Using Technology to Enhance Interaction Beyond the Classroom

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Analysis Phase

Background

The FANTASTIC FIVE group is comprised of five members; Blake Beluscak, Bill Franck, Marlene Glennon, Dan McGee, and Lisa Temsey: http://instructionaldesignspring11.wikispaces.com/Fantastic-Five. Prior to this course, we had not worked together as a group; however, we had interacted in various discussion boards and projects on an individual basis. Our team members’ content knowledge covers a diverse range of subject areas and we work in various levels of education from K12 institutions to college.

When presented with the various Project Problems, we discussed many options through email before deciding that the Problem best suited to our diverse expertise would be one posted by Dr. Colville-Hall. This posting involved an exploration of using technology to enhance interaction with her students. We submitted our choice selections and were pleased when we learned our team had been awarded our first choice.

The Problem

Dr. Colville-Hall, the Subject Matter Expert (SME), expressed that she wished to enhance foreign language instruction through interactive technology for PK-8 teacher candidates. The team set up a meeting with our SME to ascertain the exact nature of her request and to what extent she planned to incorporate technology to enhance interaction with and among her students.

Our meeting with Dr. Colville-Hall revealed that she was open to ideas and that she clearly wished to find a means to provide her students the opportunity to interact in an online
environment in such a way that would allow them to share and exchange ideas. She also desired that this environment have the capability for them to share video and critique one another. Finally, she wanted to be able to monitor this process and interact as necessary with her students and the posted content.

**The Learning Goal**

After reviewing the problem and the needs that were clarified by Dr. Colville-Hall, the team decided that a wiki would be the ideal technology for this situation, utilizing the site Wikispaces.com. The wiki would provide Dr. Colville-Hall the monitoring and interactive ability that she indicated she must have, while it would also provide her students with an online environment flexible enough to accommodate interaction among the students and instructor.

Because the wiki can be accessed by students who would be given permission to add content, videos of their classroom experiences could be uploaded and team members would be able to add comments, critiques, and suggestions. The entire process would be viewable by Dr. Colville-Hall and she would also have the control necessary to add, change, or modify the content of her students. This entire process, performed in the online wiki environment, would ultimately enhance interaction in Dr. Colville-Hall’s course through the collaborative nature of the wiki.

**Needs Analysis**

In order to progress through the ADDIE design model process, the team first analyzed the needs and abilities of the participant professor. Dr. Colville-Hall admitted that she was not familiar with wikis and how they functioned. Lisa Temsey, who currently works as a staff assistant at the University of Akron, offered to create an instructional module for Dr. Colville-
Hall’s course in SpringBoard. This module would provide background and information necessary for setting up and using a wiki.

The Fantastic Five team also designed a simple questionnaire, to be administered to the students in Dr. Colville-Hall’s course, which asked questions about the user comfort and familiarity with technology. The questionnaire contained several questions concerning the use of wikis. The data generated from the student questionnaire revealed that most of the students felt fairly comfortable with technology; however, most of the students indicated that they were not familiar with wikis or how to use them. This information was taken into consideration as Lisa Temsey considered who to set up the learning module for using a wiki on Dr. Colville-Hall’s SpringBoard course. Meanwhile, Marlene Glennon, who is employed at the University Library, planned a series of dates during which the team would meet to analyze the data and proceed on the Design, Development, and Implementation stages of the project.

**Learner Analysis**

Our team realized that this project was going to be implemented a little late in the learning process for this group of learners in Dr. Colville-Hall’s course. Our goal to implement a wiki site would require us to accelerate the implementation process if this project were to be a success. The target learners in this project design would be busy with current course requirements and asking them to sit down and learn a new technology at this point in the semester would be a challenge. Furthermore, the team saw the challenge of convincing this target group that the technology being implemented would be of significant value to them and that this implementation would assist them in the process of sharing personal experiences with one another.
Because this project design was not ready at the start of Dr. Colville-Hall’s course, the problem of giving questionnaires and obtaining feedback was a concern for the group. In order to move forward with design and development, the team knew that we would have to get these young learners to provide us feedback so that we would know how to best accommodate their needs.

**Design Phase**

**Introduction**

The issue stated by the Professor Colville-Hall is that she would like students to be able to communicate and give feedback outside of her class utilizing technology. To do this, we planned to create a wiki site that could be used by the class to post their ideas and reply to others’. However, we needed to instruct Professor Colville-Hall on how to use the wiki before focusing on the class to ensure she had a reasonable level of comfort and competency.

The objective of incorporating a wiki site into the classroom is to have students be able to compare and contrast their lesson plans with others in the class. Students would be able to see areas of weakness within their own lesson and benefit from reading peer lesson plans. Yet, since many students and the teacher come from multiple levels of teaching with technology, the steps to creating a wiki necessitated explanation to the target group. To make this a smooth transition into the class, an instructional module was created to incorporate pieces of essential knowledge. The module explains how to set up a wiki for both students and teachers.

**Task Analysis**

To ensure success, two theories have been incorporated: learning-related sequencing and student reflection. The learning-related sequencing involves students learning a simple task before proceeding into more advance material. Setting up the wiki is a simple and essential
process for students - simpler as a starting point than creating and comparing lesson plans with peers. Students then reflect on comments posted to the wiki in relation to their uploaded lesson plans and what they have read from the lessons of others, leading them to create something more refined. The need to develop proper instruction and a firm foundation is essential.

After examining data provided by the students, an instructional module was designed to aid students and the course professor in the design and setup of wiki sites. The module integrated the basic information needed for students to start the wiki by including written instructions, video guides, and photos of each step needed to begin work on the site. Lisa Temsey spoke to students in the class and explained in detail what was needed to complete the exercise. Students were then asked to post their lesson plans using the default lesson format provided on the wiki and then comment on their peers’ lesson plans. Professor Colville-Hall expressed that she had an interest in incorporating wikis into her class so students would be able to communicate the lesson plan development to one another and utilize a new method to show well-designed lessons that students create. Students who are involved in the wiki would be able to present information to their peers and gain a deeper understanding how to design a solid lesson plan. However, as the group began to think of ways to incorporate this into the classroom, a problem arose.

Although in theory wikis would have been an excellent tool to incorporate in the foreign language instruction classroom, the amount of time left to do so was insufficient to successfully carry out the project. If more time was allotted to this project, it would have led to a better integration with course instruction. To remedy this, plans are in place to continue this next semester outside of the Instructional Design class. By starting earlier, the group anticipates a better result using the learning-related sequencing theory.
Process

The procedure students follow to post their lesson plans to the Internet is that they will create a wiki site on Wikispaces.com. On the class wiki page, Instructional Techniques: Modern Language K-8, students will create a page where they can select a sample lesson plan format to use as a model for their posted lesson plan. As students create their lesson, they are to look at lessons of their peers and reflect on or evaluate their own lesson. An additional request of Professor Colville-Hall was that she would be able to link to lesson plans that show the best uses of creating a lesson.

Development Phase

In considering our performance objective, our group decided that “students will use technological tools to communicate, collaborate, discuss, and critique one another’s work.” This objective tied to both the goals of the course’s instructor and the features and benefits inherent in the choice of a wiki as a pedagogical tool.

Students were to use a class wiki to interact, collaborate, and communicate with one another as well as the professor. A wiki is designed to function as a natural collaborative and communicative tool. Its main purpose is to be a repository of information, collected asynchronously among peers and edited by one or many, usually centered on a common theme, idea, or topic. The course on foreign language pedagogy and methodology would use our group’s wiki for lesson planning collaboration.

In order to provide students with instruction on wiki use, a Springboard module was created to deliver the content to students prior to asking them to participate in the wiki. Using Springboard provides a familiar space for students to view instructional materials, offering them
an opportunity to repeatedly visit the materials as needed. The instructional module included
screenshots and detailed information vital to the wiki participant.

Our development consisted of three stages, each focusing on important aspects of
instructional design. For the first stage of development, a focus was placed on the desired
outcomes, considering what the learners would understand after the project, what essential
questions would be considered, and what learners were to know. The four understandings that
were targeted for learners are as follows:

A Information placed on a wiki is ubiquitously accessible.

B A wiki is an asynchronous complement to face to face, synchronous instruction.

C Wikis address multiple learning styles and communication styles through infusion of
 various types of media.

D Wikis supplement face to face communication and bridge the gap between such
interactions and the asynchronous sphere.

These understandings are general facets of wikis, considering their general nature and purpose;
these facets are constant from wiki to wiki.

Essential questions aid the learner by providing a focus and point of inquiry. The
questions defined by our group examined both the essence of wikis in general, as well as the
purpose for our learner’s wiki. In examining the essential questions to consider in relation to this
project, four questions came into focus:

A How can the ubiquitous nature of wikis positively impact learning, communication, and
collaboration?

B How does a wiki complement other forms of communication and collaboration?

C How does a wiki address multiple learning and communication styles?
D How can a wiki augment face to face communication and collaboration?

Such questions address the reason for utilizing a wiki in coursework and lesson development. Wikis lend themselves to becoming natural tools in education due to their inherent components for communication and collaboration. Because they are asynchronous communication and documentation mediums, students can participate at their own pace and on their own time. In the hierarchy of tools that afford flexibility for learners, wikis rank at the top.

Our group chose four pieces of essential knowledge for learners to take away from the wiki project. The following were decided as the knowledge components to the project - learners will know:

A How wikis augment face to face communication and collaboration.

B How wikis address multiple learning and communication styles.

C The useful features and benefits of wikis.

D How to effectively use a class wiki to interact, collaborate, and communicate with one another as well as the professor.

In stage two of the development process, assessment evidence was targeted in order to determine the means by which learners would demonstrate understanding of the learning unit. Learners were asked to respond to a survey about the learning experience. Their responses would inform the group as to the success of the project. Learners further demonstrated understanding of the learning goals through proper use of the wiki as defined through the Springboard module’s instruction.

Stage three of the development phase focused on the learning plan in order to support learning and knowledge mastery by the students in terms of the objectives and learning goals. Instructional strategies involved the following:
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A Tutorial: learners will receive instruction on wiki use through a SpringBoard module.

B Seminar: learners will be introduced to the wiki through face to face instruction.

C Experiential Learning/Discovery: learners will model wiki usage for their fellow students.

For this stage, required media was noted as well and is as follows:

A Access to Wikispaces via an Internet enabled device (i.e. computer, tablet, or other wireless device).

B Necessary content for the experiential learning phase – the course instructor will guide students on the content to be added by them to the wiki. The content will be lesson plans from the students.

In focusing on student learning, there were some key steps defined. A prerequisite was targeted in that learners must have a basic understanding of lesson planning as taught by their course instructor. Since learners would use their lesson planning knowledge and skills in adding content to the wiki, this basic understanding was a must. Learners must also have a familiarity with the components required of their lesson plan that may call upon materials, as they would be identified on the wiki. To minimize difficulty and increase clarity, learners would focus on the essentials of setting up a wiki before working with the course wiki. Such basics lend clarity to the process of wiki contribution. To add a component of personal interest, students would utilize their own original lesson plans for their wiki content prior to any collaboration or critique with peers via the wiki medium. Finally, learners would examine the structure and function of the wiki through the course-level wiki before creating their own or working on their own wiki pages.

Implementation Phase
Implementation of this project was decided upon by Dr. Colville-Hall and our group. We decided it would be best to place the learning module within just one of our SME’s courses. She chose Instructional Techniques: Modern Language K-8. This class consisted of 11 students. It was a combination of both undergraduate and graduate students. We first emailed the entire class to inform them that the module had been placed in the Springboard course on November 15, 2012. This afforded the students the opportunity to take a look at the training module and then log into the class wiki. However, Dr. Colville-Hall was not certain that this alone would be sufficient. She asked that a member of our group come to her class and show the students how to log in, add lesson plans, and comment on one another’s lesson plans. Lisa attended the class on November 20th and instructed the students how to use the wiki: https://5200-321.wikispaces.com/. Dr. Colville-Hall requested that the students place their next lesson into the wiki by November 27th. The students then taught their lesson on November 29th and were to add a reflection to their lesson plan. They were to have final reflections and comments to other lesson plans completed by December 2nd.

Unfortunately, there must have been a misunderstanding of the dates or requirements, because the students did not think they were required to participate in this wiki and several did not. Our group emailed the class several times throughout the process, reminding them of the importance of posting their lesson plans and their comments. We finally emailed our SME and asked her to remind her students as well. The students were asked to not only post in the wiki but to post their lesson plans to the Dropbox as well. We think they just did not feel the need to post in both places. This project could have been successfully implemented with a bit more support from the SME. Not all people are excited about the use of technology and it actually frightens many. By starting this project at the beginning of the semester, the group feels it would have more success.
Evaluation Phase

Our group sent an initial survey to the target audience: the 11 students in SME’s class: Instructional Techniques: Modern Language P-8. The results of that survey indicated that all members of the target audience were at least moderately comfortable with using technology in their classrooms, and at least 70% were comfortable with using wikis. After the due date for this assignment passed, however, we examined the wiki we set up and noticed that only five of these 11 students actually posted their assignments on the wiki (despite two email reminders to the teacher and students), and only one student left comments on two of her classmates’ posts, but no further discussion arose from her comments – which was the intention of this experiment with the wiki: to create a discussion in order to share ideas and offer suggestions on each other’s lesson plans. We also discovered that four out of the six students who did not use the wiki did not reply to the email invitation to Wikispaces. Marlene sent an email to our SME telling her which students did and did not use the wiki, and which ones did not even reply to the invitation.

We submitted a follow up survey for these students to complete, but we only received replies from the five students who participated in the wiki: roughly half indicated that they had a fairly positive impression of Wikispaces, found it easy to use and navigate, visually appealing, and were likely to use it again. The other half, however, did not have a favorable impression of Wikispaces, found it neither easy nor difficult to use and navigate, did not find it visually appealing, and were unlikely to use it again. Both indicated that Wikispaces ran smoothly on their browser most of the time, and the tutorials we provided sufficiently answered any questions they had. In the “further questions or comments” box, no student provided more specific details as to why their choices were made.

Conclusion
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We can only conclude, therefore, that perhaps the SME did not clearly indicate to her class that this was a required assignment, or that over half of this target audience was unable (due to time constraints or reduced access to computing equipment) or unwilling to embrace this particular type of technology at this time. This follows the logic of the old proverb “you can lead a horse to water, but you can’t make it drink.”

Recommendations for Changes

As far as recommendations for changes in future use, we request an earlier meeting in the semester with the SME to train both the SME (if applicable) on the technology and request that he/she make it clear to the target audience that the use of this technology (as well as completed before and after surveys) is a requirement. Without that extrinsic motivation, I doubt many students would as eagerly embrace new technology initiatives at first. This tool also needs to be regularly advertised and regularly used by ALL students, as well as the teacher, in order for it to be successful.