

Measuring Sense of Community and Perceived Learning Among Alternative Licensure Candidates

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Quantitative analysis was used to investigate relationships between sense of class community and perceived learning among alternative licensure candidates (N = 58) based on their scores from two separate standardized instruments measuring the constructs. Study results provide evidence that relationships do indeed exist and that differences between the two constructs can be identified within the data. Low correlations existed between the two constructs; correlations were higher for females than for males. There were no significant gender differences in either sense of community or perceived learning. Implications of these results are discussed and recommendations for further research are provided.

Key words: *sense of class community; perceived learning; alternative licensure*

A sense of community is important in any educational environment; it is fundamental to collaborative learning. Research by Glynn (1981) and Royal and Rossi (1997) indicates that common goals and values are essential elements of community. Strike (2004) theorizes that normation (the willingness of students to internalize group-shared expectations) is an important aspect of a learning community and helps to build a sense of connectedness. This can be particularly important among alternative licensure candidates who may come from a wide variety of backgrounds and life experiences.

Perceived learning is the amount of knowledge that students think they are learning as opposed to learning measured by grades, assessments, or test results. Ewell, Lovell, Dressler, and Jones (1994) note that “there is a considerable literature concerned with establishing the validity of student self-reports about cognitive outcomes” (p. 23). Despite the lack of an agreed definition of learning, the idea of learning as acquisition and as participation has underpinned much educational thought (Sfard, 1998). Acquisition deals with the products of learning, e.g.,

knowledge, skills, attitudes, values, behavior, and understanding. Participation suggests involvement in a learning process.

An important aspect of alternative licensure programs is the perceived support candidates receive as they face the daunting challenges of transitioning into teaching. In a similar vein, alternative licensure candidates are going to have increased confidence if they perceive they are indeed learning from the courses that comprise their licensure program (i.e., they believe that what they are learning will have a positive effect in helping them achieve their goal of becoming a teacher). Rodriguez, Plax, and Kearney (1996) suggest affective learning subsumes student motivation and promotes greater student learning because “affective learning motivates students to engage in task-relevant behaviors” (p. 297).

A review of the literature reveals that previous studies have been conducted to measure the sense of community among diverse groups of learners. The majority of research that has been conducted on perceived learning has focused on cognitive learning, i.e., how much knowledge students consider they are learning, and have not included the other two components of the construct, i.e., affective and psychomotor learning. An overview of the literature reporting previous studies measuring sense of community and previous research on the measurement of perceived learning is presented below. No previous research was located that included both constructs; therefore, this study examines whether there may be a relationship between the sense of community and perceived learning at the individual student level and also investigates whether such a relationship exists among alternative licensure candidates.

Sense of Community

The concept of community has received considerable interest in recent years. McMillan and Chavis (1986) define sense of community as “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. 9). They identify membership, influence, integration and fulfillment of needs, and shared emotional connection as the most important characteristics of sense of community. This sense of community is particularly important among students preparing for alternative licensure as the compacted format of their program along with the lifestyle change that is implicit in career switching can lead to stress and anxiety; a sense of community within the class may help relieve these pressures.

An educational community is a learning environment where collaboration is prevalent, diversity is incorporated, and individuals trust and respect each other. Community members share a vision, a common sense of purpose, and a common set of values. Rovai, Wighting, and Lucking (2004) theorize that sense of community in an educational setting includes two underlying dimensions, which one can label social community and learning community. Social community represents the feelings of the community of students regarding their spirit, cohesion, trust, safety, interactivity, interdependence, and sense of belonging. Learning community consists of the feelings of community members regarding the degree to which they share common values and the extent to which their educational goals and expectations are satisfied by

group membership. Research indicates that learning is assisted if students believe that they belong to the community, and interpersonal relationships are important in a community of learners. The less a person understands the feelings and behaviors of others, the more likely he or she will act inappropriately or insecurely and fail to gain acceptance within the community (Gardner, 1983). Alternative licensure candidates may benefit from being prepared in an environment that supports a sense of classroom community not only to enhance their own collaborative learning but also to understand the importance of developing community among the children they will be teaching. Previous studies (e.g., Rovai & Wighting, 2005; Wighting, 2006; Wighting, Liu, & Rovai, 2008) have measured sense of community among diverse groups of students, but no research was located that measured sense of community in alternative licensure candidates.

Perceived Learning

Educators and researchers measure learning based on cognitive, affective, and/or psychomotor change. Dumont (1996) and Hiltz and Wellman (1997) report that use of student grades is the most prevalent measure of cognitive learning outcomes. However, using grades to operationalize learning may not always provide the best results. Classroom test grades or final course grades, particularly for graduate university courses, tend to have very restricted ranges, i.e., they tend to reflect uniformly superior achievement, thus limiting their use in any correlational study. Grades can have little relationship to what students have learned. For example, students may already know the material when they enroll or their grade may be more related to class participation than to learning. Grades may not be a reliable measure of learning, particularly for performance tests, as different teachers and even the same teacher at different times will likely not assign grades in a consistent manner.

In contrast, research evidence suggests self-reports of learning, or perceived learning, can be a valid measure of learning. Pace (1990) supported the validity of student self-reports of learning based on research evidence that suggested the consistency of results over time and across different populations. However, the emphasis has been on measuring cognitive change. Since learning can involve cognitive, affective, and psychomotor components, measurement of all three domains is required in order to measure perceived learning. Measurement of perceived learning among adult learners is just as important as it is among younger students. Most alternative certification candidates are preparing to embark upon their second or third career, and it is important for their instructors to know how much information the candidates perceive they are learning at an early or mid-point of their program (i.e., while there is still time available to modify the instruction if necessary).

Purpose

A review of the literature did not reveal any studies that had measured and investigated relationships between sense of community and perceived learning. This study measures both these constructs in order to obtain greater insight into possible relationships. The purpose of the

study is to measure and examine the two constructs and to respond to the following research questions:

- Does a relationship exist between sense of community and perceived learning?
- Do any significant differences exist between male and female alternative licensure candidates in either sense of community or perceived learning?

Methodology

Participants

A nonrandom sample of 58 alternative licensure candidates (ages 26-57 years) from intact classes participated in the study. Forty were female and 18 were male. A volunteer rate of 94% was achieved. The participants were enrolled in alternative teaching licensure orientation classes and average class size was 28. The student population was diverse, and included a number of students from different American cultures and ethnic backgrounds, primarily Caucasian and African-American. This study, however, did not attempt to investigate differences associated with age or ethnicity. Participants are drawn from a variety of previous career backgrounds, including 31 from business, 15 from marketing, and eight military retirees; no attempt was made in this study to correlate previous background with other data.

Setting

The sample comprised candidates enrolled in an alternative licensure program in an independent university in southeastern Virginia. Students in this program are being prepared to transition into a new career to teach high-need subjects in public or independent middle or high schools. The coursework is primarily face to face, and the majority of the courses include a practicum component that requires students to visit local middle and high schools to work on practical assignments.

Instrumentation

The Classroom and School Community Inventory (CSCI) was used to measure the students' sense of community. This instrument is available online at www.regent.edu/acad/schedu/pdfs/classroom_school_community.pdf together with a description of its development. Rovai, Wighting, and Lucking (2004) provide comprehensive evidence of validity and reliability for both the classroom form of the instrument (measures sense of community in a specific class) and the school form (measures sense of community in the whole institution).

The CAP Perceived Learning Scale was the instrument used to measure the students' perceived learning. This instrument is also available online at <http://dx.doi.org/10.1016/j.iheduc.2008.10.002> together with its developmental background. Rovai, Wighting, Baker and Grooms (2009) provide evidence of the instrument's validity and

reliability to measure perceived cognitive, affective, and psychomotor learning in traditional and virtual higher education classroom settings.

Results

The purpose of the current study is to (a) examine if a relationship exists between sense of community and perceived learning and (b) investigate if any significant differences exist between males and females in either sense of community or perceived learning. The focus of the first question was to determine whether a relationship existed between students' sense of community and sense of perceived learning in order to assist instructors of alternative certification students as they prepare to transition into teaching. The second research question addresses whether the community or perceived learning data revealed any significant differences between male and female alternative licensure candidates. In response to the first research question, to investigate whether a relationship exists between sense of community and perceived learning, a statistical correlation test was conducted and the results are shown in Table 1.

Table 1

Bivariate Relationship Between the Two Constructs

Variables	Sense of Community	Perceived Learning
<i>All participants (N = 58)</i>		
Sense of Community	1.00	
Perceived Learning	.29**	1.00
<i>Females (n = 40)</i>		
Sense of Community	1.00	
Perceived Learning	.47**	1.00
<i>Males (n = 18)</i>		
Sense of Community	1.00	
Perceived Learning	.28**	1.00

Note: ** Correlation is significant at the 0.05 level (2-tailed).

Table 1 reflects that there is a low correlation between sense of community and perceived learning, $r(58) = .29$, $p < .001$ using interpretations of the size of correlation coefficients as defined by Hinkle, Wiersma, and Jurs (2003). In order to address the second research question that investigates possible gender differences in correlations between sense of community and perceived learning, the data were split accordingly and a statistical correlation was conducted separately for females and males. The results shown in Table 2 reveal that there is a statistically

significant correlation between sense of community and perceived learning for both females and males. Interestingly, the correlation is higher for females than for males. The correlation for females is defined as being moderate, $r(40) = .47, p < .001$, whereas the coefficient for males is low, $r(18) = .28, p = .004$.

Table 2

Means of Females and Males: Sense of Community and Perceived Learning

Variables	Female	Males
<i>Sense of Community</i>		
Item 1	3.06	3.18
Item 2	3.25	3.10
Item 3	3.25	3.25
Item 4	3.19	3.21
Item 5	3.30	3.23
Item 6	2.72	2.88
Item 7	3.19	3.26
Item 8	2.82	2.84
Item 9	3.19	3.37
Item 10	2.95	2.79
Total	30.92	31.11
<i>Perceived Learning</i>		
Item 1	4.83	4.41
Item 2	4.97	4.78
Item 3	4.53	4.85
Item 4	4.86	4.64
Item 5	4.59	4.64
Item 6	4.50	4.52
Item 7	4.50	4.53
Item 8	4.58	4.52
Item 9	4.51	4.72
Total	41.87	41.61

Table 2 reflects the mean scores for both instruments disaggregated by gender. An independent samples t-test was conducted to investigate possible differences between males and females in either sense of community or religious commitment. The results of the t-test did not reveal any statistically significant differences between males and females in either sense of community or their perceived learning.

Discussion

The two research questions addressed in this small-scale study are (a) to examine if a relationship exists between sense of community and perceived learning and (b) to investigate if

any significant differences exist between males and females in either sense of community or perceived learning. In response to the first question, the results do reveal a positive relationship between sense of community and sense of perceived learning; a low correlation exists between the two constructs. What is less clear, however, is causality i.e., which of the two constructs is predominant, or whether they might be equally interdependent. It is recommended that future research might investigate causality to determine to whether one (i.e., sense of community or perceived learning) tends to significantly impact the other.

The second research question reveals that, in addition to the significant relationship between sense of community and perceived learning, the correlation is much higher for females than for males. This gender difference could be important to instructors of alternative licensure courses. As a connection could exist between sense of community and perceived learning among a group of alternative licensure candidates, the instructor could foster the sense of community (with its identified relationship to perceived learning) and ensure that instruction is organized in ways that encourage female and male interaction. Females can be given roles that promote the facilitation of a sense of community so that it benefits the learning environment for both genders in an alternative licensure program.

Limitations

A limitation of this study is the self-report nature of the questionnaires employed in this study. It is recognized that subjects taking part in research studies involving self-report instruments are often reluctant to report negative experiences. The results of this research can only be generalized to a similar population of participants. The students in this study were all enrolled in an alternative licensure program and the results may not apply to students enrolled in other programs.

Conclusions

Alternative certification administrators and instructors can benefit from the implications of this study. First, a positive correlation has been found to exist between the sense of community and perceived learning. This relationship could be linked to actual learning, and instructors may find that to collect data on these two constructs could be very helpful in adding to their knowledge of individual students and how they work and learn collaboratively. This study has also shown that the correlation is stronger among females than among males, and instructors may wish to structure collaborative learning among alternative licensure candidates in ways that benefit from this.

Future research can build upon the present small-scale study by replicating the research with a larger sample size and in more diverse settings. It is recommended that further studies into the various relationships between sense of community and sense of perceived learning be conducted in alternative licensure programs. For example, a study that investigates differences among alternative certification students preparing to teach at different grade levels, e.g., middle school compared to high school, might reveal results that could be helpful to administrators. A

study that focuses on an investigation of possible ethnic differences might be very useful to alternative licensure programs in regions with a high proportion of Hispanic or African-American students transitioning into teaching. Further studies into the gender differences found in this study are also recommended. A mixed method design that incorporates a qualitative component may provide deeper insight into students' sense of community and perceived learning.

References

- Dumont, R. A. (1996). Teaching and learning in cyberspace. *IEEE Transactions on Professional Communications*, 39(4), 192-204.
- Ewell, P. T., Lovell, C. D., Dressler, P., & Jones, D. P. (1994, August). A preliminary study of the feasibility and utility for national policy of instructional "good practice" indicators in undergraduate education. Contractor report. Washington, DC: U. S. Government Printing Office. (ERIC Document Reproduction Service No. ED372718)
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: BasicBooks, HarperCollins Publishers, Inc.
- Glynn, T. J. (1981, September). Psychological sense of community: Measurement and application. *Human Relations*, 34(9), 789-818. DOI: 10.1177/001872678103400904
- Hiltz, S. R., & Wellman, B. (1997). Asynchronous learning networks as a virtual classroom. *Communications of ACM*, 40(9), 44-49.
- Hinkle, D. E., Wiersma, W., & Jurs, S. G. (2003). *Applied Statistics for the Behavioral Sciences* (5th ed.). New York: Houghton Mifflin Company.
- McMillan, D.W. & Chavis, D.M. (1986, January). Sense of community: A definition and theory. *Journal of Community Psychology*, 14(1), 6-23.
- Pace, C. R. (1990). *The undergraduates: A report of their activities and progress in college in the 1980's*. Los Angeles: Center for the Study of Evaluation, University of California, Los Angeles.
- Rodriguez, J. I., Plax, T. G., & Kearney, P. (1996, October). Clarifying the relationship between teacher nonverbal immediacy and student cognitive learning: Affective learning as the central causal mediator. *Communication Education*, 45(4), 293-305.
- Rovai, A. P., & Wighting, M. J. (2005). Feelings of alienation and community among higher education students in a virtual classroom. *Internet and Higher Education*, 8(2), 97-110.

- Rovai, A. P., Wighting, M. J., Baker, J. D., & Grooms, L. D. (2009, January). Development of an instrument to measure perceived cognitive, affective, and psychomotor learning in traditional and virtual higher education classroom settings. *Internet and Higher Education, 121*(1), 7-13.
- Rovai, A. P., Wighting, M. J., & Lucking, R. (2004). The Classroom and School Community Inventory: Development, refinement, and validation of a self-report measure for educational research. *Internet and Higher Education, 7*(4), 263-280.
- Royal, M. A., & Rossi, R. J. (1997). *Schools as communities*. ERIC Digest No. 111. Eugene, OR: ERIC Clearinghouse on Educational Management. (ERIC Document Reproduction Service No. ED405641)
- Sfard, A. (1998, March). On two metaphors for learning and the dangers of choosing just one. *Educational Researcher, 27*(2), pp. 4-13.
- Strike, K. A. (2004, May). Community, the missing element of school reform: Why schools should be more like congregations than banks. *American Journal of Education, 110*(3), 215-232.
- Wighting, M. J. (2006). Effects of computer use on high school students' sense of community. *The Journal of Educational Research, 99*(6), 371-379.
- Wighting, M. J., Liu, J., & Rovai, A. P. (2008). Distinguishing sense of community and motivation characteristics between online and traditional college students. *Quarterly Review of Distance Education, 9*(3), 285-295.