

CAMPUS TECHNOLOGY



Collaboration

3 Challenges to Wiki Use in Instruction

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- 02/11/09

Wake Forest University [has posted](#) the following about the benefits to using wikis in instructional settings:

[A wiki ... p]romotes evaluating, synthesizing, elaborating, analyzing, problem solving, decision making, knowledge base construction, argumentation/justification, and learning communities.

In a recent article, Wheeler, Yeomans, and Wheeler (2008) [suggested](#):

Wikis enable students to collaboratively generate, mix, edit and synthesize subject-specific knowledge within a shared and openly accessible digital space.

Both of these descriptions highlight higher-level thinking skills that teachers would love to see developed in their students. The reality is, however, that just as with any actual use of technology in instruction, there are always challenges, not only in practical terms with familiarity with the technology itself but, more importantly, in a pedagogical sense as the benefits to teaching and learning are examined more thoroughly. How can the instructional uses of a wiki be maximized to ensure this higher level of engagement with students?

Challenges (with benefits)

As we examine some of the challenges that teachers face when using a wiki for instructional purposes with students, the following three challenges will be discussed, along with the benefits that also accompany them.

1. Creating Meaningful Assignments: Motivation

There is a temptation with using a tool like the wiki for teachers to simply introduce the tool and

ask the students to use it, and then watch to see what happens. That usually occurs because teachers themselves are unfamiliar with the actual potential of the tool to the process of teaching and learning. While knowledge around this is still growing, we do know from teaching in general that students respond poorly to badly designed assignments with no real purpose articulated as to their connection with the learning outcomes or direct benefit to the student's overall learning experience.

Unfortunately, when using new technology tools, this can become obvious very quickly as assignments are "captured" and viewable objectively. This means that gaps in design and purpose are not only demonstrated through lack of (obvious) participation by students but also lack of viewable connection to the overall purpose and meaning of a course. This frustrates students and usually results in lack of motivation and participation on their part. Well designed assignments are clearly based on the learning outcomes of a course and also present meaningful purposes for students in their completion. That is, students are further in their learning process after an assignment than they were before it.

When using a wiki, the design of an assignment must be demonstrated clearly in the viewable sense as well as in the non-viewable pedagogical reasons for doing it. For example, when designing an effective assignment for a wiki, make sure that:

The Assignments Is Moving and Not Closed (Dynamic, Not Static)

The main reason for using a wiki is collaboration. That is, students working together in order to progress a project or a document. In other words, it cannot be completed without full participation from everyone and cannot stand alone outside the wiki. The work is dynamic in the sense that it is not preset with only one method of completion. The process and the outcome depend on the collaborative success of the students.

The Assignment Requires Participation

As a wiki is "viewable," participation and non-participation are obvious. All input and contributions are captured and owned by the person who contributed the work. Likewise, if there is a gap in participation or students opt to miss specific steps in the process, this is captured and viewable. Therefore, the success of the work depends on everyone fully participating.

The Assignment Uses the Participation To Move Forward

The participation must also progress the work forward. In other words, there must be somewhere for the input to lead. Again, if the outcomes are preset, then there cannot always be a movement forward. Additionally, if the outcomes are preset, then the autonomy and individuality of students and student groups will not be reflected in the work. Therefore, the stages of input must not only be present and captured, but must also move the thinking and the work forward from the place it originated. While this can be the goal of any collaborative project with students, the wiki makes the process more transparent.

2. Grade Value for Constructed Input: Affirmation

Affirming students through grading values that adequately reflect the process is not new to education; however, in the area of new technology use, it is essential. That is, students will become frustrated when grades only reflect the end result or a product. The effective use of Web 2.0 tools requires students to be active throughout the process, and that work should be reflected in the final

grade for an assignment.

For example:

Working with and Building on Existing Information

Web 2.0 tools make the gathering and organization of information a first stage in any project. Prior to these individualized tools being accessible to students, teachers retained the "source-like" quality of information provider and information organizer. With these new tools, those roles should not be provided by the teachers, but students should be rewarded via process grade for gathering useful information and for organizing that information in a meaningful way that enhances the process and the work.

Inputting new information

Along with that idea should be the notion of gathering new information. In other words, when students gather information that demonstrates innovation or creativity, it should also be reflected in the process grade.

Synthesis of Ideas and Relevant Use

Finally, the information should not only be organized but synthesized into useful ideas for the project or work at hand. While this is typically viewed as a higher order thinking skill, synthesis is a normal step in making the vast available information useable and applied within the specific context of an assignment. Again, that skill should be valued in the process grade assigned by the teacher.

Whatever the content or specific focus of the assignment, if the stages outlined above are not reflected in the grade, the students will feel that their work has not been adequately reflected. Additionally, if these stages of process are achieved effectively, they develop advanced level skills in students such as collaboration, idea modification, summary and synthesis, and application. Such skills are difficult to develop well in students and should be reflected in the actual grade. Therefore, focus on the learning process rather than an answer or preset objective should drive the grading differentials.

3. Collective Knowledge Use: Learning

Actual learning takes place when what is understood is applied in some meaningful context of use. That is, we can forget facts and information bites that we may have memorized for recall; however, we tend to always know what we use on a regular basis and/or what has been integrated into our professional practice or knowledge base for life and work.

The power of using the wiki for collective learning is that it builds on a collective collaboration of knowledge construction and also visibly and logically captures the progress of thought and application for the participants and observers. Therefore, rather than simply an argument or debate, a paper, or a project, a wiki-based assignment can illustrate stages of development in thinking, collaboration, synthesis, and application. This helps to contextualize the learning that has taken place for immediate benefit to students and for future use in learning.

In line with this thinking, and the potential for higher level collaboration using a wiki, the following

are three possible barriers to effective collective learning:

Non-Complex Problems

Posing simple problems with preset or obvious solutions is not an effective use of collective learning. Problem-based design is an effective way to promote collective learning but only when the problems posed are complex and require exploration and discovery at multiple levels.

Preset Solutions

When teachers have already provided the solutions to the problems, there is no perceived need for students to engage in collective work.

Inadequate Time Allowed for Process

Problems need time to process and collective learning needs time to take place. When inadequate time is allotted for this kind of work, students will become frustrated and short cut the process.

So wikis can provide an effective context within which higher-level thinking skills and collective learning can take place, but not without careful planning on the part of the teacher. Control must be let go so that students are empowered to explore and discover and to work together towards a solution. This maximizes the problem-based approach but also increases the likelihood that students will acquire the kinds of skills that are transferrable and the higher-level processing skills that complex problems require in order to work them through.

About the Author

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