
WIKIS IN THE CLASSROOM: OPPORTUNITIES AND CHALLENGES

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This paper describes the development of a wiki in a Principles of Marketing class. Over the course of the semester students in two sections of the class created over 1,300 articles about the city of Omaha. Over 20 guests from a variety of organizations attended at least one class session and participated in discussions with the students. Quantitative and qualitative assessment data is presented to show how the project contributed to student learning. The article concludes with a discussion of the opportunities and challenges of using wikis in the classroom.

Introduction

The rapid growth of user generated content and the emergence of popular sites such as Wikipedia, YouTube, MySpace, Flickr, and Second Life has received significant media attention over the past several years (Dearstyne 2007). The term "Web 2.0" is sometimes used to capture the approach underlying these user generated sites, with an implicit comparison to Web 1.0 sites which are controlled by the publisher and cannot be edited by users. During 2006, *Newsweek*, *U.S. News and World Report*, and *Time* magazine all had cover articles on the phenomena with *Time* magazine naming "You" as its Person of the Year and noted in the opening of its article:

The new Web is a very different thing. It's a tool for bringing together the small contributions of millions of people and making them matter. Silicon Valley consultants call it Web 2.0, as if it were a new version of some old software. But it's really a revolution. (Grossman 2006)

Research in education has shown that experiential learning and engagement with the material increases learning (Astin 1999; Kolb 1984; Van der Schee 2007). When teaching core curriculum classes, it is often a challenge to overcome apathy and disconnect (Shanahan, Hermans, and Haytko 2006). When the sequencing of courses encourages marketing majors to take the Principles of Marketing course in the Fall semester of

their junior year, it can be a particular challenge to create this engagement in a class of non-majors. Such was the situation I was facing in two sections of Principles of Marketing I was teaching in the Spring of 2007.

This paper describes a class project that involved the development of a wiki about the city of Omaha (www.omahawiki.org) that explored how user generated content can be used in marketing. Over the course of the semester, students developed over 1,300 articles and uploaded over 360 pictures. The site was open to the public and by the end of the semester over 950 unique visitors had visited the site from 18 countries and 132 different cities. The students made presentations to guests from local organizations and developed recommendations of how the site should be positioned and developed after the conclusion of the semester.

Goals of the Wiki Project

One goal of using the wiki development project in the Principles of Marketing classes was to increase student engagement in the class (Clarke and Flaherty 2007). Before planning the syllabus, I reviewed the majors of the pre-registered students and knew that over 60% of the students would be finance and accounting majors. Since the marketing major consisted of six required courses sequenced over three semesters, I knew there were would be relatively few marketing majors in the course. I thus wanted a project that would appeal to non-marketing majors in order to increase their engagement in the course (Allred and Swenson 2006).

A second goal was to use the collaborative approach of a wiki (Leuf and Cunningham 2001) to help students better communicate their ideas to others and identify areas of agreement and disagreement. Bok (2006) argues in *Our Underachieving Colleges* that two of the goals of a college education should be to learn to communicate and learn to think. Two of the goals for our undergraduate program were stated as prepare students to:

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“communicate effectively, clearly, and persuasively through appropriate mediums” and “think critically and creatively about information, assumptions, and arguments in order to develop innovative solutions to business and societal problems.” Wikis are software by which people reach consensus on text and my experience with Wikipedia and a different wiki project during my sabbatical had indicated that use of a wiki might help to further these curricular goals. I had recently read *The Wisdom of Crowds* (Surowiecki 2004) and *Wikinomics* (Tapscott and Williams 2006) and saw the opportunity to use class discussion to draw out this collective wisdom (Hernandez 2002).

A third goal was to bring greater alignment across my teaching, research, and service activities and to align them with the strategic goals of the college. The AACSB accreditation standards require aligning curricular goals with the mission of the institution and I had been on the board of *Colleagues in Jesuit Business Education* for several years and had been on sabbatical the prior academic year at the Jesuit Institute at Boston College. During my sabbatical I had started the Ignatian Wiki (www.ignatianwiki.org) as a shared resource for Jesuit educational institutions around the world. I thus wanted to use my knowledge about the process of developing a wiki in my teaching activities. Our dean was also emphasizing projects with local companies that provided applied experiences for the students. Thus, developing a wiki about the city and exploring how it might be used to market the city fit with strategic goals of the college.

A fourth goal was to help students understand intellectual property and copyright laws and to have a greater appreciation of ethical issues related to user generated content. This included issues related to proper citation and allowable reuse of copyrighted content. There have been many embarrassing incidents at Wikipedia of firms removing unflattering but accurate information on themselves and/or deliberately vandalizing or posting negative information on competitors. Are firms responsible and/or liable for such actions of their employees? Who, if anyone, in a firm should be allowed to post company information on user generated sites? Is it unethical for firms to develop profiles on Facebook to market their products and/or produce YouTube videos where their involvement is hidden? I sought to use class discussion to explore such issues.

Creation of the Omaha Wiki and its Relationship to Principles of Marketing

Since the class wiki used the software used by Wikipedia, the first assignment asked them to go to

Wikipedia, pick any topic where they had expertise, and make some change to an existing article. The students were then randomly selected to discuss their changes. It was interesting that many of the student edits had been further edited and in some cases “reverted” (undone) before we discussed the edits in class. This led into a discussion of questions such as who writes and edits articles in Wikipedia, how vandalism is removed, and how disagreements are resolved. Most of the students had no idea of the community process and technology tools by which the volunteers at Wikipedia review changes to articles (see Kirschner 2006).

The focus then shifted to article creation on the Omaha Wiki. I passed out a two page handout that summarizes the basic commands students would need such as formatting of text, creation of internal and external links, and the process for adding images (photographs) to articles. The class wiki was set up so it could be viewed by the public but edits could only be made by students in the class. I asked each student to create five new articles and make at least five edits on existing articles by mid semester. We spent at least fifteen minutes per class session discussing contributions the students had made, questions they had about the project, and general issues about development of the site. Two class sessions were held in a computer room so students could edit articles and have technical questions answered.

As we progressed through the text, I used class discussion to relate each chapter to the Omaha Wiki. For the introductory chapters on segmentation and positioning, we discussed how different audiences (e.g., tourists, residents, convention goers, people relocating) had differing information needs. In the chapter on marketing research, I showed how online metrics provided very detailed metrics on site visitors (e.g., number of unique visitors, network location, geographic location, content accessed). For the chapter on business to business marketing, we discussed the differing needs of business customers (e.g., convention planners, business relocation) vs. consumers and discussed print ads and commercials the Omaha Chamber of Commerce had prepared for a business audience. For the chapters on promotion, we discussed user generated ads (three of 2007 Super Bowl commercials were user-generated) and had a logo design competition. This allowed a very fruitful discussion of branding, positioning, and comparative advantage of the Omaha Wiki in comparison to other info sites. Throughout the course we discussed intellectual property issues and the growth of user generated content sites. One theme throughout the course was that students tend to not trust information on commercial websites, find many on-line marketing efforts to be obnoxious (e.g., pop-up ads, pop-under ads, flash-

ing ads, being forced to watch commercials to access on-line video), and believe this mistrust of commercial sites is fueling the growth of user-generated sites.

The wiki project counted for 30% of the course grade and 67% of this grade was based on quality and quantity of individual contributions to the wiki and one third was based on team development of a “portal” and the team presentations of this portal. Every edit students made to the wiki went into the database and it was very easy to identify student contributions by going to their “User page” in the wiki and clicking on “User Contributions.” As part of the grading, I required each student to fill in a one page form that provided a count of new articles created, number of edits done, and number of photographs uploaded for each of three time periods (first half of the course, next quarter, final quarter). I also asked students to provide a textual narrative of the logic behind their contributions.

The site developed nicely over the semester and I provided a count of articles and images uploaded on the main page of the site, celebrated milestones (e.g., 500th and 1000th articles), and provided information on site traffic using Google Analytics. As the site grew, there was also significant interest from various people I contacted about attending the final student presentations. In all, 22 guests attended either the final presentations or class sessions in the final 4 weeks of the class including VPs, CEOs, and Directors of Marketing from the Greater Omaha Chamber of Commerce, the Omaha Convention and Visitors Bureau, Omaha Public Schools, and Omaha Performing Arts. As the site traffic grew and the potential of the site became clear, the AIM Institute, a profit firm that promotes the use of information technology in Nebraska, agreed to host the site and the site was moved to their site in Omaha the weekend before the final class presentations. This move greatly increased the reliability and speed of the site for the final presentations and provided for a smooth transition of the project after the semester was over.

Assessment of the Project

The primary tool for assessing the project was a survey done of the students in the final week of the class. Table 1 shows a quantitative summary of responses by students to the survey that specifically focused on the wiki project. The students were also asked to provide open ended comments to several questions about the project.

On the whole, the project was positively received by the students and appeared to have achieved its major goals. Over 90% of the students agreed that the project helped them understand copyright licensing issues and 97% agreed that the site should continue operating af-

ter the semester was over and that the instructor displayed enthusiasm and worked hard to obtain group consensus in class discussion. Seventy percent of the students agreed it was a valuable learning experience and 81% indicated they had discussed the project outside of class with others not taking the course. The lowest levels of agreement were related to restricting access only to those on campus (5%) and concerns about privacy (3%). The campus access question was asked because the IT department had wanted to restrict access only to students on campus which would have greatly affected the ability to show the project to the guests who came to the class. A separate question asked the students where they did their editing and only 24% indicated they primarily did their editing on campus (49% said “at home” and 27% said equally at home and on campus). This usage information has important implications for site access.

The open ended comments provided additional insight, with twelve students providing positive comments and three students providing negative comments. Representative positive comments included “This project was an amazing idea, I had an amazing time, and I learned a lot from this experience,” “This was a brilliant idea for a marketing project. I hope it stays with [Creighton] and that this year’s marketing classes get credit for it somehow,” and “it has been a great project and I think will continue to be a great resource for the city.” Negative comments included “I was honestly hoping to do a marketing plan in this class” and “I feel like I didn’t learn anything about marketing.” The majority of the other sections of the Principles of Marketing classes required students to write individual marketing plans and it appeared that this set the expectations for many students. This highlights a challenge of introducing a teaching innovation in a core class where other sections of the class have different types of projects.

Opportunities for Using Wikis for Teaching Marketing

The assessment data indicated that the students did not find it difficult to edit articles (only 14% agreed it was difficult) and uploading and placing photographs was only moderately more difficult (24% said difficult). Students also indicated they spent about the same amount of time on this class as other classes (mean of 2.95) and thus the project does not seem beyond the technical abilities of most students. I have since used a class wiki in the core MBA marketing management class to do market analysis and competitive positioning for both the Omaha Wiki site and for the Omaha Community Foundation. Because of the sensitive nature of strat-

Table 1
Assessment of the Omaha Wiki Class Project

<i>Questions (5=strongly agree, 1=strongly disagree, "Top 2 box score" is the sum of strongly agree and agree)</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>"Top 2" box score</i>
The Omaha Wiki project was a valuable learning experience.	3.73	1.10	70%
The Omaha Wiki project made the course interesting.	3.95	1.03	73%
The Omaha Wiki project helped me understand real world marketing issues.	3.57	1.32	65%
The Omaha Wiki project helped me understand copyright licensing issues.	4.32	.67	95%
The Omaha Wiki project contributed to interesting class discussions.	3.86	1.11	70%
The learning I gained through the Omaha Wiki project will be valuable after I graduate.	3.46	1.04	59%
I wish more of my classes had projects like the Omaha Wiki project.	3.62	1.14	68%
The guest speakers contributed to my learning in the class.	3.84	.90	78%
I talked about the Omaha Wiki project outside of class with other students who were not taking the class.	4.00	0.91	81%
I talked about the Omaha Wiki project outside of class with other students taking the class.	3.89	0.91	81%
Editing articles on the Omaha Wiki was difficult.	2.22	0.92	14%
Uploading photographs and putting them in an article was difficult.	2.62	1.09	24%
Understanding copyright licensing issues was difficult.	2.84	0.99	27%
I spent more time on this class than on most Creighton classes.	2.95	1.00	32%
The instructor displayed enthusiasm for the course material.	4.73	0.51	97%
The instructor was fair in decisions regarding the Omaha Wiki.	4.54	0.65	92%
The instructor worked to obtain group consensus in the class discussions.	4.68	0.53	97%
The instructor responded promptly to e-mails I sent.	4.59	0.55	97%
I am glad we had the option to select our own teammates for the wiki project.	4.19	0.78	78%
I am glad we had the ability to choose a user name other than our Creighton netID for the Omaha Wiki.	4.57	0.65	92%
The Omaha Wiki should have been restricted so it could only be seen by people logged into the Creighton campus network.	1.92	0.89	5%
I was concerned about my privacy since all of my wiki contributions can be accessed via "User Contributions" on my user page.	2.08	0.80	3%
I think the www.omahawiki.org website should continue operating after the semester is over.	4.62	0.55	97%

egy discussions, the decision was made to have a closed wiki that was accessible to only members of the class and not the general public. In this class I also found that it did not take very long for students to learn how to create and edit content on the wiki and that the students did the majority of this work from home. I thus believe that wikis can be used in a variety of classes and provides a good basis for class discussion around content issues on the wiki.

An additional opportunity for using wikis is to have cumulative knowledge development across semesters. There is no reason a wiki has to be open to the public for editing or viewing once the semester is over and one possibility is to have sequential semesters pick up where the prior class left off. There have been experiments of using a wiki to collaboratively author texts and the Wikimedia Foundation has sister projects to Wikipedia called Wikibooks and Wikiversity. There have been also been class experiments of not even having a textbook for the class but rather having the students use a wiki to create a text over the course of the semester.

Another opportunity is for class wikis that span universities. Cook and Swift (2006) describe a sales management simulation that was used in five classes in two universities and wikis naturally lend themselves to such collaborative learning. Wikipedia has hundreds of thousands of contributors and there are opportunities for classes at multiple universities to jointly contribute to a special interest wiki. As Davidson (2007) indicates,

Wikipedia is not just an encyclopedia. It is a knowledge community, uniting anonymous readers all over the world who edit and correct grammar, style, interpretations, and facts. It is a community devoted to a common good—the life of the intellect. Isn't that what we educators want to model for our students?

Challenges of Using Wikis

I found that the greatest challenge in using a wiki in the classroom is the time and technical expertise to manage the site. I personally have an undergrad degree in computer science and still encountered significant technical challenges. I initially had the Omaha Wiki hosted in the IT department at my university, but they were not able to support photographs on the site. I was unwilling to proceed with developing an encyclopedia that would not be illustrated and had to spend over 15 hours moving the site to an off campus hosting firm.

A second challenge is the time involved in monitoring the student contributions and organizing content on the site. Vandalism and verbal attacks on students are potential sources of embarrassment and possibly liability if using a wiki site that has no restrictions on access (e.g.,

Bugeja 2007). Since the Omaha Wiki could not be edited by people not in the class, I did not worry about vandalism on the site because all edits were traceable to a specific user account. However, I did spend a significant amount of time categorizing content, explaining the project to others in the community, inviting guests to class, and making arrangements for the site to continue after the semester was over. These investments of time can only be justified if they are viewed as either service activities or investments of time that can lead to publications.

In summary, wikis in the classroom provide a unique opportunity for collaborative learning. While there are challenges in developing and hosting such projects, there are significant opportunities to deepen student engagement in the course material and for helping students appreciate a collaborative approach to learning.

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