

# Chapter 14

## Requirements for Successful Wikis in Collaborative Educational Scenarios

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### ABSTRACT

*What are the requirements for the Wiki engines to be used collaborative learning activities? Can any general-purpose engine be used? Or is there a niche for an educationally oriented crop of wiki engines? Do these educational wikis need to be integrated within the LMS to frame the collaborative activity within the walls of the virtual classroom, or is it preferable to have an external engine? These questions arise to every teacher who is about to plan a wiki-based collaborative learning activity. In this paper, the authors examine the use of wikis in college courses at three universities. The findings of this research are introduced and adopted as new features in two major open source wiki engines used for education: the Wiki module for Moodle 2.0 (as a Wiki engine embedded inside a LMS) and Tiki as independent full-featured Wiki CMS/Groupware engine.*

### INTRODUCTION

#### Research Framework and Methodology

The use of wikis in education is of a potentially huge value: wikis can be applied to foster collaborative work, to promote project based learning experiences, to open the work conducted in classroom to the world, to facilitate information

exchange between groups and educational institutions, etc. The possibilities are practically endless (Augar, Raitman, & Zhou, 2004; Educause Learning Initiative, 2005; Fountain, 2005; García Manzano, 2006). So, using wikis as environments for educational activities allows new pedagogical scenarios, which are pursued by many educators worldwide in the context of collaborative learning (Dillenbourg, 1999). But since a Wiki engine is a tool, we might want to be sure that we are using the right one for the job.

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The main question we want to address in this paper is: what kind of wiki application we need in order to host the educational wiki experiences? Or in other words: what are the requirements for a Wiki engine to be suitable to host collaborative learning activities, which successfully facilitate faculty and students with their respective tasks? This paper exposes the conclusions and insights obtained after a 6-year research period conducting the following activities:

- Using Wikis for collaborative learning activities in college courses (degree and master) on different specialties and on 3 different Universities (UOC, UB and UPC).
- Analyzing the feedback from students, the quality of the work and the usage logs.
- A participative observation process within the 2 Open Source communities ‘Moodle’ and ‘Tiki Wiki CMS/Groupware’ (also known as “Tiki”), engaging in conversations about teaching using wikis and improvement the wiki engines with teachers, administrator and developers.
- Developing improvements to the Wiki engines, submitting the code to the community and being exposed to the feedback and evaluation.
- Making sure our research is actually being taken advantage of, by committing actual code to the official releases, after an approval process, which sometimes involves votes in the community (Moodle case), or by means of the wiki way of making software (Tiki case).

### **Two Alternative or Complementary Approaches: Internal or External Wiki**

An educational institution has to choose between two basic ecosystems (or set them both ready complementarily, offered as alternatives for their faculty): the first one is to use a wiki engine em-

bedded and highly integrated inside the Learning Management System (LMS), host of the “virtual campus” of the educational institution, such as Moodle (<http://moodle.org>), Sakai (<http://sakai.org>) or Dokeos (<http://dokeos.org>), among the free software solutions. The second option is to use a vertical wiki application (such as Tiki or MediaWiki), a stand-alone full featured Wiki CMS/Groupware web application or just a powerful wiki engine, respectively, to conduct a fairly free wiki experience outside of the boundaries of the educational institution.

In both cases, basic conclusions from previous works have to be taken into account as premises in order to ensure the effective use of wikis in Education. These include:

- a. WYSIWYG (What You See Is What You Get) is not necessarily a “must” feature because basic wiki markup seems to be easy enough to understand and use even for primary education pupils (Désilets, Paquet, & Vinson, 2005).
- b. The main handicaps that prevent users from having a successful activity seem to be the lack of motivation and usability (Kickmeier-Rust, Ebner, & Holzinger, 2006).
- c. Our experience indicates that students usually don’t participate much (if any) in wikis if there is no grading “retribution” for that participation. This is similar to what has been reported for professional sites where potential contributors don’t see its worth, provided the institution hosting the wiki does not offer any benefits to make up for the time spent contributing (Giordano, 2007).
- d. In order to enhance their learning, students need “on time” feedback for their individual contributions in the class or the workgroup (Diamond, 2004). Teachers, on the other hand, need tools that facilitate the task of quickly providing objective feedback, assessment, and grading of groups and individuals alike (De Pedro, 2007).

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