2005

Examining the Impact of Learning Communities on Motivation

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The purpose of this study was to determine if learning communities have an inherent motivational effect on learners and, if so, whether higher motivation impacts attitudinal change. As learning communities and groups become more established in distance education settings, it is important to understand the impact these groups have on the motivation of the learners. Motivation is the length and direction of effort expended by the learners in pursuit of achievement (Keller, 1979a, 1979b; Moller & Russell, 1994). It is assumed that configuring learners into communities produces a positive effect on each community member. This positive response, in turn, increases motivation or effort. This research project was conducted to determine if learning communities increase the effort level (motivation) expended by students in distance education. Based on this small sample study, groups do have a motivational impact on learners; although, in this case, that impact was not transferable to an attitudinal change. This lack of attitude change may be more related to the lack of potency of the instructional materials than to any effort, or lack thereof, on the part of the subjects.

LITERATURE REVIEW

Distance education provides for ubiquitous and flexible learning opportunities, and many universities are turning toward this delivery system to address the needs of local and commuter students. In a Department of Education survey (1997-98), 20% of the respondents—990 postsecondary institutions—reported that within 3 years they planned to join the 1,680 schools offering online distance education courses (National Center for Education Statistics, 2000). In a speech to the United States General Accounting Office, Cornelia M.

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The Quarterly Review of Distance Education, Volume 6(2), 2005, pp. 137–143 ISSN 1528-3518

Ashby, director of education, workforce, and income security issues (2002) stated that, "Overall, about 1.5 million out of 19 million postsecondary students took at least one distance education course in the 1999-2000 school year" (p. 3). By 2002, more than 84% of 4-year institutions were offering distance education courses (Ashby, 2002). By most accounts, these numbers will continue to rise.

The University of Phoenix, the nation's largest private, online college, is averaging more than 500 new students a month and has "pulled off the rarest of feats: Its stock has skyrocketed," hitting all-time highs, "despite the worst tech-stock bear market in history" (Symonds, 2003).

In the corporate sector, the trend is even stronger, with major e-learning initiatives now common in large (Fortune 1000) companies. According to the annual *Training* magazine survey, e-learning expenditures are growing to as much as 30% of the training budget in the leading companies (Rosenberg, 2001).

With figures such as these continually on the rise, researchers are examining all aspects of the distant learning environment to determine what approaches, methods, and technologies are most appropriate and effective. One particular area that must be explored concerns what motivates and inspires the distance learner.

In terms of its role in learning achievement and motivation, the issue of learning communities has been at the forefront of distance education. Whereas traditional distance learning models emphasize the independence of the learner (Downs & Moller, 1999; Moore, 1989) and the privatization of learning (Keegan, 1986), newer models emphasize collaboration. There is little doubt that collaboration can be a successful learning strategy. The idea of students laboring together in a teaching and learning experience to produce a product that is somehow more than the sum of its parts is not a new one. The theory behind successful collaborative learning is essentially the same whether one is in a face-to-face classroom or online. However, putting theory into practice for online learning is often difficult. Online collaboration, in the form of peer work groups and learning communities, increases engagement in the learning process (Gay & Lentini, 1995; Moore & Kearsley, 1996). Kruger (2000) explains that distant students are capable of developing meaningful relationships with faculty and other students when they engage in learning communities "unbound by the barriers of time and place" (p. 59). Cifuentes and Murphy (2000), studied multicultural understanding and self-concept through distance learning communities and cite numerous benefits, such as a sense of expanded worldview of students, increased multicultural awareness (when given the opportunity to interact with others from diverse cultures and backgrounds), and increased student self-concept, and conclude that distance education communities can "foster powerful relationships" (p. 81). Studies of written communications in distance education environments by Schallert and Reed (2004) support the contention that "deeper, more thoughtful, more creative learning experiences" can be had within a community of online learners.

In a study of a Texas A&M online graduate class, Yakimovicz and Murphy (1995) found that a distance course requiring students to work together improved learning outcomes and strengthened ties between students. Unlike local students with unfettered access to the campus, its personnel, and resources, nonresident students must juggle a multitude of self-driven tasks in relative isolation. This is where online learning communities "may be the only viable path to greater student involvement" (Tinto, Goodsell-Love, & Russo, 1993, p. 21). Helping to form social bonds with peers, increasing academic motivation and participation, improving self-concept and self-awareness, and, potentially, having a positive impact on achievement are some of the few benefits of online collaborative learning. Not promoting collaboration in the online learning environment generally results in low levels of participation but, when promoted, "collaborative work forms the basis for the student's ability to

engage in a transformative learning process" (Palloff & Pratt, 1999, p. 127). Clearly, a deeper understanding of the role learning communities play and the potential for positive impact on student motivation is a significant research issue.

As learning communities and groups become more established in distance education settings, it is important to understand the impact these groups have on motivation of the learners. Motivation is the length and direction of effort expended by the learners in pursuit of achievement (Keller, 1979a, 1979b; Moller & Russell, 1994). It is assumed that this configuration of learners has a positive effect on each other and, thus, increases motivation or effort. The purpose of this study was to determine if learning communities have an inherent motivational effect on learners and, if so, whether higher motivation impacts attitudinal change. This research project was conducted to determine if learning communities increase the effort level (motivation) expended by students in distance education.

FRAMEWORK AND RATIONALE

Regardless of how well content is presented, a learner must expend effort to be sufficiently engaged in the learning process so as to produce the desired outcomes (Keller, 1979a, 1979b). Choosing to persist in a learning task is not a simple choice and is influenced by many variables (Driscoll, 2000). However, the literature on learning communities indicates there is a strong interpersonal commitment of the community members that should provide a supportive element to continuing motivation. The newer instructional models claim that significant and meaningful learning occurs as the result of the learner-to-learner communication. This is more likely to occur when learners have access to a supportive community that encourages knowledge building and social reinforcement (Foshay & Moller, in press; Moller, 1998). Thus, learner-to-learner dialog is not only necessary for the intellectual exchange, but it is necessary to create a proper emotional condition, which paves the way for knowledge sharing and growth. Thus, we are more able to enlarge our own beliefs and more likely to take risks when supported by a community of other learners (Grabinger, 1996).

Further insight into the motivation construct, and support for the role of community, can be found in Bandura's work on self-efficacy, which is better known as confidence. Confidence is our belief that we can be successful at a given task, and thus expending effort is a worthwhile choice. Confidence, among other inputs, is influenced by vicarious experiences, such as seeing other learners being successful and by verbal persuasion or words of encouragement, particularly from one with a prior relationship (Bandura, 1977; Driscoll, 2000). Simply put, a learning community provides external events that cause internal changes—a grounding principle of the instructional systems design discipline.

METHODOLOGY

In this study, the subjects were 51 graduate students at a Big Ten university. Twenty-two were in a naturally-formed treatment group and 29 were in a naturally-formed control group. In this quasi-experimental design, naturally-formed means the subjects are traditionally in these study compositions and were not placed there for the purpose of the research. The treatment group is comprised of subjects working in learning communities. The control group is comprised of subjects working individually. Both groups took a pretest using an attitudinal measure for sexual harassment. Both the treatment and control groups completed a computer-based program on sexual harassment. A posttest attitudinal measure was administered, as well as an Instructional Materials Motivational Survey (IMMS). The IMMS measures subjects' motivational reactions to instructional materials and has a reliability estimate of .96.

The collected data was analyzed using a *t* test to measure the differences between treatment and control groups for motivation and sum change of the attitude survey. Finally, a correlation was used to determine if the anticipated higher motivational scores are related to a greater change in attitude.

RESULTS

In the study, there were a total of 51 participants; 22 were in the treatment group, 29 were in the control, and six were eliminated due to incomplete data. The research showed that there was no attitudinal change between the treatment and control groups, with the means being almost equal from the pre-/posttest as well as between groups. Using an independent samples *t* test, we found that the pretest average for Group A and B was 2.75 and 2.82 respectively, with a significance of .310 at the .05 level. The posttest average for Group A and B was again 2.77 and 2.82 respectively, with a significance of .441 at the .05 level.

In terms of motivation (Table 1), there was statistical significance at the .05 level in motivation between Group A (Treatment) and Group B (Control), in every area accept confidence.

DISCUSSION

It appears, based on this small sample study, that groups do have a motivational impact on learners; although, in this case, that was not transferable to an attitudinal change. This lack of attitude change may be more related to the lack of potency of the instructional materials than to any effort, or lack of, on the part of the subjects.

Our findings are in contrast to a study done by Kelsey and D'Souza (2004) which found that student-student interaction was not a crucial component to online learning. However, the authors admit that in their particular study, "Student-student interactions were not formally provided in the majority of the courses" (p.7). Qureshi, Morton, and Antosz (2002) found that distance education students were less motivated than their on-campus counterparts. However, one of the possible reasons they list for this finding is the lack of motivational value in distance education courses. What is practically significant about our finding is that learning communities most likely will increase the effort level (motivation) expended by students in distance education situations. If proven true, increased motivation through online learning communities may be a key to different findings than those of Qureshi, Morton, and Antosz.

Potential increases in motivation, as a byproduct of learning communities, parallels

TABLE 1
Motivation Scores in a Collaborative Setting

Motivation	*Group*	*Mean Score*	*Sig. (.05 level)*
Attention	A	3.71	.005
	B	3.27	
Relevance	A	3.75	.001
	B	3.08	
Confidence	A	4.00	.238
	B	3.8	
Satisfaction	A	3.14	.002
	B	2.34	
Overall Motivation	A	3.69	.001
	B	3.20	

research of face-to-face classes. Kerssen-Griep, Hess, and Trees (2003) cite numerous studies showing social classroom environments can motivate learners. Such a sense of community may be part of the necessary support structure distance learners need (Cathcart, Samovar, & Henman, 1996; Kember, Lai, Murphy, Shaw, & Yuen, 1994; Moller, 1998). According to Cathcart et al. (1996), groups that are cohesive enjoy numerous benefits—from higher participation and lower rates of turnover to increased bonding within the group and a greater commitment to group goals. Following the earlier definition of motivation being effort expended by the student, it seems plausible that this higher level of engagement comes from participating in a learning community. In a discussion of studies concerning of the use of computer-mediated discussion, a necessary communication tool in online learning communities, Schallert and Reed (2003) found many "affective and motivational responses associated with the social dynamics of online communication among students" (p. 6) Further, Schallert and Reed found that students are often drawn to a deeper level of participation through discussions with other students. By the end of many discussions, some students showed progress from a naïve understanding of the subject matter to a much more sophisticated one (2003). Thus, membership in a learning community can promote communication, social interaction, and deeper understanding. This, in turn, increases motivation, which strengthens the community. Arguably, this creates a positive cycle along the lines of a greater sense of community leads to greater motivation, which in turns to a greater sense of involvement and understanding, which increases participation within the community.

Admittedly, this is only one small sample study. While we believe strongly that these results can be replicated with undergraduates, this study reflects only our experiences with graduate students. Success or failure in a study such as this can depend on unforeseen variables. While distance learning communities show great promise, Peters and Armstrong (1998) point to caveats concerning frustration among different types of learners, power transfers in which the student must assume a greater responsibility for his or her own education, and a redefining of teaching-learning relationships as hurdles that need to be addressed.

Continued research on this topic is important. In the document "Best Practices for Electronically Offered Degree and Certificate Programs," (The Higher Learning Commission, n.d.) developed by six regional accrediting bodies, one finds a call for "learning that is dynamic and interactive, regardless of the setting in which it occurs" and lists a distance education program's interactive component as vital to its success.

Pallof and Pratt (1999) write

> it is the relationships and interactions among people through which knowledge is primarily generated. The [online] learning community takes on new proportions in this environment and consequently must be nurtured and developed so as to be an effective vehicle for education. (p. 15)

With proper design, the use of online learning communities will continue to enhance the learning experiences of all students. The resulting increase in motivation has potentially powerful benefits not only to the student but also to the group, the instructor, and the university. More importantly, such collaboration will lead to better classes and a greater sense of intrinsic, personal satisfaction for students and faculty. With this greater sense of satisfaction comes the hope that distance education might one day fulfill its potential and not wind up in the "academic pit that is filled with so many other panaceas for learning" (Jonassen, Mayes, & McAleese, 1993).

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