



Pergamon

Internet and Higher Education 5 (2002) 197–211

**THE INTERNET
AND HIGHER
EDUCATION**

Development of an instrument to measure classroom community

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Received 29 March 2002; accepted 20 May 2002

Abstract

The purpose of this study was to develop and field-test the Classroom Community Scale and to determine its validity and reliability for use with university students taking courses at a distance via the Internet. The 20-item Classroom Community Scale measures sense of community in a learning environment. Data were collected from 375 students enrolled in 28 different courses, offered for graduate credit via the Blackboard e-learning system by a private university. It was concluded that the Classroom Community Scale is a valid and reliable measure of classroom community and that this instrument yields two interpretable factors, connectedness and learning.

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Keywords: Community; Learning; Connectedness; ALN; Persistence; Scale

1. Introduction

Many postsecondary schools are moving rapidly toward the use of technology to deliver courses and programs at a distance. Several distance education models are presently in use, such as broadcast television, video and audio teleconferencing, and asynchronous learning networks (ALNs). Learners use computers and communications technologies in ALNs to work with remote learning resources, including online content,

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instructors, and other learners, but without the requirement to be online at the same time. The most common ALN communication tool is the Internet used in conjunction with e-learning software such as Blackboard or WebCT, that allow students and instructors electronic access to course materials, grades, activities, and communication options such as discussion boards and e-mail.

One area of concern is that dropout rates tend to be higher in distance education programs than in traditional face-to-face programs. Carr (2000) noted that dropout rates are often 10 to 20 percentage points higher in distance education courses than in traditional courses. She also reported significant variation among schools, with some postsecondary schools reporting course-completion rates of more than 80% and others finding fewer than 50% of distance education students finish their courses.

The physical separation of students in programs offered at a distance may contribute to higher dropout rates. Such a separation has a tendency to reduce sense of community by giving rise to feelings of disconnectness (Kerka, 1996), isolation, distraction, and lack of personal attention (Besser & Donahue, 1996; Twigg, 1997), that could affect student persistence in distance education courses or programs. Tinto (1993) emphasized the importance of community in reducing dropouts when he theorized that students would increase their levels of satisfaction and the likelihood of persisting in a college program if they feel involved in the learning community and develop relationships with other members of the community. In support of this view, Ashar and Skenes (1993) found that social integration had a significant positive effect on retention in a higher education business program by creating a social environment that motivated adult learners to persist. They found that learning needs alone appeared strong enough to attract adults to the program but not to retain them.

Accordingly, the purpose of this study was to explore the factors that influence students' community experiences, to develop and field-test the Classroom Community Scale and to determine its validity and reliability for use with postsecondary students taking online courses. Armed with an effective tool to measure community in a learning environment, educational researchers will be better equipped to conduct research on how best to design and deliver instruction at a distance in order to promote community and, by implication, to promote satisfaction and persistence among students.

1.1. Community

McMillan and Chavis (1986, p. 9) defined 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." Bellah, Madsen, Sullivan, Swidler, and Tipton (1985) and Shaffer and Anundsen (1993) support this view and suggest that the most essential elements of community are spirit, trust, mutual interdependence among members, interactivity, shared values and beliefs, and common expectations. One can therefore posit that members of strong classroom communities have feelings of connectedness. They have duties and obligations to each other and to the school and they possess a shared faith that members' educational needs will be met through their commitment

to shared learning goals. McAdam (1982) points out that to have a strong sense of community, individuals must do more than merely go through the actions of interpersonal interaction and community membership. Members must have strong feelings of community, that is, they must have a motivated and responsible sense of belonging and believe that active participation in the community will satisfy their needs.

1.2. Distance education and community

Eastmond (1995) defines distance education as the use of print or electronic communications media to deliver instruction when teachers and learners are separated by place and/or time. Filipczak (1995, p. 111) views distance education as “getting people—and often video images of people—into the same electronic space so they can help one another learn.” Proponents of ALNs identify learner–instructor and learner–learner interactions as vital characteristics of this form of distance education (Shale & Garrison, 1990). Strong sense of community should facilitate interactions in any classroom community.

Studies of online environments provide evidence that one can create a sense of community and sustain strong ties through electronic media (Baym, 1995; Reid, 1995; Rheingold, 1993). These studies show that when one views community as what activities people do together, rather than where or through what means they do them, community can exist independently from geography, physical neighborhoods, and campuses (Wellman, 1999). Members of such communities exhibit behaviors that are associated with the traditional concept of community. Members of online communities support common goals and a strong commitment to community goals (Baym, 1995; Donath, 1999). They recognize boundaries that define who belongs and who does not, establish their own hierarchies of expertise and modes of interaction (Sproull & Kiesler, 1991). Members also share a common history and a common meeting place (e.g., the virtual classroom). Rules of behavior and a shared history provide an identity for the group and a way of knowing how to behave and how to anticipate the behavior of others (Donath, 1999). In a classroom community, one requires both social and intellectual interactions to accomplish learning goals, supported through various interactive media (Dede, 1996).

Proper attention must be given to community building in distance education programs because it is a “sense of community” that attracts and retains learners. Educators who perceive the value of community must conceptualize how sense of community can be nurtured in distant learning environments. The Classroom Community Scale is a test instrument that can assist educational researchers in studying community in virtual classrooms and help identify course design and instructional delivery that best promotes the development of community. Accordingly, this study responded to the following research questions:

1. How valid is the Classroom Community Scale?
2. How reliable is the Classroom Community Scale?
3. Is there a single dimension or are there multiple dimensions underlying the items that make up the Classroom Community Scale?

2. Methodology

2.1. Participants

Participants for this study consisted of 375 students enrolled in 28 online courses. Males represented 34% of participants while 66% of the participants were females. By ethnicity, the breakdown was: White, 62%; African–American, 24%; other, 14%. The mean age of the 360 participants who divulged this information was 39.78 (S.D. = 9.22). All participants were volunteers, representing a volunteer rate of 66%.

2.2. Setting

The treatments used in this study consisted of 28 education and leadership graduate courses (see [Table 1](#)) offered by a private university located in an urban area. Instructor–student ratios ranged from a low of 1:10 to a high of 1:23. Different full-time faculty members taught each course. All courses were delivered to students during the span of a 16-week semester via the [Blackboard.com](#) e-learning system. This system consists of an integrated set of mostly asynchronous application tools that were accessible to students via the Internet. These tools fall into four major categories: (a) productivity tools such as calendars, address books, and information services; (b) communication and collaboration tools, the most important of which are discussion boards, e-mail, and group areas; (c) assessment tools such as computer assisted testing and an online grade book; and (d) content management tools that allow the online instructor to present rich content online, including hypermedia and multimedia. There was no attempt to control either the design or the instructional delivery of these courses by the researcher. Individual instructors determined

Table 1
List of online courses by content area and by title

Education courses	Leadership courses
Advanced Educational Administration	Technology Integration
Advanced Human Learning and Motivation	Consulting Practices
Advanced Supervision and Design	Ethics and Values
Educational Statistics	Foundations of Effective Leadership
Exemplary Instructional Strategies	Human Development
First and Second Language Acquisition	Human Focus of Leadership
Foundations of Distance Education	Leading People
Foundations of Teaching and Learning	Models of Leadership
Legal, Ethical, and Professional Issues	Strategic Planning
Models of Thinking	Strategic Vision
Multicultural Education	Organizational Strategy
Philosophy of Christian Education	Organizational Systems
Research I	Research Design and Analysis
School and Community Relations	Team Leadership

how to design and present their courses within the framework of the Blackboard e-learning system. All instructors were experienced in online course delivery, with each instructor having a minimum of 2 years experience teaching at a distance.

2.3. *Item generation*

A review of the literature suggested that the characteristics of sense of community, regardless of setting, include feelings of connectedness, cohesion, spirit, trust, and interdependence among members. Therefore, an initial set of 20 items was developed that addressed these elements of classroom community. Additionally, Hill (1996) and Rheingold (1991) maintain that the components of community differed from setting to setting suggesting that sense of community is setting specific. One such setting is the classroom where learning is the goal. Consequently, a second set of 20 items was developed to represent the specific setting of the classroom, either traditional or virtual. These additional items addressed classroom-specific community issues pertaining to feelings regarding interaction among community members as they pursue the construction of understanding and the degree to which members share values and beliefs among each other regarding the extent to which their educational goals and expectations are being satisfied. Altogether, there were 40 items in the initial set of items for the Classroom Community Scale.

Half the items were negatively worded. Following each item is a five-point Likert-type scale of potential responses: *strongly agree*, *agree*, *neutral*, *disagree*, and *strongly disagree*. Participants check the place on the scale that best reflects their feelings about the item. The scores are computed by adding points that are assigned to each of the five-point items. Items are reverse-scored where appropriate to ensure that the most favorable choice is always assigned a value of four and the least favorable choice is assigned a value of 0. Consequently higher scores reflect stronger sense of community.

A panel of experts consisting of three university professors who taught courses in educational psychology was given the initial pool of 40 Classroom Community Scale items to evaluate for content validity. Each expert independently rated the relevance of each Classroom Community Scale item to sense of community in a classroom environment using a four-point Likert-type scale consisting of *totally not relevant*, *barely relevant*, *reasonably relevant*, and *totally relevant*. The potential score for each item ranged from 0 (*totally not relevant*) to 4 (*totally relevant*). The mean score for each Classroom Community Scale item as evaluated by the expert panel ranged from a low of 3.33 to a high of 4.00. This review resulted in the deletion of items that were not rated as totally relevant by all faculty raters. Additionally, items that did not account for salient factor loadings on interpretable factors during a preliminary factor analysis of the 40 items were also deleted. For the purposes of this study, a rotated factor loading of over 0.3, which indicates that over 9% of the variance is accounted for by the factor, was taken as large enough to indicate that the loading was salient. Final refinement resulted in reordering the 20 remaining items to avoid a response set due to sequential placement of related items. The final Classroom Community Scale as analyzed by this study is in

Appendix A and consists of 10 items related to feelings of connectedness and 10 items related to feelings regarding the use of interaction within the community to construct understanding and the extent to which learning goals are being satisfied within the classroom setting. Researchers may use this instrument for studies they conduct provided they give proper attribution by citing this article.

For items 1, 2, 3, 6, 7, 11, 13, 15, 16, and 19, the following scoring scale was used: *strongly agree* = 4, *agree* = 3, *neutral* = 2, *disagree* = 1, *strongly disagree* = 0; for items 4, 5, 8, 9, 10, 12, 14, 17, 18, and 20: *strongly agree* = 0, *agree* = 1, *neutral* = 2, *disagree* = 3, *strongly disagree* = 4. To obtain the overall Classroom Community Scale score, one must add the weights of all 20 items. Total raw scores range from a maximum of 40 to a minimum of 0. Subscale raw scores range from a maximum of 20 to a minimum of 0. To calculate the connectedness subscale score, the scores of odd Classroom Community Scale items, i.e., 1, 3, 5, 7, 9, 11, 13, 15, 17, and 19, are added together. Similarly, to calculate the learning subscale score, the scores of the remaining even Classroom Community Scale items are added together.

2.4. Procedures

Data were collected during the final 3 weeks of the semester and for 1 week following the semester for each of the 28 online courses sampled in this study so that students would have substantial exposure to the course about which they were responding. The Classroom Community Scale along with demographic questions regarding gender, ethnicity, and age were made available to students via an online survey. The researcher e-mailed the students on a weekly basis during the 4-week data collection effort providing directions and encouragement for completing the survey.

2.5. Design

Quantitative research methods were used to establish the extent of the validity and reliability of the Classroom Community Scale to measure classroom community among higher education students in online learning environments. Factor analysis of the data was conducted using direct oblimin rotation in order to determine the dimensionality of the classroom community construct. Reliability analyses were conducted using both Cronbach's coefficient α and the split-half methods in order to establish the internal consistency characteristics of the scale. The procedures used for each analysis are described in greater detail in Section 3 below.

3. Results

3.1. Instrument and item analysis

Table 2 shows the descriptive statistics for the total Classroom Community Scale and for each subscale by gender and by total participants. In order, the classroom community means for

Table 2
Descriptive statistics by gender and by total participants

	Min	Max	<i>M</i>	S.E.	S.D.
<i>Male participants (n = 128)</i>					
Connectedness	1	40	25.49	0.64	7.21
Learning	12	40	29.24	0.53	6.02
Classroom community	18	79	54.73	1.04	11.79
<i>Female participants (n = 247)</i>					
Connectedness	7	40	26.95	0.46	7.20
Learning	3	40	30.64	0.43	6.72
Classroom community	14	80	57.60	0.79	12.47
<i>Total participants (N = 375)</i>					
Connectedness	1	40	26.45	0.37	7.23
Learning	3	40	30.17	0.34	6.51
Classroom community	14	80	56.62	0.64	12.30

White, African–American, and other students were 56.84, 58.34, and 54.71 (S.D.s = 12.55, 11.75, and 12.74, respectively). The *n*'s for each ethnic group were 231, 91, and 53.

An independent *t* test was conducted to evaluate the hypothesis that classroom community differs by gender in online learning environments. The test was significant, $t(373) = 2.15$, $P = .03$. Female students possessed a higher classroom community ($M = 57.60$, S.D. = 12.47) than male students ($M = 54.73$, S.D. = 11.79). However, the effect was small as evidenced by $\eta^2 = .012$. A one-way ANOVA provided evidence that there was no difference in classroom community by ethnicity. Additionally, an independent *t* test that evaluated the difference in mean classroom community between the 15 education courses and the 13 leadership courses was also not significant.

Frequency counts of Classroom Community Scale items were calculated to determine if each item elicited a full range of responses across the five-point Likert-type scale. All 20 items elicited the full range of possible responses from *strongly agree* to *strongly disagree*. Response means for each item varied from a high of 3.23, S.D. = 0.86 (for item 2, "I feel that I am encouraged to ask questions") to a low of 2.10, S.D. = 1.10 (for item 7, "I feel that this course is like a family"). Additionally, an ANOVA was conducted to determine if there was a significant amount of variation among the 20 items. The ANOVA was significant, $F(19,6935) = 64.41$, $P < .0001$, confirming significant variation.

Table 3
One-way analysis of variance for classroom community

Source	<i>df</i>	<i>F</i>	η^2	<i>P</i>
Classroom community (CC)	27	2.84 *	.18	.0006
CC within-group error	347	(133.57)		

The value enclosed in parentheses represents mean square error.

* $P < .001$.

Classroom Community Scale items have a Flesch Reading Ease score of 68.4. This scale rates text on a 100-point scale, the higher the score, the easier it is to understand the document. Most standard documents have a score of approximately 60 to 70. Additionally, Classroom Community Scale items reflect a Flesch–Kincaid grade level score of 6.6.

3.3. Factor structure

Table 4 is a correlation matrix of the Classroom Community Scale items. It reveals that test items are correlated with each other. The maximum likelihood method of factor analysis was conducted to explain these correlations and to determine the dimensionality of the 20 items. The Kaiser–Meyer–Olkin measure of sampling adequacy was 0.94, suggesting that none of the Classroom Community Scale items violated the factor analysis assumption of no multicollinearity. Additionally, Bartlett’s test of sphericity yielded an approximate chi-square of 3883.85, $P < .001$, providing evidence that the analyzed data do not produce an identity matrix and are thus approximately multivariate normal and acceptable for factor analysis.

Three criteria were used to determine the number of factors to extract: the scree plot, the Kaiser–Gutman Rule, and solution interpretability. The scree plot and the Kaiser–Gutman

Table 5
Pattern matrix

Items	F_1	F_2	h^2
<i>Connectedness items (n = 10)</i>			
1. I feel that students in this course care about each other	.85	–.16	.57
3. I feel connected to others in this course	.81	.04	.66
5. I do not feel a spirit of community	.75	.08	.62
7. I feel that this course is like a family	.61	.21	.57
9. I feel isolated in this course	.60	.23	.58
11. I trust others in this course	.82	–.11	.59
13. I feel that I can rely on others in this course	.73	.03	.58
15. I feel that members of this course depend on me	.62	–.01	.42
17. I feel uncertain about others in this course	.66	.06	.50
19. I feel confident that others will support me	.59	.13	.46
<i>Learning items (n = 10)</i>			
2. I feel that I am encouraged to ask questions	.24	.48	.46
4. I feel that it is hard to get help when I have a question	.10	.62	.53
6. I feel that I receive timely feedback	–.07	.58	.39
8. I feel uneasy exposing gaps in my understanding	.17	.33	.40
10. I feel reluctant to speak openly	.17	.44	.49
12. I feel that this course results in only modest learning	–.01	.73	.50
14. I feel that other students do not help me learn	–.05	.69	.51
16. I feel that I am given ample opportunities to learn	–.03	.80	.58
18. I feel that my educational needs are not being met	–.01	.72	.50
20. I feel that this course does not promote a desire to learn	.01	.74	.53

Factor labels: F_1 —connectedness, F_2 —learning.

Factor loadings reflect a scoring system that reverse scores negatively worded items.

Rule indicated that the hypothesis of unidimensionality was not supported since three factors possessed eigenvalues of 1.0 or greater. Factors were rotated using the direct oblimin method to allow correlation between factors. The three-factor solution was not interpretable and did not separate trust or interaction, for example, as separate factors as might be hypothesized. The two factor solution was highly interpretable and identified factors that corresponded to the connectedness and learning components of the classroom community construct. These two factors accounted for all significant loadings (see Table 5). Items loaded highly on one factor and low on the other. Since two interpretable factors were extracted, the estimates of the communalities (h^2) report the proportion of variance explained by these two factors. The connectedness factor accounted for 42.81% of the item variance and the learning factor accounted for 11.24% of the item variance, thereby yielding a highly interpretable solution, which represents over 50% of the data. The two extracted factors were moderately related, $r=.60$, $P<.001$, as expected.

3.4. Reliability analysis

Two internal consistency estimates of reliability were calculated for the Classroom Community Scale: Cronbach's coefficient α and the split-half coefficient corrected by the Spearman–Brown prophecy formula. Cronbach's coefficient α for the full Classroom Community Scale was .93 and the equal-length split-half coefficient was .91, indicating excellent reliability. Additionally, internal consistency estimates were calculated for each of the two subscales. Cronbach's coefficient α and the equal-length split-half coefficient for the connectedness subscale were .92 each, also indicating excellent reliability. Cronbach's coefficient α for the learning subscale was .87 and the equal-length split-half coefficient was .80, indicating good reliability.

4. Discussion

This study presents a conceptual framework for understanding sense of community in classroom settings and analyzes the validity and reliability of an instrument that can be used to conduct research in this area. Learner–learner and learner–instructor ties have historically provided students with social, emotional, and academic support. However, with the advent and growing popularity of e-learning systems, it is important to consider the sense of community experienced by students in online learning environments. In this study, the Classroom Community Scale, which measures classroom community, was developed, refined, and field-tested using 375 graduate students enrolled in 28 different Blackboard-based online courses. This test instrument generates an overall classroom community score as well as two subscales: connectedness and learning. Connectedness represents the feelings of the community of students regarding their connectedness, cohesion, spirit, trust, and interdependence. Learning represents the feelings of community members regarding interaction with each other as they pursue the construction of understanding and the degree to which members share values

and beliefs concerning the extent to which their educational goals and expectations are being satisfied.

A factor analysis confirmed these two subscales as latent dimensions that explain why the test items are correlated with each other, thus, providing additional evidence of the construct validity of classroom community. Most factor loadings were high (i.e., >0.6) and the lowest loadings were moderately high. Both factors were internally consistent and well defined by the items. Consequently, the following two deductions are made regarding the factor analysis solution.

1. Factor 1 correlates with all 10 Classroom Community Scale items constructed to measure connectedness. This suggests that Factor 1 is a reliable and interpretable factor in the data set and that it represents a common underlying dimension of classroom community.
2. Factor 2 is also a reliable and interpretable factor in the data set that represents learning, the second common underlying dimension of classroom community.

The Classroom Community Scale was found to be a valid measure of classroom community and both the overall scale and its two subscales possess high internal consistencies. These high reliability coefficients provide evidence that although the scale is multidimensional, being composed of the connectedness and learning subscales, the items nonetheless reflect, at a more general level, the overall classroom community construct.

Classroom community scores sampled in this study were relatively stable by ethnic groups and by course content area. However, significant differences in classroom community were noted between females and males. This difference supports the hypothesis of [Belenky, Clinchy, Goldberger, and Tarule \(1986\)](#) who identified two different communication patterns that can be detected in textual communications: (a) the separate voice, that is the separate, autonomous, or independent path which is typical of the majority of men (and some women); and (b) the connected voice, the relational, connected, or interdependent path, which reflects the majority of women (and some men). This communications model suggests that many female students place emphasis on relationships and prefer to learn in an environment where cooperation is valued more than competition. The connected voice supports classroom community building while the separate voice does not. Both [Blum \(1999\)](#) and [Rovai \(2001\)](#) conducted studies in online learning environments and reported finding a difference in sense of community by gender, with females manifesting stronger sense of community than males. Qualitative and quantitative methods used in these studies suggested the differences in community were related to communication pattern differences.

In the present study, the minimum male connectedness score was 1 out of 40 possible points and for females the minimum score was 7 out of 40 points. For both genders, the maximum score was 40. This large variability in feelings of connectedness suggests that male students, or perhaps students manifesting the separate voice, do experience weaker feelings of community than females, or students with the connected voice, in online learning environments. Students with low sense of community probably feel isolated and are potential online course dropouts. Additional research is required to determine which variables, such as communication patterns

or learning styles, explain the large variability in classroom community among students enrolled in the same online courses. The ability of the Classroom Community Scale to discern these differences in classroom community by gender provides added evidence of the validity of this scale.

Significant differences in classroom community were noted between the 28 online courses that were sampled in this study, suggesting that the Classroom Community Scale is sufficiently sensitive to detect differences in university courses taught asynchronously via the Internet. This finding leads one to hypothesize that classroom community is sensitive to online course design and/or pedagogy, since these factors were left uncontrolled in this study. Additional research is required to identify course design and pedagogy-related variables that promote stronger sense of community in online courses.

The Classroom Community Scale can be administered to other populations, to include students taking courses in a traditional classroom setting. The test instrument was not constructed to limit its use to a distance education population. A Flesch–Kincaid grade level score of 6.6 suggests that the test instrument can be easily understood by a wide range of student populations.

5. Conclusion

The present study reports on instrument development and validation procedures. Data presented here provide evidence that the 20-item Classroom Community Scale is an efficient instrument to assess graduate students' sense of classroom community. Moreover, measurement of classroom community adds a useful tool that can be used in future research to measure the extent of classroom community, as well as the effectiveness of subsequent course design and instructional delivery changes meant to promote classroom community and reduce feelings of isolation.

However, there are limitations. The sample used in this study consisted of university students at a single institution pursuing graduate study using the Blackboard e-learning system; therefore, caution should be exercised when generalizing community scores to students at other institutions or to students enrolled in traditional courses or using other forms of distance education. In the future, other target populations, such as traditional students and high school students, as well as other university populations, could be used for the purpose of norming the Classroom Community Scale. Other forms of distance education, such as broadcast television, video and audio teleconferencing, could also be examined. Resultant scores could then be standardized for ease of interpretation. However, researchers need to confirm scale reliability for all sampled populations.

Appendix A. Classroom Community Scale

Directions: Below, you will see a series of statements concerning a specific course or program you are presently taking or have recently completed. Read each statement carefully

and place an X in the parentheses to the right of the statement that comes closest to indicate how you feel about the course or program. You may use a pencil or pen. There are no correct or incorrect responses. If you neither agree nor disagree with a statement or are uncertain, place an

	Strongly agree (SA)	Agree (A)	Neutral (N)	Disagree (D)	Strongly disagree (SD)
1. I feel that students in this course care about each other	(SA)	(A)	(N)	(D)	(SD)
2. I feel that I am encouraged to ask questions	(SA)	(A)	(N)	(D)	(SD)
3. I feel connected to others in this course	(SA)	(A)	(N)	(D)	(SD)
4. I feel that it is hard to get help when I have a question	(SA)	(A)	(N)	(D)	(SD)
5. I do not feel a spirit of community	(SA)	(A)	(N)	(D)	(SD)
6. I feel that I receive timely feedback	(SA)	(A)	(N)	(D)	(SD)
7. I feel that this course is like a family	(SA)	(A)	(N)	(D)	(SD)
8. I feel uneasy exposing gaps in my understanding	(SA)	(A)	(N)	(D)	(SD)
9. I feel isolated in this course	(SA)	(A)	(N)	(D)	(SD)
10. I feel reluctant to speak openly	(SA)	(A)	(N)	(D)	(SD)
11. I trust others in this course	(SA)	(A)	(N)	(D)	(SD)
12. I feel that this course results in only modest learning	(SA)	(A)	(N)	(D)	(SD)
13. I feel that I can rely on others in this course	(SA)	(A)	(N)	(D)	(SD)
14. I feel that other students do not help me learn	(SA)	(A)	(N)	(D)	(SD)
15. I feel that members of this course depend on me	(SA)	(A)	(N)	(D)	(SD)
16. I feel that I am given ample opportunities to learn	(SA)	(A)	(N)	(D)	(SD)
17. I feel uncertain about others in this course	(SA)	(A)	(N)	(D)	(SD)
18. I feel that my educational needs are not being met	(SA)	(A)	(N)	(D)	(SD)
19. I feel confident that others will support me	(SA)	(A)	(N)	(D)	(SD)
20. I feel that this course does not promote a desire to learn	(SA)	(A)	(N)	(D)	(SD)

X in the neutral (N) area. Do not spend too much time on any one statement, but give the response that seems to describe how you feel. *Please respond to all items.*

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