

Individual Differences in Sense of Classroom Community

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Abstract. The paper proposed reports a causal-comparative study that were conducted to examine whether the sense of community development differs by students' characteristics in both traditional and online course setting. Subjects comprise 171 undergraduate students enrolled in a major American university. Specifically, the researchers investigate whether students' learning preference, gender, and peer-acquaintance level influence their sense of community after controlling for initial differences, and whether their sense of community correlates with course grades.

Introduction

The value of social bonds in the learning process has been widely acknowledged in the education field (e.g. Vygotsky, 1978; Lave & Wenger, 1991). As an endorsement of this observation, building sense of community within classrooms has become a widely-accepted practice (Palloff & Pratt, 1999). Sense of community, as defined by McMillan and Chavis (1986), refers to "a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together" (p. 8). Drawing on this definition, Rovai (2002) have specified four components of a classroom community as *spirit*, *trust*, *interaction*, and *learning*.

For the past decades, quite a few empirical studies have indicated that in a classroom setting, stronger sense of community promotes both the socialization and learning outcomes of students, such as persistence in courses, cooperation among members, perceived cognitive learning, and learning motivation (Bruffee, 1993; Dede, 1996; Moore & Brooks, 2001; Rovai, 2002).

However, few empirical studies reported on variables that influence students' sense of community. Rovai (2001) did report that in a virtual classroom female sense of community was significantly higher than that of males, but his finding was extracted from a small group of participants (18 in the total). Regis (1988) found that the likelihood of acquaintances predicted the sense of community at a face-to-face setting. His study, however, was more descriptive than experimental. Graff (2003) concluded that in a blended learning environment, students with intuitive cognitive style reported a lower sense of community than students with an intermediate or analytic style. Then, he suggested a replication of his study using more individual differences dimensions.

Research Purpose and Methods

The research was intended to verify previous researchers' supposition on the relationship between individual difference and sense of community, by doing empirical studies in both face-to-face and online course setting. Specifically, this causal-comparative study was conducted to investigate whether the sense of community differs by students' learning style, gender, and peer-acquaintance level, after controlling for initial differences. The study also sought to indicate if sense of community would predict students' course grades.

Participants

Participants comprised 171 undergraduate students (111 males and 60 females, with a mean age of 20.7) in a major university. 74 of them enrolled in a teamwork-oriented face-to-face course offered by the business school. The other 97 participants were engineering-majored undergraduate students who attended an ANGEL-based online science course that was balanced between teamwork and individual project.

Instruments

Classroom Community Scale (Rovai, 2002) is an instrument to assess students' sense of community and the extent of community development. The CCS contains 20 five-point Likert-scaled items, ten items each for the subscales of *connectedness* and *learning*. It has a theoretical maximum score of 100, with higher scores reflecting a stronger sense of community. Rovai (2002) reports the internal consistency of the total scale as .93 and a high degree of face validity. A 16-item Likert-scaled solitary/social learning style survey was constructed by the researchers based on a well-established LSO Learning Styles Inventory (Advanogy.com, 2003). It has a theoretical

maximum score of 80, with higher score indicating a more social learning style and lower score indicating a more solitary style. A solitary-styled learner is more private, introspective, and independent; a social-styled learner, on the contrary, typically prefers learning in groups or classes (Ke, 2004). A panel of experts consisting of two university professors in educational psychology has vetted the content validity of the test questions. A pilot study of the survey was carried out toward a blend of 140 graduate and undergraduate students at the previous academic semester, indicating a KR-20 reliability of .76. A short survey was also developed to collect students' demographic data, including gender, race, and year in college. In the survey, participants were asked to self-report their acquaintances with their teammates in a three-point scale.

Procedure

Students' demographic data, which include gender and peer-acquaintance level, were collected at the beginning week of academic semester. Then, measured by Classroom Community Scale (CCS), data of students' sense of community was collected at the second week and the concluding week of the semester.

Findings

A 2 x 2 x 3 MANCOVA (with pre-measurement of CCS as covariate) was conducted to examine if students' learner preference, gender, and peer-acquaintance level would influence their scores at the CCS and each of its subscales. A correlation analysis then was used to measure the strength and direction of relationship between sense of community and course grades.

No main effects of learning style, gender, or acquaintance level were observed for the overall CCS scale. But a significant interaction effect was found between learning style and gender ($F = 4.893, p = .032$). A Bonferroni test of post-hoc comparisons indicated that females with a solitary learning style ($M = 65.9$) reported a lower sense of community than all the other groups ($p < .01$), while females with a social learning style ($M = 76.6$) reported the highest sense of community ($p < .01$). Additionally, a significant effect of learning style was noted for the *connectedness* subscale ($F = 4.109, p = .021$). A Bonferroni test showed that students with a solitary learning style reported a significantly lower sense of connectedness than students with a social learning style ($M_{sol} = 32.5, M_{soc} = 37.4, p = .014$). No effects of learning style were noted for the *learning* subscale. No effects of gender or acquaintance level were observed for both of the two subscales. Because students' course grades are non-parametric (A, B, C, D, or F), Spearman's Rho correlation coefficient was computed to determine bivariate correlation between CCS scale score and course grade. The correlation was positive (.49) and statistically significant at the .01 level (two-tailed).

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