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Promoting Student Engagement through Bulletin Board Style Virtual Learning Communities

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Title

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Abstract

This study investigated the possibility of increasing student engagement by creating, implementing and maintaining a virtual learning community (VLC) as an added resource for students. Increasing student engagement requires reaching students with a variety of active and collaborative learning methods (Ullah & Wilson, 2007). In the 21st century, almost all students are engaged in online activities; being connected has become essential (Oblinger & Oblinger, 2006).

A two-phase, mixed methods approach was used. Two focus groups of undergraduates ($N = 10$, $N = 11$) were conducted to gather information about attitudes toward a virtual community as a resource and to solicit suggestions for improvement. The updated VLC was activated and data collected to assess student participation and engagement in the VLC and classroom ($N = 81$).

Purpose of the study

This study investigated the possibility of increasing student engagement in traditional college classrooms by designing, creating, implementing, and maintaining a virtual learning community as an added resource for students. The virtual or online theme is important because of students' interest in and use of social networks and other virtual sites. With almost all 8-year to 18-year olds (96%) engaged in online activities (Oblinger & Oblinger, 2006), being online has become essential to young people and connectedness to the virtual world is part of their daily routine. The purpose of this research was to assess whether college and university faculty can leverage the power of students' preference for the virtual world in an effort to improve student engagement in their academic experiences.

As a faculty member engaged in leading students in the learning process, this study was of personal interest and importance to the researcher. Being a member of Generation X and growing up with the rise of technology, he was very interested in exploring and assessing ways to integrate the virtual world into the teaching-learning process.

Theoretical Framework

University faculty members are collectively coming to the realization that standard teaching techniques no longer serve this new generation of learners (Skiba & Barton, 2006). Instead, newer approaches, such as blogs, and social networking sites, will increasingly become the norm, rather than an exception (Carlson, 2005). It is not unusual to hear from students that virtual interactions are just as meaningful and important to them, as face-to-face conversations (Oblinger & Oblinger, 2006).

Web-based virtual learning communities constitute one type of social networking and can be described by their various components or functions. For the purposes of this study, a virtual learning community is defined, in what Luppicini (2003) called formal learning environments, such as colleges and universities, in which web-based, virtual opportunities are created for students to add their thoughts and opinions in collaboration with others in the community. Virtual learning communities share with traditional learning communities the need for active moderators tasked with the responsibility of managing the discussion, as well as setting the general tone and norms (Luppicini, 2003). In this way, virtual learning communities differ from informal social networking sites.

In an effort to think constructively about engaging students in the learning process, this study drew upon Arthur Chickering and Zelda Gamson's *Seven Principles for Good Practice in Higher Education* (1987). The Seven Principles were later used by George Kuh and his associates to lay the foundation for the National Survey of Student Engagement (NSSE). According to Kuh, the concept of engagement is simple: the more students are involved with coursework, the more they will learn (2003).

Because the purpose of this study was to determine the efficacy of enriching student engagement by using a virtual learning community, the work completed by Kuh and other NSSE researchers provided the theoretical foundation for student engagement, both in the virtual learning community and in traditional college classrooms. Further, because the study relied on self-reported data from students, the work done for NSSE on validating the use of self-reported data from college students provided support for the techniques used (Kuh, 2003).

Definition of Terms

Student Engagement – General theory that "students learn from what they do in college" (Pike & Kuh, 2005). Student engagement is more specifically defined as: time on task (Merwin, 1969); quality of effort (Pace, 1980, 1984, 1990); meaningful interactions with their faculty and fellow students (Pace, 1990); meaningful involvement with the entire co-curricular experience (Pike & Kuh, 2005).

Student Participation – A quantitative measure of any contribution, question, or

comment offered by a student either in class or in the virtual learning

community.

Traditional College Classroom – College course wherein students meet in

person with a faculty member, who conducts the teaching and learning

scheduled for that day.

Virtual Learning Community – A formal learning environment "wherein web-

based, virtual opportunities are created for students to add their thoughts

and opinions in collaboration with others in the community" (Luppicini,

2003, p. 409)

Methodology

The research design employed was a two-phased, sequential, mixed-methods, exploratory approach. The exploratory strategy involves initial qualitative data collection followed by an analysis of these data and a quantitative data collection and analysis phase that builds on the preliminary segment (Creswell, 2003). In the first phase, self-selected students in business classes participated in two focus groups ($N = 10$, $N = 11$). The purpose of the focus group discussions was to learn, directly from the students, which features of an initial virtual learning community they liked and disliked, and most often used and ignored. The focus groups took place at the end of the winter term, giving students the opportunity to fully engage in the virtual learning community for the entire term before being asked to assess it.

In the second phase, three classes of business student ($N = 81$) were assessed on the quality and quantity of their participation and engagement in the virtual learning community, as well as in the classroom during the spring term. Demographic data in the form of gender, course entry grade point average, and level of technology sophistication were also collected on students who agreed to participate in the study.

Research Questions

The research questions investigated in the study were these.

1. To what extent do students participate voluntarily in a virtual learning community?

2. Are there significant differences between students, according to their characteristics of gender, course entry grade point average, and technology skills, and engagement with a virtual learning community?

3. Does student participation in a virtual learning community relate to student engagement in a virtual learning community?
4. Does student engagement in a virtual learning community relate to student engagement in the classroom?

Data Analysis

- All students in these classes ($N = 86$) were invited to participate in the study and almost all agreed (94%, 81 students).

- Of the 81 students who chose to participate, and signed the Human Subjects Form, 33 students (41%) opted out of voluntary participation in the virtual learning community;

- Strong positive relationships resulted between participation and engagement in the virtual learning community and engagement in the virtual learning community and in classroom;

Results

From the findings, several conclusions became apparent. First, students have strong opinions on how a virtual learning community should be presented in terms of accessibility and aesthetic. Also, that enrollment in and use of a virtual learning community should be automatic and user friendly.

Second, when given the option not to participate in the virtual learning community, a goodly number of students (41%) chose to remain disengaged, and many of those who did engage did so at the minimal level (38%). This may call into question the idea of a voluntary resource available to students.

Third, no relationships were identified between the student characteristics of gender, course entry grade point average, and technologic skill level and engagement in the virtual learning community.

Fourth, strong positive correlations were obtained between student participation and student engagement in a virtual learning community.

Fifth, strong positive correlations were obtained between student engagement in the virtual learning community and student engagement in the classroom.

Table 1

Quantity (Participation) and Quality of Engagement

		VLC Engagement
VLC Participation	Pearson Correlation	**.83**[*]
	Sig. (2-tailed)	.001
	N	81

Table 1 lists the strongest correlation in the study. VLC Participation and VLC Engagement were highly related (*r*=..83). These results were not surprising, as one would expect that as students became more experienced and comfortable using the Virtual Learning Community, the quality of their contributions would also increase.

Table 2

Quality of Engagement in the Classroom and in the VLC

		VLC Engagement
Classroom	Pearson	**.48**[*]
Engagement	Correlation	
	Sig. (2-tailed)	.001
	N	81

Perhaps the most important finding in the study, Table 2 lists a strong positive

correlation between quality engagement in the VLC and positive engagement in

the traditional college classroom (*r*=.48). With literature on the topic

overwhelmingly demonstrating the importance of quality student engagement in

higher education, this finding is central to the researcher's hypothesis that

creating and maintaining a Virtual Learning Community as an added resource

for students in traditional college classrooms is likely to have a positive impact

on student learning outcomes on college campuses.

Other Findings in the study

Table 3

Quantity of participation overall

			% of
		Percentage	Active
Post Counts	Frequency	of Students	Students

Zero	33	41%	
1 to 3	31	38%	65%
4 to 6	10	12%	21%
7 to 10 +	7	8%	14%
Total	81	100%	100%

As previously stated, the Post Counts listed in Table 3 indicate that 41% of students who chose to voluntarily participate in the study chose not to engage in the Virtual Learning Community. Among those choosing to participate, most engaged lightly.

Table 4

Post Counts per Term in a Virtual Learning Community by Student Gender

	Students	Female		Male	
Post Counts	#	#	%	#	%
Zero	33	17	52%	16	48%
1 to 3	31	17	55%	14	45%
4 to 6	10	9	90%	1	10%
7 to 10 +	7	2	17%	5	83%
Total	81	45	56%	36	44%

Table 4 lists the results regarding gender and participation in the virtual learning community. The data indicate that non-participation was about equal,

but slightly higher for females (52%) than for males (48%). Low level

participation, students making 1 to 3 posts per term, was more likely to be female

(55%) than male (45%), while participation at the high end, 7 or more posting per

term, was dominated by males (83%).

Table 5

Post Counts per Term in a Virtual Learning Community by Student GPA

	Students	4.00-3.60 (A)		3.59-3.00 (B)		2.99-2.00 (C)	
Posts Counts	#	#	%	#	%	#	%
Zero	33	4	12%	11	33%	18	55%
1 to 3	31	5	16%	17	55%	9	29%
4 to 6	10	1	10%	8	80%	1	10%
7 to 10 +	7	3	50%	3	33%	1	17%
Total	81	13	16%	39	48%	29	36%

The data in Table 5 indicate that the higher the grade point average of

students upon entering the course the more likely they were to participate in the

virtual learning community. Those most likely not to participate were low-performing C students (55% of the zero posts). Those most likely to participate in the mid-ranges, 1 to 3 posts and 4 to 6 posts per term, were mid-range B students (55% and 80%, respectively). Those most likely to participate often, 7 posts or more per term, were high-performing A students, who were half of this category (50%).

Table 6

Post Counts per Term in a Virtual Learning Community by Technology Skills

Post Counts	Students	4.0-3.6 (A) #	4.0-3.6 (A) %	3.59-3.0 (B) #	3.59-3.0 (B) %	2.99<2.0 (C) #	2.99<2.0 (C) %
Zero	33	15	45%	12	36%	7	18%
1 to 3	31	12	39%	15	48%	4	13%
4 to 6	10	8	80%	2	20%	0	0%
7 to 10 +	7	5	83%	2	17%	0	0%
Total	81	40	49%	31	38%	11	12%

Table 6 contains the data for self-assessed technology skills. About half the students placed themselves in the most skilled category (49%). The students in this high-end category dominated all the frequency categories, except one. The technology skilled students were the greatest number of the non-participants (45%), the greatest number making 4 to 6 posts per term (80%), and the greatest high-end users, 7 or more posts per term (83%). Only the mid-category of technology skill users dominated the 1 to 3 posts per term category (48%).

Quality of engagement by student characteristic

None of the demographic characteristics of the students, which were examined (i.e., gender, course entry GPA, and level of technology skill) appeared to relate to participation in the virtual learning community. Some differences

were noted, but no discernible trends emerged. However, high-performing A

students were more likely than others to participate in the virtual learning

community. The technology skill measure used, the Technology Skills Self-

Assessment, turned out not to work well, because almost all students (87%) rated

their technology skills in the top two categories. However, those few students

who assessed their technology skills as low were all either non-participants or

low-level participants in the virtual learning community. Gender appeared to

play little role in the choice to participate with about equal numbers of male

(52%) and female (48%) students choosing to contribute to the virtual learning

community. Among those who did choose to participate and contribute, the

results by gender were quite mixed. Light users were again, about equally split

between males (54%) and females (45%). However, moderate users were

predominantly female (90%), while the heaviest users were primarily male (83%).

Conclusions and Educational Implications for Virtual Learning Community

Development in Higher Education

Conclusions

The findings in this study generally support the inclusion of a virtual learning

community, as an additional resource for students in traditional college

classrooms, assuming the instructor has the knowledge, interest, time, and access

to technology necessary to implement this resource. This conclusion is supported

by the literature, which states that students are increasingly choosing electronic

means of engaging with each other and the world around them (Oblinger &

Oblinger, 2006), and that students' active involvement with the process of

learning increases their engagement and achievement (Astin, 1984; Ullah &

Wilson, 2007).

The study findings and the literature on student engagement and the attraction

of 21st century student to the to digital world all support the conclusion that the

deployment of a virtual learning community as a resource for the traditional

classroom experience can be a positive and rewarding experience for faculty and

for students, at least high performing, motivated ones. What is unknown is how

to encourage the less motivated students to engage both in the virtual learning

community and in the classroom environment. This conclusion does not imply

that use of virtual learning communities should be universally embraced. There

will be numerous faculty members in all disciplines who will lack the technological comfort and skill necessary to engage their students successfully in a virtual learning community. For these faculty members, the potential rewards of using this resource with their students will not be sufficient to justify the time and effort that they will need to expend, regardless of any technological or financial support offered by the institution.

Beyond the technological skill and minimal financial resources required of faculty, assuming no institutional support is forthcoming, there are time constraints to consider. As with any other field of work, faculty members tend to be busy. The demand to teach four or more courses per term, the pressure to publish and present research findings at conferences, and the press of various committee assignments places considerable time commitments and stress on faculty members. Asking for yet more time from faculty will be a challenge to higher education leaders, who must decide whether the benefits of deploying virtual learning communities at their institutions are worth the various costs. However, if the decision is made to encourage the use of virtual learning communities, it will be necessary to plan carefully and for the institutional leaders to make available the time and technological resources faculty will need.

Implications

As with any change, there may be cultural barriers to acceptance and implementation of this new resource. Cultural barriers will be difficult to overcome because they represent strongly held beliefs, core values, long-held expectations, established motivations, and entrenched cultural norms already in place in the institution (Pappas, 1996). The resistance exhibited when faculty are asked to make major changes in the way things are done may be the real challenge. Few faculty members are likely to eagerly give up what they already know and believe works to attempt something that is unknown, especially when packaged with many challenges of implementation (Tinzmann, Jones, Fennimore, Bakker, Fine, & Pierce, 1990).

Administrators have provided faculty greater access to technology in the last decade than ever before. This access includes not just hardware, but innovative software products, as well as access to the Internet (Surry & Land, 2000). While many faculty members have adopted technology applications in the classroom, overall use, as part of instruction, remains low. The key to increasing instructional use of technology is to gain faculty buy-in (Surry & Land, 2000).

With faculty at most colleges and universities rewarded primarily for producing scholarly research, rather than quality in-class experiences (Adria & Rose, 2004), convincing faculty members that designing, creating, maintaining,

and using virtual learning communities is worth their time will likely be a

difficult task for leaders at institutions of higher education.

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