

## Chapter 8

# Teachers Learning with Wiki: Factors Influencing Behaviors and Outcomes

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### **ABSTRACT**

*Wiki implementation in education has been thoroughly researched over the past few years, particularly due to the use of this technology in higher education institutions. One unique branch of this research is the influence of the Wiki environment on teachers who participate in teacher education programs. A multicultural group of teachers - younger and older, experienced and novices, Jews and Arabs – was examined while learning literature and its instruction with Wiki. Satisfaction with the learning process and its outcomes, as well as with relations among learners and between them and the lecturer, was high. Three main factors influenced the learning process and participants' attitude toward the use of Wiki: (a) level of professional development and teaching experience, (b) culture and mother-tongue of the participants, and (c) discord between academic norms and the Wiki environment's democratic norms.*

### **INTRODUCTION**

The aim of this chapter is to present the impact of teachers' professional level, their culture and learning habits on their behaviors while learning with Wiki, and on the outcomes of this learning activity. The chapter begins with a brief review of the literature regarding Wiki-enhanced teaching, including its use in teacher education. It then describes phenomena uncovered by a study which

examined a group of multi-aged and multicultural teachers with diverse professional experience, who learned in a Wiki environment. At the end, challenges for teacher education are discussed.

### **Teaching and Learning in a Wiki Environment**

Wiki technology allows participants to share the writing and editing of varied documents according to the writers' goals. Every participant may write,

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add, edit, change or erase paragraphs or expressions in the edited document as needed (Leuf & Cunningham, 2001). This is a multi-modal, hypertextual, transparent environment, with a relatively user-friendly interface, and few limitations on text dimensions. Among its advantages are the 'archive' and 'history' features, allowing one to follow the process of document development and the relative contributions of the different participants, as well as reconstruct and improve previously rejected versions (Read, 2005; Ravid, 2006). These characteristics invite teachers and educators to adopt this social technology in order to extend the learning process beyond the classroom walls. Studies examining Wiki-assisted learning have shown its advantages, noting its support of constructivist learning processes (Farabaugh, 2007; Wand & Beasley, 2008); group planning and implementation of tasks; strengthening interactions among learners and between them and their teacher as compared with the interaction taking place in traditional learning environments, as well as exposing the knowledge accumulated by a group of learners to the entire group and its assessment throughout the learning process (Morgan, 2004; Watson, Boudreau, York, Greiner & Wynn, 2008). Wiki is one of the tools available for constructing an effective connection between the concept of "writing for learning" (Emig, 1977) and active learning, using cooperation which was found to be effective for learning and knowledge construction (Salomon & Perkins, 1998; Slavin, 1996). Additional studies have shown that learning with Wiki strengthens and improves the participants' efforts to contribute to the group's document creation and improve it, through constant exposure to the other participants and external readers (Ravid, 2006). Writing in the Wiki environment has been found to encourage, if based on appropriate pedagogy, complex processes of reading comprehension, multiple interpretations, dialogue among interpreters and free creative writing (Desilets & Paquet, 2005; Farabaugh, 2007).

Satisfaction with learning with Wiki depends on the application of appropriate pedagogy, which may foster efficient usage of the environment's advantages. The literature shows that participants' knowledge and trust of each other have a positive effect on cooperation and minimize harmful competition. Learning tasks best suited to this environment are characterized by having a wide perspective and openness to different points of view (Meshar-Tal & Tal-el-Hasid, 2006). In addition, familiarity with and respect towards the rules of working, behavior and politeness in the environment, minimize tension among participants (Ben-Zvi, 2007). It has been shown that it is important to inform participants regarding the characteristics of writing in a hypertext environment, as these are different from the rules of normative academic writing. It is also important to present criteria for assessment of both process and product in advance (Meshar-Tal & Tal-el-Hasid, 2006; Morgan, 2004).

Teaching with Wiki influences teachers' work, since they are required to be facilitators, managers and orchestrators simultaneously (Schneider, Synteta & Girardin, 2003). Discussion by learners regarding the written documents is essential for the promotion of learning, and its contribution is enhanced when the teacher deals in his/her comments with critical thinking, not only with linguistics, quantitative or content-based issues (Wang & Beasley, 2008). Documents or products constructed on Wiki pages become part of the data resources for discussion, research or processing, growing from the contribution of all partners in the learning project. Therefore, in order to mindfully use the developing content and ongoing process, teachers are required to apply flexible teaching.

Alongside the advantages of Wiki technology for teaching and learning, Wiki has some limitations as well. Research shows that the culture of teaching and learning the various domains affects the level of effectiveness of using Wiki. It was found, for instance, to be effective in the

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