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Academic Leadership Journal

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Introduction

Note: *Whenever the personal pronoun “I” is used in the introduction and in the conclusion, it refers to the lead author who was the source of the original idea for the grant, developed the grant objectives, and implemented the grant in his classes and reflect his important professional experiences that led to the grant proposal and the analysis of its accomplishment.*

In December of 2008, the authors were awarded a University of North Carolina at Charlotte funded curriculum and instructional development grant based on two innovative ideas for preparing future school leaders: (1) the creation and use of wikis to expand and deepen student learning beyond the classroom, and (2) the creation of a virtual social network to connect current educational leadership students and graduates, providing the opportunity and the means for networking between students and practitioners, practitioners with each other, and both groups with educational leadership professors around the proposition that solving problems of practice (whether in the graduate classroom or in the K-12 arena) can be significantly enhanced by sharing personal knowledge of research-based strategies and school-proven best practices.

Review of the Literature

Web 2.0 Defined

O'Reilly (2005), one of the originators of the idea of Web 2.0, described the central principle behind its success as the embracing of the power of the web to harness collective intelligence. O'Reilly described the tool/practice of hyperlinking as the actual underpinning of the Internet itself. In other words, hyperlinks create the web of the World Wide Web. He wrote, “Much as synapses form in the brain, with associations becoming stronger through repetition or intensity, the web of connections grows organically as an output of the collective activity of all web users” (p.2).

Applications of Web 2.0 to Teaching and Learning

Boulos, Maramba, and Wheeler (2006) wrote of the use of Web 2.0 in online health-related continuing education. They noted why applications, particularly wikis, blogs, and podcasts, are more and more frequently being used: “Because of their ease of use and rapidity of deployment, they offer the opportunity for powerful information sharing and ease of collaboration” (p. 1). Shin and Lowes (2008), echoing this idea, pointed out that Web 2.0 clearly offers prospects in the use of participation and social activities to support learning.

Cleary and Marcus-Quinn (2008) noted that Virtual Learning Environments (VLEs) in higher education

can be productively used to “manage and enhance teaching and learning, and research. Discussion, chat, scheduling, and other collaboration tools make VLEs especially useful systems for designing and managing complex group projects” (p.1). Ajjan, Hartshorne, and Ferdig (2008), discussing the results of a survey of higher education faculties’ use of Web 2.0 technologies, noted that both students and professors perceive the use of Web 2.0 technologies as positive in general, but not necessarily for classroom use. They concluded:

The university students of today are not only conversant with, but are active users of, Web 2.0 technologies. Thompson (2007) wrote: “Recent information on student expectations already reveals significant changes that should be anticipated by educators. While today’s students still see faculty knowledge and expertise as the most important element in learning ... an EDUCAUSE survey reports that they will want faculty members to use information technology to communicate that knowledge better” (p.2).

To ignore this emergent reality is to ignore an opportunity to widen and deepen the experiences of students both during matriculation and beyond. Given the speed with which technology emerges and develops significantly limits the scope of the review of the literature. By the time a peer reviewed manuscript is published the technology which it discusses may have died, significantly expanded from its original design, or morphed into an almost unrecognizable version of its original self. Nonetheless, we drew several conclusions from the literature which formed the basis of our research.

Web 2.0 and learning.

Web 2.0 technologies provide a unique opportunity to continue content-specific interaction beyond the educational leadership classroom. Through post-classroom reflection and application conducted in a Web 2.0 environment, a continuous external *virtual cooperative learning* environment can be created.

Extending the classroom: the closed professional social network.

Today’s school leadership students (as opposed to only three to five years ago) live in a world of virtual social networks which have changed the nature and means of communication and connections. A natural and needed outcome of leader preparation programs should be not only an emphasis on networking for graduates, but the creation of focused-opportunities and means for networking to continuously add to the body of knowledge and successful practices. The university-funded, and department of educational leadership-developed closed professional social network created as part of this research, the **IN*SITE**network, filled this need.

Project Objectives

Six specific objectives for the project were identified based on insights from personal professional experiences and the review of the literature:

- 1. Teach students through Web 2.0 technologies
- 2. Increase faculty-student interaction outside the classroom
- 3. Increase student engagement through virtual cooperative learning
- 4. Create a self-sustaining and self-correcting feedback process as a practicum experience in

knowledge building and problem solving

- 5. Improve learning outcomes through virtual cooperative learning
- 6. Increase networking as a leadership practice of current and former students

Purpose

The purpose of this research study was (1) to determine the extent to which the project objectives were achieved, (2) to inform other professors, especially in the field of educational leadership, on the value, or lack of value, of using Web 2.0 strategies as additions to traditional instructional methods, and (3) to suggest future research directions regarding this quickly evolving technological tool that rapidly increasing numbers of graduate students expect as part of their “graduate experience.”

Method

Procedures and Participants

A pilot survey was conducted in the summer of 2009 with 11 participants who were students in a regularly scheduled master’s-level educational leadership course. The results of the pilot survey were reviewed, and minor changes were made in the survey instructions to help reduce confusion when similar questions were asked about the different Web 2.0 tools and techniques, and a section for demographics was added.

On December 12, 2009, email invitations were sent to 48 students enrolled in either *Curriculum Leadership* or *Legal Aspects of Schooling* courses during the fall semester of 2009 who agreed to participate in the survey. We received a total of 27 responses for a return rate of 56%. The respondents represented part-time students and a small minority of full-time students. Elementary school affiliation made up 51.9% of the students, middle school 11.1%, and high schools were represented by 29.6% of respondents. Thirty-seven percent of respondents were in *Curriculum Leadership*, and 63% were in *Legal Aspects of Schooling*.

By way of experience with Web 2.0 tools, 63% reported that they were members of a social network, but only 33.3% reported that they were skilled in social networking. A large majority of the respondents (88.9%) reported that they had no experience with *Google docs*. More than half of the respondents (51.9%) reported that they had no experience in using wikis.

Instrumentation

The survey measured the six objectives of the grant. The instrument was a self-administered online survey consisting of 65 questions: five questions about demographic and background information and 60 questions about their experiences with Web 2.0 technology as a learning tool. Fifty-three of the questions were scored on a one- to five-point Likert scale and, seven of the questions were open-ended. The Likert scale questions were developed to measure participants’ experiences in *Curriculum Leadership* and *Legal Aspects of Schooling* in the following areas:

- Web 2.0 technologies as a teaching tool
- faculty-student interaction outside the classroom

- student engagement
- self-sustaining/self-correcting feedback process
- improvement of learning outcomes
- increased networking
- design/navigation of the web sites
- the overall project
- the mentor experience

The students were also asked seven open-end response questions in three categories: (1) the **IN*SITE***wiki*, (2) the **IN*SITE***network* and, (3) the mentor experience.

The overall reliability was high with alpha coefficients reaching 0.95. **Reliability coefficients of the subscales were moderate to high, with alpha coefficient ranging from 0.69 to 0.97.**

Data Analysis

Descriptive statistics were used throughout data analysis. Analyses were conducted on overall scores as well as subscale scores. A subscale score was created based on the six project objectives and was calculated by averaging the individual item ratings within that subscale. The higher the score indicated more positive experiences with Web 2.0 technology as a learning tool.

Results

Overall results

The mean scores of individual items ranged from 3.74 to 4.67 indicating that participants' experiences with the Web 2.0 technology were very positive. The number of participants who either disagreed or strongly disagreed was three or less for all items. The results broken down by grant objective can be seen in Table 1 below.

Table 1

Subscale scores for grant objectives in rank order

Grant Objectives	N	Mean	SD
Increased networking	24	4.35	0.52
A self-sustaining and self-correcting feedback process	24	4.23	0.66
Student engagement	27	4.14	0.69

Faculty-student interaction outside the classroom	27	4.10	1.02
Improvement of learning outcomes	25	4.07	0.74
Web 2.0 technologies as a teaching tool	27	4.02	0.79

Results of Open-end Questions

These questions were intended to provide the researchers with data to improve the learning experiences for future classes. Like the Likert-scale items, the responses were very largely positive typically noting the opportunity to network and to collaborate virtually as being most important. Negative comments were typically related to navigation in *PBworks* and *NING* and lack of responsiveness by mentors.

Blog Contributions from the **IN*SITE***network*

Students were encouraged to contribute blogs on the **IN*SITE***network* and were instructed to create a blog or to respond to others' contributions only when they were motivated by the content of other blogs or classroom discussions. The intent was that the contributions would be truly reflective of thinking outside of the classroom rather than as a mandated class requirement.

Over the semester, the professor of record wrote 24 blogs related to the content of the courses being taught, and on occasion to education events in the news and were published on the **IN*SITE***network* site. Student blogs followed the same pattern. Students from the two classes contributed nine original blogs, and contributed a total of 186 comments to blogs posted by the professor and other students. These were reflections which would not likely have been produced without the Web 2.0 strategies employed in the classes.

Discussion

The purpose of the grant – to virtually create cooperative learning experiences – is strongly supported by the data as a legitimate tool for working with aspiring school leaders. The survey and open-end response data clearly give us a picture of a successful implementation of the objectives of this grant. However, the conclusions would be very limited without the conclusions based on the experience of the professor, who developed the idea, wrote, led the development of, and implemented the objectives of the grant. Therefore, these conclusions are written in first person and reflect his experiences with and conclusions about adding Web 2.0 strategies as instructional tools.

The process was time intensive.

Teaching a course best described as a hybrid using both face-to-face and virtual teaching significantly increases preparation time. Web 2.0 teaching strategies are time-intensive strategies for students and instructor. For students, this was typically a result of the virtual collaboration aspect and the inherent messiness of collaboration as a problem-solving and solution-seeking process. With this in mind, I reduced class time to allow students to engage virtually.

Not all Web 2.0 tools are created equal.

For networking between peers, mentors, and others, *NING*, as a dedicated social network, was clearly the best tool. When providing a means for virtual collaboration, *Google docs*, which mirrors most typical office software programs, provided a much better tool for collaborating in real-time or asynchronously. As information sharing tools, both *NING* and *PBWorks* were excellent. For sharing information within a small group where that information can be read, edited, and submitted, *Google docs* was an excellent tool.

Mentoring was a sound idea, but...

Assigning each student a mentor who had previously and successfully completed the course was a solid idea. It saved time for students since mentors could help them more quickly understand course expectations and teaching methods. However, a number of mentors did not routinely respond to student requests for help or guidance, which was understandably frustrating to students.

Web 2.0 collaboration as a skill set for administrators.

Do school leaders need to be able to use Web 2.0 tools as a school improvement and/or leadership skill set? When I had to frequently remind students that these classes were not technology classes when they asked if I would take time to show them how to “set up” a wiki or a social network so that they could use these tools back in their own schools, I knew the answer to this question was “Yes.”

Conclusions and Recommendation

This is a very small study with only 27 respondents from two master’s-level school leadership classes at one department at one university, and so the ability to generalize beyond it is very limited indeed. However, given that the grant proposal itself was peer reviewed and was selected for implementation, that eight months were spent in researching, designing, and piloting the strategies before being fully implemented in two very diverse classes, and that the survey responses were overwhelmingly positive should, at a minimum, provide incentives for others interested in these techniques to give them a try.

Additional research should be done to assess whether these techniques (1) indeed are part of an essential technology skill set for school leaders; (2) would be of equal value in other educational leadership classes beyond the two of this study; (3) would provide similar results in classes beyond the study of education; (4) are applicable to, or superior to, fully online courses and fully face-to-face classes; and (5) the effect of class mentors and how to keep the mentors engaged with their mentees.

Any professor who chooses to use Web 2.0 tools must begin the process with the full knowledge that significant time spent in learning the tools and planning for their implementation is essential to their success. Equally important is the full commitment to find the balance between in-class professor-directed learning and virtual student-directed learning.

A Final Caveat

At the conclusion of the second semester using Web 2.0 tools, an email was received from a student who wrote about how much he enjoyed the classes. He wrote, “I hope someday to be at least half the storyteller you are. I’ve found the information you’ve shared in class to stick with me more so than things

that were taught in some other classes.”

It is easy to forget that a large part of being a professor – especially a professor of educational leadership – is sharing practical experiences and stories. Storytelling as a powerful teaching technique is much documented (Aveling, 2001). As much as the students gained from the Web 2.0 teaching strategies, the Web 2.0 environment of *Tweets* and *Facebook-walls* is not a world conducive to the richness of storytelling, and so we caution the reader – the potential adopter – to protect face-to-face class time and to continue to tell **your stories**.

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