and technological factors in the learning process. This chapter first outlines relevant learning theories and then highlights wikis as tools that may assist learning by increasing social interaction.

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INTRODUCTION

The purpose of learning theories is to explain the practice of learning and for this reason education is a fruitful field for their application. Learning theories initially focused on individuals (e.g., Skinner, 1968) but gradually extended their scope to include the overall socio-cultural environment (Lave & Wenger, 1991; Vygotsky, 1978). The rapid developments in ICT added another factor affecting the modern educational process. In modern learning theories, technology constitutes a significant educational tool and may affect learning achievements (Schunk, 2014).

Web-based tools are frequently used in educational settings as they provide advantages in promoting learning. Such advantages include gaining access to a vast amount of learning resources anywhere and anytime, facilities for creating and managing learning resources, synchronous and asynchronous interaction, collaborative facilities, knowledge management and sharing, exchange and understanding of different opinions and adaptation to learners’ needs (Antonis, Lampsas, & Prentzas, 2008; Conole & Alevizou, 2010; Hatzilygeroudis & Prentzas, 2006; Livingstone, 2012). Web-based tools are frequently associated with modern learning theories focusing on social interaction. Wikis are among these tools. A wiki is a Web-based environment enabling collaborative content creation recording the history of changes and contributions of users.

However, existence of technological features alone does not suffice for the successful integration of a tool in education since several factors affect the final outcome. These factors were classified by Mishra and Koehler (2006) into three main categories by proposing the Technological Pedagogical Content Knowledge (TPACK) model. These are the following: (a) Pedagogical Knowledge involved with the educational approach to be applied, (b) Technological Knowledge concerning the technological advantages and limitations of the technology to be used, and (c) Content Knowledge focusing on the teaching subject.

Based on this rationale, this chapter focuses on the possibility of integrating wikis in education. Knowledge about how to use wikis to enhance collaborative learning is a characteristic example of applying TPACK. The chapter concerns the linking of issues involving technological and pedagogical knowledge. More specifically, the compatibility of wiki technology with modern learning theories is shown by discussing wiki features and their connection with expectations of learning theories such as social interaction, participation, collaboration, critical thinking, knowledge co-construction and creation of learning communities.

This chapter begins with a brief presentation of the major principles of modern learning theories. Further on, the connection between wiki features and expectations of learning theories is discussed. Afterwards, future research directions involving wikis in education are outlined. Finally, the conclusions of the chapter are presented.
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