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Constructivist Learning Through Wikis in the Writing Classroom

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As technology evolves, shifts and changes in the world, classrooms are inevitably affected by the ripple of technology and its constant transformation. At least eighty percent of kindergarteners use computers regularly and nearly fifty percent of children under the age of nine browse the Internet (21st Century Literacies 2). By the time students reach college, many of them are already well versed in social software—technologies such as blogs, wikis, podcasts and RSS feeds (Parker & Chao 57). Despite the large number of students conducting computer-related activities at home, “The National Center for Education Statistics revealed that only half of the public school teachers who had computers or the Internet available in their schools used them for classroom instruction” (Judson 584). As a writing teacher at a two-year college, I struggled to understand how I could incorporate available technology to support my student writers.

Jackson Community College recently opened its doors to a new educational building with top-of-the-line technology where classrooms were equipped with individual wireless laptop computers for each student. Therefore, access was available and wide open for use, but questions still plagued me and I began to realize that I held assumptions about my role as a teacher. For example, how do I use all of this technology in a constructive way that will support my pedagogical beliefs? How can a teacher incorporate technology with “best” practices or actions that support fundamental components of a writing classroom like process, community, collaboration and revision? This initial questioning led me on a quest to explore one particular technology in both a composition and creative writing classroom—wikis.

Why Wiki?

My purpose for introducing wikis into my writing classroom was multifaceted. I wanted to integrate a form of technology that was conducive to collaborative activities but also easy to use. I settled on using free wiki software called PB Wiki (<http://pbwiki.com/>), whose slogan is, “if you can make a peanut butter and jelly sandwich then you can make a wiki.” I chose PB Wiki because the ease of creation and maintenance of the wiki was appealing and appropriate for a teacher’s first experimentation in integrating social software into the classroom.

A wiki can best be described as a collaborative Web site where content can be edited, revised and continually written, allowing all users easy access to a space where they collaboratively create writing (Parker & Chao 57-58). Wikis can be updated at any time from any location where the Internet is available and are a live, shared space, where all writers have editing and writing privileges (Wei et al. 205).

Wikis were first made famous by the highly publicized Web site *Wikipedia* (<http://www.wikipedia.org/>), which draws on multiple writers as the means for constructing and presenting knowledge. Founder of Wikipedia, Jimmy Wales, claims “wikis are helping young people develop writing skills and social skills by learning about group consensus and compromise—the virtues you need to be a reasonable and productive member of society” (Oatman 3). Others agree that wikis serve as a place to contribute and consume knowledge collectively enhancing learning experiences (Shareski, Winkler 6). While Wales presents a strong argument in support of wikis, I wasn’t sold on the idea of using it in my own classroom until I began to research how other writers and educators were capitalizing on the fluid and flexible structure of a wiki.

A professor of education at the University of British Columbia uses wiki spaces in both teaching and research where graduate course work employs the wiki as support for collaborative experiments in composition and a place to reflect on the writing process (Lamb 40). Author Rick Heller is using a wiki to develop his next novel by asking his readers for editing suggestions

and general feedback. He plans on using the best edits and suggestions into the next draft of his book (Lamb 40). Businesses have also recognized the advantages wikis can provide based on the highly collaborative nature of knowledge sharing. Toyota Motors has recently integrated collaborative technologies as a source to find new ways to initiate and sustain creative energy within customers, suppliers, and employees (Evans 31). Companies like Toyota are discovering that collaborative technologies such as wikis create fluid collaboration and communication among the different groups required for operating a successful business. With the notion of wikis in the workforce, business schools are also beginning to recognize the potential benefit of integrating social software into the classroom (Evans 32).

While educators and writers appear to be very open to the wiki concept, I was equally as drawn to the fundamental properties of wikis and the purposes for their original creation—collaborative spaces for writers to contribute and build knowledge. Because all members of a group are encouraged to participate on the wiki, they serve as knowledge repositories for communities of practice where participants improve and expand upon the knowledge through continual contribution over an extended period of time (Godwin-Jones 15; Walker 10). Perhaps the most significant factor leading me to experiment with wikis in my classroom is the concept of group knowledge building that wikis promote because it directly aligns with my constructivism pedagogy as a teacher.

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Constructivism and Technology Collide:

Theoretical Framework

While there are multiple interpretations of *constructivism*, educators generally refer to constructivism in terms of

cognitive and social or cultural constructivism (Windschitl). While the cognitive perspective centers on how learners, as individuals, adapt and refine knowledge (Windschitl), the purposes of this article support a social constructivism perspective where knowledge is developed through social and communal activities (Parker & Chao 59). As a writing teacher, social constructivism aligns with my pedagogical beliefs because I place great value on fundamental principles of constructivism—community, collaboration, group negotiation, and language development.

The social and cultural perspective of constructivism derives in part from early works of Lev Vygotsky when he developed a theoretical framework where social interaction allows “an environment to learn language, learn about language and learn through language” (Windschitl; Warschauer 471). Vygotsky argued that a student’s zone of proximal development, the knowledge created through social processes instead of individual activities, is only advanced when collaborative learning takes place between students and students and teacher (Warschauer 471; Windschitl). The role of the school then is to provide a place where social contexts can be created in order to promote higher-order intellectual activities through collaborative efforts (Windschitl). Additionally, Vygotsky’s perspective on constructivism focused “human learning and development bound up in activity where purposeful action was mediated by various tools” (Warschauer 471). In the case of my classroom, our version of the “various tools” would be the use of wikis. The challenge became to determine how wikis would mediate learning for students within the classroom community.

I strove to understand how I could guide students to generate practices in the class that would help them to learn how to use a wiki and to foster their development as writers. Another key piece of a constructivist framework is how members of a community, such as a classroom, develop language and action that lead to particular practices (Barton, Hamilton & Ivanic). Therefore, I sought to develop opportunities for students to engage in practices that would lead them to interact with wikis for multiple purposes through a creative writing classroom and a composition classroom.

If, on the sociocultural perspective of constructivism, knowledge comes to life through cultural influences through participation within a community of practice (Windschitl),

I rationalized that the medium of wikis would provide a platform for such collaboration to take place. In fact, some researchers argue that wikis may be the ultimate tool in supporting constructive learning because they focus on the learner and the community of learners, provide a space to manipulate a problem, and are highly interactive (Seitzinger 11). From this perspective, wikis seemed to be the best tool that fit with my pedagogical beliefs of teaching writing.

Integrating Wikis into the Writing Classroom

In order to fully understand the connection between constructivist pedagogy, wikis, and writing I utilized wikis in two of my writing courses—composition and creative writing, two courses with different expectations and outcomes. The classes provided me with opportunities to engage as a teacher researcher, particularly since I was able to observe students over time and talk with them about wikis and their progress. My research was catalogued through field notes—reflective notes recorded directly following class meetings, and analysis of student writing on the wikis.

Because the composition classroom is inherently different from the creative writing classroom in terms of student needs and support, I implemented the wikis differently in each class to see how best to reach the needs of specific writing communities. Outlined in the following sections of this article are the descriptions of wiki use in each classroom experience (composition and creative writing) and the outcomes that resulted. Based on my study, the results of wiki use in writing classrooms can be generally categorized into the following benefits:

Wikis

- are flexible and easy to use
- promote collaborative interaction
- provide a venue for purposeful writing
- increase opportunities to connect with different learning styles
- extend communication beyond the limits of classroom walls
- promote multimodal writing in an increasingly digital world

Wikis and the Composition Classroom:

Some Observed Patterns

In the composition class, the wiki was used as part of a

research assignment entitled the *wiki research project* over the course of one month. Students worked in groups of four to five researching a subtopic within a larger field of study. While each student produced a “traditional” research paper, the groups also worked together to display their research findings as a collective group on a communal wiki. The wiki thus served as a platform to share their individual research and create a comprehensive Web site on their chosen topic, which they then presented to the class.

The challenge of the assignment came in organizing and presenting their agreed upon information in the format of wikis—a technology many had never heard of before entering the class. Despite the challenge of teaching the technology of wikis, it was a priority for me to prepare students for the multimodal world they will live in upon graduation. According to Selfe & Hawisher (2), “Today, if U.S. students cannot write to the screen—if they cannot design, author, analyze, and interpret material on the web and in other digital environments—they will have difficulty functioning effectively as literate human beings in a growing number of social spheres.” Because the need to prepare students to write in an increasingly digital world is present and because writers in the workforce rarely operate alone, the use of wikis in conjunction with a traditional research assignment created a new realm of learning possibility—one that replicated a real-life and useful writing situation, allowing practice in group negotiation, collaboration and technology—elements consistently supported through the lens of social constructivism.

Developing A Community of Writers

As I observed each group working together on the wiki research project, I began to take note of several key trends. What unfolded over the course of the four-week wiki research project solidified for me an idea David Jonassen once spoke of: “learning most naturally occurs not in isolation but by teams of people working together to solve problems” (Seitzinger 4). Each group had to negotiate, interact and collaborate their individual ideas for the purpose of the group’s goals. This led to interactive conversations where students had to defend, explain and present their ideas in an articulate fashion to seek approval from the group. Rather than working individually with heads down

in mute silence, the classroom became a lively environment where student exchanges were constantly occurring. Social constructivist learning was at its peak.

While collaboration and preparation for a multimodal world were effective outcomes of this study, providing an environment for purposeful writing was also a trend I observed. In many composition classrooms, students write to the teacher or to other students in the class. Even after discussions of broadening audience with writing in a composition classroom, many students fail to see the point in working hard to reach a particular audience when at the end of the day the teacher is the only person placing judgment on the writing. For this reason, wikis are conducive to writing classrooms because they create an authentic audience where students are empowered by the scope of people that could read their writing (Oatman 1). Rather than the teacher and classmates being the only set of eyes to read a student's writing, the wiki opens up the audience to include anyone, anywhere at anytime (although users can create an invitation-only wiki).

The newfound scope of audience was a bit shocking to my students at first, but over time I observed an increasing diligence in effort to make their writing stronger because the added element of audience operated as a motivator. Upon the realization of the scale in audience, one student responded, "This is so cool. We are actually creating a source that people may use in their own research." This student created an important awareness for me as a teacher and as a researcher: incorporating wikis into my classroom meant that I had opened the door wider for the understanding of audience and empowered my students by creating a purposeful and meaningful writing assignment that reached an audience far beyond our classroom.

A Telling Case in the Composition Classroom

One of the most important potential benefits of wikis I observed through the wiki research project can be seen through one student and his story, which represents a telling case (Mitchell). Joseph exemplified the classic underachiever. He consistently scored low on his essays and not necessarily for a lack of writing ability, but for a lack of motivation and effort. During a conference, Joseph admitted that the composition class was a low priority for him and

that he did not see the benefit of spending time working on his writing when he was interested in entering a health-related career. He also admitted to writing his essays at the last minute or scribbling homework assignments down as he walked into the classroom. He often failed to participate in peer review and crucial prewriting activities to support idea building. Joseph had no qualms about producing C and D quality work as long as he barely scraped the line of passing the course.

This point in the semester hinged upon the wiki research project and I was worried he would slip through the cracks and give up entirely. I had failed to "hook" him, to draw him into the writing world, to demonstrate the importance of writing and excitement of presenting ideas through the written word. I had failed to engage him as a teacher. In a class of twenty five students, my rationale argued that it was not always possible to reach everyone, but I felt defeated and frustrated that all my attempts to draw him into our classroom writing community had failed—he remained an isolated and quiet figure in the corner of the classroom or worse yet, not present at all.

I began to notice a shift in Joseph's attitude the first day we began working on the wiki research project. It was subtle and perhaps unrecognizable to anyone else, but I saw the light in his eyes return when I told the class they could research any topic and it would be displayed online for all to see. He listened more attentively to my lecture, making eye contact and even jotting down some notes—an act of open-mindedness he rarely exhibited before. His group chose to explore historical aspects of several genres of music for their project and that decision, combined with the wiki, set off a chain of events that would earn Joseph not only a passing grade but a different perspective on writing. Joseph began to take a leadership role in his group quickly after the project began. On the first day of the project he participated in his group meeting, vocalized his ideas, and demonstrated his knowledge of preexisting web design and music. Over the course of the wiki research project Joseph showed his group how to utilize important web design elements to enhance their writing.

During one group meeting a week into the project, Joseph argued for each of their research pages to contain a musical play list of the genre they were researching. Several

members of his group opposed this idea because they thought it would be “too hard” or “not worth it.” Joseph did not retreat. He went on to defend his position by explaining to his group that adding a musical play list for each genre would bring to life their writing and research. He argued that if a reader had never heard about the music their group was writing about, they would want to hear what it sounded like or even watch a video of the music being performed. With his explanation, Joseph’s group began to change their mind about adding the play lists and soon their wiki was pulsing with music and video that showcased the music they were conducting research on. During this dynamic moment of interaction, several significant points occurred—group negotiation was needed to solve conflicting view points, collaboration was needed to set community practices and standards, and group knowledge building was implemented to make decisions and outcomes for the community.

By offering writing in a different package, Joseph became not only interested in his own writing but also highly engaged in classroom interactions. While he had failed to participate before, he now became a central contributor to his group and the class. After seeing how “cool” Joseph’s wiki was, other groups in the class asked Joseph for help in refining their wiki with visual and auditory elements to support their research. Joseph’s story highlights an important realization of using technology in the classroom—wikis provided Joseph a different opportunity to explore writing. It aligned with his personal interests and skills resulting in excitement and investment in his writing—key elements that were missing from Joseph’s writing experiences in the past. While Joseph represents only one student, in one class, at one college, his story is an important one because it demonstrates that different students require different learning environments and for students like Joseph, social software technologies may offer the much needed shift in interest and encourage them to actively participate in a writing community.

Wikis and the Creative Writing Classroom:

Some Observed Patterns

While the composition wiki was used in conjunction with a four-week research assignment, in contrast, the wiki in the creative writing classroom was used as an ongoing,

semester long project. The creative writing class wiki operated as a course management system providing a communal space to share information about the calendar, syllabus and upcoming events. In addition to supporting useful documents, each creative writing student had his or her own wiki page within the class wiki where they would post assignments, freewrites, thoughts, pictures and other various musings related to writing experiences.

Though the wiki design in the creative writing course was structured differently from the composition course, my observations yielded equally important results. Though the wiki served as an informational format a large portion of the time, individual student wiki pages created a facet of the constructivist paradigm to include collaboration, communication and conversation (Parker & Chao 59). Perhaps the most striking connection to draw from the observations involves student dialogue on the wiki produced outside of the classroom.

I had previous experience with using the PB Wiki software before implementing them into the creative writing course, having had the opportunity to experiment on my own before the start of the semester. However, my experience was limited and I was unaware that recent updates allowed an easy-to-use comment feature in which writers could leave comments on any of the wiki pages without having to edit the entire page. This made feedback, communication, and fluid conversation easy to initiate and sustain.

At the time I made the discovery of the comments feature, the class was a month into the semester and students had been asked regularly to post homework assignments and other writing activities on their wiki pages. Without any encouragement, instruction, or mention of leaving comments from the teacher, students in the creative writing course began leaving comments on one another’s wiki pages. For weeks this dialogue took place between the young writers as they created conversations on the wiki about various topics ranging from their writing to their opinions on President Bush and cheese. One might ask why a conversation about cheese and Bush would signify such importance, but the answer is straightforward and simple—the writers had moved their community far beyond the limits of the physical classroom and were connecting on a personal level through their writing on the

wiki. Furthermore, the dialogue continued as a *choice*, not a restrained and required assignment given from the teacher. The students had found each other on the wiki on their own.

This discovery of independent community building suggests two important issues about the use of wikis in the writing classroom: First, teachers are often learning about technology at the same time the students are, and, in many ways, students can teach the teacher about technology. And secondly, without any prompting, a group of writers can spontaneously create a writing community that transcends weekly meetings, physical space, and time requirements increasing potential opportunities for group knowledge building and collaborative activities. The astonishment I faced when I learned of the wiki conversations quickly dissolved into confidence that introducing a wiki into the writing classroom would have powerful affects even I was unaware of as the researcher.

Telling Case in the Creative Writing Classroom

While my constructivist pedagogy grew roots in independent wiki dialogue, structured assignments utilizing the wiki also revealed the ease of use and tendency in developing a community of writers. For one assignment, students were asked to go on an artist date—a block of time set aside to nurture their inner artist most often achieved through an excursion to rejuvenate creativity (Cameron 18). After completing their artist dates, students were asked to write a brief explanation to post to the wiki about where they went, what they did and how it helped reconnect themselves with their inner artist.

One student, Dana, visited her childhood playground for the artist date assignment and brought her camera and chalk along with her. As she wandered through the playground, she paused periodically to scribble messages down with the chalk, capturing the words and images of youth with her camera. She then uploaded her photographs onto the wiki for the class to view. The images revealed messages written on various objects—on an old swing set she wrote: “Never be afraid to reach your highest height.” Other inspiring phrases popped up in her photographs and she included a few of herself being silly, laughing and pointing playfully at the camera with written captions explaining each frame of her adventure.

While Dana appeared very outgoing on the wiki, providing artful images, thoughtful writing, and routine feedback to her peers, in class Dana was a different student. During face-to-face meetings, Dana was introverted, quiet and restrained. During writing workshops Dana’s suggestions were written legibly on her classmate’s writing, but verbalizing feedback to her peers did not come without direct probing or prompting from classmates or the teacher. When she did respond to questions asked of her, she answered softly, her gaze frequently focused on the paper in front of her rather than the group of writers surrounding her. Though Dana was the quietest student in class, she became the loudest voice online through her writing and Web design on the wiki.

Dana’s story confirms that students have different needs and styles of learning. For Dana, her voice was made visible through writing, often supported by visual images, on the wiki, something she struggled to reveal in face-to-face meetings. The wiki gave her a home to be herself, to communicate, and to contribute to conversations with the writing community of the class. Not long after her display of photographs went up on the wiki from her artist date, her wiki page became a desired community standard of writing and design. Other students in the class began uploading images, videos and music to support their writing on the wiki as Dana had demonstrated through her artist date. The wiki became an extension of each writer as they continually added words and images together to create a communal space outside of the physical classroom, enhancing digital knowledge as well as supporting constructivist pedagogy through group sharing, collaboration and community expectations. Dana, though timid and hesitant to join the writing community in class, initiated growth of the community with her use of writing and images on the wiki.

Conclusions

While the observations of a composition and creative writing classrooms using wikis are small pieces of a larger conversation, they do encourage a connection between constructivist pedagogy, technology, and writing. If educators are to prepare students for a world full of changing technology, integrating social software such as wikis can provide a user-friendly approach while maintaining

pedagogical standards traditional to the writing classroom. The collaborative nature of wikis means that students build knowledge together with a focus on community rather than on the individual learner (Parker & Chao 59). This suggests wikis may be an effective choice in bringing technology into the writing classroom.

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