NSSE and Learning Communities:
Understanding Learning and Adjustment, Relationships with Others, and Satisfaction

Client: The College of Agriculture and Life Sciences, Iowa State University
Associate Dean David G. Acker, Ph D

Capstone Project
Submitted by:
Stephanie Schoening

For Consideration to:
POS Committee
Larry Ebbers, Ph D and Kevin Saunders, Ph D Co-Chairs

Iowa State University
Table of Contents

1. Overview 3

2. Executive summary 4

3. Introduction of problem 5
   a. Background 5
   b. Theoretical Support 7
   c. Statement of the Problem 11
   d. Research Questions 12

4. Methodology 12
   a. Sample 13
   b. Data Analysis 14
   c. Results 15

5. Discussion 18

6. Ethical consideration 23

7. References 24

8. Appendix 27
   a. Human Subject Exemption 27
Overview of Project

Based on my continued interest in first-year experience, I looked for an opportunity to engage in research related to the impact of learning communities. Upon investigation, I discovered an interest in the college of Agriculture and Life Sciences and designed a research proposal that examined learning community students' experience related to learning and adjustment, relationships with others, and satisfaction.

Means of reporting the results

The results of this inquiry were presented to the named client, Dr. David Aker on February 4, 2010. The final draft of this research along with final orals will be presented to the POS committee for discussion at the final orals on February 4, 2010.

Definitions of Terms

Learning Community: a formal program where groups of students take two or more classes together (Zhao & Kuh, 2004).


Relationships with others: Building trust and familiarity.

Satisfaction in the first year: a self-report measure of contentment collected in the spring of the student’s first year of college through NSSE.

Student engagement: the quality of effort students expended on connecting with the institution’s resources and faculties.
Executive Summary

This paper is a Capstone project completed in requirement of the Educational Leadership and Policy Studies program at Iowa State University. The client for this Capstone project is Dr. David Aker, Associate Dean of the College of Agriculture and Life Sciences. This study presents research on learning communities participants in the College of Agriculture and Life Sciences at Iowa State University. Items from the National Survey of Student Engagement (NSSE) were examined to uncover information specifically related to first-year students’ learning and adjustment, relationships with others, and satisfaction compared to non-learning community participants for the College of Agriculture and Life Sciences and compared to learning community participants in the other colleges within Iowa State University. The results found the higher ratings on several items in the learning community classroom of the College of Agriculture and Life Science’s learning communities compared to other ISU colleges, including a positive quality of relationship with faculty, access to tutoring, working with faculty outside of the classroom and solving real-world complex problems. Secondly, there were no significant difference between learning community participants and non-participants within the college. Further investigation explored the likelihood that rather than a participant versus non-participant effect, the difference lies in the activities and environment unique to the College of Agriculture and Life Sciences.
Introduction of the Problem

Learning communities are now a popular curricular structure within landscape of higher education. This is particularly true at Iowa State University (ISU) where learning communities have been offered for over ten years. About 65% of first-year students at Iowa State University elect to participate in learning communities (CALS White paper, 2008). There are six colleges (excluding Veterinary Medicine) that comprise ISU and all offer learning communities.

In 2008-2009 the College of Agriculture and Life Sciences at ISU offered 21 learning communities. Eighty percent of students in the College of Agriculture and Life Sciences participated in learning communities. Noting the intense and intentional focus on student experience by the faculty and administration of the College of Agriculture and Life Sciences this study investigates the need for enhanced understanding of learning communities’ impact. When approached with the proposal the Associate Dean of the College of Agriculture and Life Sciences, Dr. David Acker, was receptive to examination of the college’s learning communities. Further interest was indicated when meeting a group of faculty from the college who teach in learning communities. The faculty group’s input helped to shape the questions and items to be investigated in this study. The faculty group recommended a desire to examine some specific areas of inquiry through the responses of a sample population of the college’s first-year students related to their learning and adjustment, relationships with others, and satisfaction.

Background

Learning communities are positively associated with student gains in personal and social development, practical competence, and general education (Zhoa & Kuh, 2004). Integration into the college life includes understanding and accessing resources, connecting with peers and instructors, and responsibly completing course requirements. Tinto and Russo’s (1994) research
at two-year colleges showed that students in learning communities spend more time outside of class together, discussing class content, speaking with instructors, and using resources on campus than students who do not participate in a learning community.

Understanding students' experience in learning communities provides insight into ways to support their learning and engagement. The National Learning Communities Dissemination Project involved nineteen institutions, twelve four-year colleges, and seven community colleges (Minkler, 2002). The purpose of the project was to understand under which conditions do learning communities flourish, which factors make them fail, and how organizations learn from their experiences. This comprehensive study of learning communities and student outcomes conducted over three years found these common lessons from all participating sites:

- Participation in learning communities resulted in the same or better grades for cohort students than from those in respective stand-alone course comparison
- Student who participated in learning communities had significantly higher rates of retention that did their respective stand-alone counterparts
- Student survey data indicated that the learning community college experience was inherently better than what they had experienced in stand-alone courses

Better grades, higher retention rates and a self-reported better experience in courses all compliment the learning community structure. Developmental gains and greater involvement across campus are also benefits of learning communities. Tinto et al. (1994) researched two- and four-year institutions with learning communities to find greater involvement in a range of academic and social activities, along with greater developmental gains over the course of the year than students learning in the regular curriculum.
In addition to increased student involvement, research also indicates gains in other important academic areas and satisfaction. Lenning and Ebbers (1999) describe the benefits of students who participate in learning communities include higher academic achievement, better retention rates, greater satisfaction with college life, improved quality of thought and communication, a better understanding of self and others, and a greater ability to successfully bridge the gap between academic and social worlds. These are all significant student development issues that serve as determining factors of their retention and success. The sources cited above show that involved students achieve better and are more satisfied with their college experience than student in stand-alone courses.

Simply stated, retention, engagement, satisfaction, and learning might be enhanced if actions such as offering learning communities were taken to integrate the students with each other and with the college (Cohen et al., 2003). Learning communities offer opportunities for greater integration and the weight of evidence in higher education literature points to student involvement as a key factor in student learning and personal development (Hu & Kuh, 2003).

Theoretical Support

Astin’s (1985) theory of student involvement states the amount of student learning and personal development associated with any educational program is directly proportional to the quality and quantity of student involvement in that program. Further, the effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement. Student involvement in academic programs is increased by participation in a learning community. Three areas of involvement explored in this study are learning and adjustment, relationships with others and satisfaction. These three factors of student involvement in learning communities are supported in a study by Zhao and Kuh (2004).
Many studies use Astin’s model as their theoretical foundation including Zhao and Kuh’s (2004) study, *Adding value: Learning communities and student engagement*. This study of 365 four-year institutions links student involvement in learning communities with key factors of student learning and personal development. The authors found that students in learning communities had more frequent interactions with faculty. Additionally learning community students were more positive about the quality of academic advising and the degree to which their campus was supportive of their academic and social needs. Nationally learning community students are generally more satisfied with their college experiences.

As discussed in the literature above, learning communities provide gateways for student success by facilitating greater student involvement with resources on campus. Experiences within the learning community teach students to collaborate and feel connected to the campus. These experiences are important because by linking students to others through on-going social interactions students can build a support system of relationships. The linking of courses in learning communities “results in students becoming members of a community focused on academic content which allows them to further develop their identity and discover their voice as well as integrate what they are learning into their world view and other academic and social experiences” (Zhoa & Kuh, 2004, p. 118).

**Learning and Adjustment, Relationships with Others, and Satisfaction**

Student involvement is related to learning and adjustment to college life. Faculty who teach in first-year seminar and learning community courses employ a curriculum that encompasses some of the richest integrative activities (Bass & Eynon, 2009). These include peer tutoring, undergraduate research, internships, and service learning. These are called “high impact activities.” These activities go beyond teaching subjects and teach ways of approaching,
understanding, and interacting with the world in real world problem solving (Bass & Eynon, 2009). This learning and integration could ease the adjustment into the rigorous academic life first-year students enter rather abruptly. Easing this transition through social support and valuing students’ personal perspective in connection with classroom content is an approach that can help students succeed.

Relationships with others and satisfaction are also impacted by student involvement in college life. Creating a sense of community in the learning community classroom is associated with program completion. Research by McKinney, McKinney, Franiuk and Schweitzer (2006) investigated a sense of community in relation to student learning and satisfaction. In this study more than 87 percent of subjects stated that a sense of community in the classroom contributes significantly to the completion of their program. Further the research showed that students’ sense of community related not only to students’ perception of their performance and their satisfaction with the course, but also with measure of their actual performance including grades (McKinney et al., 2006).

Student satisfaction is also impacted by student involvement in college life. Learning Communities help first-year students adjust to college by creating a supportive environment that engages them in the life of the institution (Zhao & Kuh, 2004). Activities and programs within learning communities are designed to create a seamless experience for students that integrate social and academic experiences. Although the level of integration will vary, activities and programs encourage reflection and bringing students’ personal interests into their academic work and academic work into their personal and social activities. One activity common in learning communities are classroom visits to the library or other support services. It might be inferred that students who are familiar with campus resources and know how to find answers to their
questions will feel more satisfied with the institution. Students who are satisfied and are successful in accessing campus services are more likely to pass classes and return to enroll in another semester which is reflected in research results reported from institutions offering first-year experience programs (Minkler, 2002).

In synthesis of this supportive literature it is clear learning communities have a powerful effect on the student experience by creating a supportive environment for students. Similar benefits have been experienced at ISU. Learning communities at ISU have enjoyed a strong history of positive effects on student’s deep learning, retention, positive perception of support on campus, and greater overall satisfaction (Saunders & Love, 2004). To summarize, national and local research about learning communities show they create involved and supported students.

These areas of active involvement and student development particularly related to learning and adjustment, relationships with others, and satisfaction are of interest to the client and committee of this researcher in the scope of this Capstone project.

Gaps in Research

Tebben (1995) found that the largest contributors to student satisfaction and course competition were the caring attitude of the instructors and the supportive environments created by fellow students (McKinney et al., 2006). The research by McKinney et al. (2006) revealed correlations that suggest a strong relationship between students’ sense of community and what they felt they were getting out of, or learning in, a course. Therefore, investigating learning and adjustment, relationships with others, and satisfaction is a worthwhile pursuit. In communication with the Associate Dean of the College of Agriculture and Life Sciences, the Learning Community Faculty group of this college and the Provost’s Office there is interest in this line of inquiry. Additionally, examination of the sources posted on the ISU Learning Communities
Website reveals that ISU has run some comparisons between learning community and non-learning community students using the National Survey on Student Engagement (NSSE) data, but it has been on a benchmark level that uses several questions in broad scale (e.g., NSSE five benchmarks). Looking for differences in individual items would be a new direction of examination for the university. These data could be connected with curriculum, recruiting, retention, and planning conversations within the college and perhaps across the university. ISU has not conducted item level analysis related to specific areas of development and could benefit from this analysis.

Further Zhao and Kuh (2004) suggest additional research is needed at the institutional level to determine whether some forms of learning communities are more effective for impacting different outcomes. The College of Agriculture and Life Sciences is using this inquiry to examine their learning community structures compared to that of the other university colleges collectively.

This research strives to provide details on why students experience this success by using NSSE data to focus on their experience. Further, rather than looking at broad indicators like retention, specific areas of development will be examined, specifically learning and adjustment, relationships with others, and satisfaction. This study will fill in the gap in literature by expanding ISU’s understanding of the impact of learning communities.

**Statement of the Problem**

To address the gaps in the literature, assist the client in future planning and to deepen the understanding of best practices, this study will provide information related to learning and adjustment, relationships with others, and satisfaction of first-year students at ISU. This study will use existing ISU NSSE data to examine how ISU learning community participants from the
College of Agriculture and Life Sciences report their experiences compared with two groups; (1) learning community participants in other ISU colleges, and (2) the College of Agriculture and Life Sciences students who do not participate in a College of Agriculture and Life Sciences learning community in relation to students’ learning and adjustment, relationships with others, and satisfaction.

**Research Questions**

1) How does participation in a College of Agriculture and Life Sciences learning community compare with students in other ISU colleges’ learning communities in its impact on students’ learning and adjustment, relationships with others, and satisfaction?

2) Is the student experience different for students in the College of Agriculture and Life Sciences who participate in a learning community compared with College of Agriculture and Life Sciences students who did not participate in relation to students learning and adjustment, relationships with others, and satisfaction?

**Methodology**

This inquiry is quantitative because it allows for comparison between two representative groups using existing survey data. By accessing three concurrent years of the NSSE data set from Iowa State University there is a large enough sample of learning communities participants across the individual colleges of the university to allow for comparison to address the first research question. For the second research question there will be a limitation in the comparison samples. Because 80% of first-year, full-time the College of Agriculture and Life Sciences students participate in learning communities it is likely the sample of participants to non-participant will not be equal. Three years of data will be used to help address this limitation.
For the purpose of this study, items have been selected from throughout the instrument to illuminate three aspects of the student experience: learning and adjustment, relationships with others, and satisfaction. A total of 22 items were selected for investigation.

**Sample (population)**

Iowa State University currently administers the NSSE in the spring to 2,000-2,500 first-year students. The number of responses represents about one-third of ISU first-year students annually. The sample will be further defined by the research question. Results from the 2005-2006, 2006-2007, and 2007-2008 academic year will be examined.

**Data Source**

The sources of data for the inquiry are NSSE data gathered from Iowa State University Office of the Provost. Additional information was provided by the ISU Registrar’s office. The NSSE assesses the extent to which students engage in good educational practices and what they gain from their college experience. NSSE was developed to measure the time and effort students put into their studies and other educationally beneficial activities associated with a variety of developmental and learning outcomes during college (Chickering & Gamson, 1987, as cited in Kinzie & Sarraf, 2008; Kuh, 2001, 2003). To better understand the students’ engagement, Iowa State University has administered the National Survey of Student Engagement (NSSE) annually since 2000, with the exception of 2004. NSSE is administered annually each spring across the nation to first-year and senior college students. The 2007 ISU administration included over 610 institutions (NSSE Annual Report, 2007).

**Limitations**

The findings of this inquiry are specific to NSSE items related to learning and adjustment, relationships with others, and satisfaction as defined by the researcher. A limitation
in using existing data from the NSSE is that there is no control over the questions asked or the constructs around these questions. The researcher is limited to using the existing source to fit the purpose of the study rather than creating precise items related solely to the inquiry. As previously referenced, there is a limitation in the comparison samples within the College of Agriculture and Life Sciences. Because 80% of first-year, full-time students in the College of Agriculture and Life Sciences participate in learning communities the sample of participants to non-participant are not equal. Another limitation is this study does not look at specific structures within learning communities.

There is no investigation or comparison as to what practices are producing the best results related to student development specifically in the areas of learning and adjustment, satisfaction, and relationships with others. This further analysis and comparison could be a rich topic for future research. Additionally the structures and sophistication of development of the learning communities in each college are not known and therefore not compared. A limitation is that each college could have more or less developed learning community curriculum and activities when compared to the College of Agriculture and Life Sciences. That is why the structure, curriculum, or specific activities of the learning communities in College of Agriculture and Life Sciences are not discussed in this inquiry.

**Data Analysis**

For the first research question a two-sample t-test will be used to yield mean scores for each NSSE item for the two groups. The two groups are identified as learning community participants in either the College of Agriculture and Life Sciences or the other five colleges in aggregate. ISU has a history of handling college comparison data this way and the depth provided through the lumped comparison is appropriate for this inquiry. The mean scores of each
NSSE item will be compared to examine the differences that exist, if any, in the experiences of the two groups.

A two-sample t-test will be used to yield mean scores for each NSSE item for the two groups in the second research question of this study, Iowa State University first-year students from the College of Agriculture and Life Sciences who participated in a learning community and Iowa State University first-year students from the College of Agriculture and Life Sciences who did not participate in a learning community. The mean scores of each NSSE item will be compared to examine the differences that exist, if any, in the experiences of the two groups. The level of significance is set at $p < 0.05$.

**Results**

This inquiry is built around two research questions. First, how does participation in a College of Agriculture and Life Sciences Learning Community compare with students in other ISU college's learning communities as it impact on student’s learning and adjustment, relationships with others and satisfaction? Second, is the outcome different for students in the College of Agriculture and Life Sciences (CALS) students who participate in a learning community compared to CALS students who did not participate in learning communities in relation to students learning and adjustment, relationships with others and satisfaction?
Table 1 compares Learning Community participants in the College of Agriculture and Life Sciences with Learning Community participants in other colleges. Learning Community participants in the College of Agriculture and Life Sciences had significantly higher ratings on items below, when compared with Learning Community participants from other colleges.

- Tutored or taught other students (paid or voluntary),
- Worked with faculty members on activities other than coursework (committees, orientations, student life, activities, etc.),
- Quality: Your relationships with faculty members,
- Institutional contribution: Solving complex real-world problems,
- Quality: Your relationships with administrative personnel and offices and

<table>
<thead>
<tr>
<th>CALS LC vs All Other LC</th>
<th>LC CALS</th>
<th>Other</th>
<th>Mean Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Asked questions in class or contributes to class discussions</td>
<td>185</td>
<td>2.46</td>
<td>0.81</td>
</tr>
<tr>
<td>Prepared two or more drafts of a paper of assignments before class</td>
<td>185</td>
<td>2.41</td>
<td>0.93</td>
</tr>
<tr>
<td>Came to class without completely reading or assignments</td>
<td>185</td>
<td>2.10</td>
<td>0.72</td>
</tr>
<tr>
<td>Worked with classmates OUTSIDE OF CLASS to prepare class assignments</td>
<td>185</td>
<td>2.56</td>
<td>0.76</td>
</tr>
<tr>
<td>Tutored or taught other students (paid or voluntary)</td>
<td>177</td>
<td>1.89</td>
<td>0.87</td>
</tr>
<tr>
<td>Participated in a community-based project (e.g. service learning) as part of a regular course</td>
<td>177</td>
<td>1.54</td>
<td>0.75</td>
</tr>
<tr>
<td>Used e-mail to communicate with an instructor</td>
<td>177</td>
<td>3.00</td>
<td>0.81</td>
</tr>
<tr>
<td>Discussed grades or assignments with an instructor</td>
<td>177</td>
<td>2.32</td>
<td>0.83</td>
</tr>
<tr>
<td>Worked with faculty members on activities other than coursework (committees, orientation, student life activities, etc.)</td>
<td>176</td>
<td>1.82</td>
<td>0.78</td>
</tr>
<tr>
<td>Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)</td>
<td>176</td>
<td>2.70</td>
<td>0.85</td>
</tr>
<tr>
<td>Quality: Your relationships with other students</td>
<td>172</td>
<td>5.94</td>
<td>1.21</td>
</tr>
<tr>
<td>Quality: Your relationships with faculty members</td>
<td>172</td>
<td>5.14</td>
<td>1.19</td>
</tr>
<tr>
<td>Quality: Your relationships with administrative personnel and offices</td>
<td>171</td>
<td>5.04</td>
<td>1.38</td>
</tr>
<tr>
<td>Hours per 7-day week spent preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)</td>
<td>172</td>
<td>4.27</td>
<td>1.69</td>
</tr>
<tr>
<td>Hours per 7-day week spent participating in co-curricular activities (organizations, campus publications, student government, social, fraternity or sorority, intercollegiate or intramural sports, etc.)</td>
<td>172</td>
<td>2.47</td>
<td>1.16</td>
</tr>
<tr>
<td>Institutional emphasis: Spending significant amount of time studying and on academic work</td>
<td>171</td>
<td>3.09</td>
<td>0.72</td>
</tr>
<tr>
<td>Institutional emphasis: Providing the support you need to help you succeed academically</td>
<td>171</td>
<td>3.07</td>
<td>0.76</td>
</tr>
<tr>
<td>Institutional contribution: Working effectively with others</td>
<td>170</td>
<td>2.89</td>
<td>0.83</td>
</tr>
<tr>
<td>Instructional contribution: Understanding yourself</td>
<td>169</td>
<td>2.52</td>
<td>0.90</td>
</tr>
<tr>
<td>Instructional contribution: Solving complex real-world problems</td>
<td>169</td>
<td>2.41</td>
<td>0.83</td>
</tr>
</tbody>
</table>
• Quality: Your relationships with other students

These six items listed above reference behaviors that are typically enhanced by learning communities, integrated curriculum, and social activities as cited in the literature.

Table 2 compares Learning Community participants in the College of Agriculture and Life with students in the College of Agriculture and Life Sciences students who participate in a learning community compared to College of Agriculture and Life Sciences students who did not participate in learning communities in relation to students learning and adjustment, relationships with others and satisfaction?. Learning Community participants had significantly higher ratings on items below, when compared with students who did not participate in a learning community.

• Quality: Your relationships with administrative personnel and offices and
• Quality: Your relationships with other students

**Discussion**

This inquiry sought to uncover differences between groups of students related to their participation in learning communities. Further this research sought to understand more about the experience of students in a learning community within the College of Agriculture and Life Sciences. The research examined if their outcome was different than learning community participants from other colleges or from their peers in the College of Agriculture and Life Science who did not participate in a learning community.

The literature demonstrates the positive impact of learning communities related to engagement, relationships, and retention. The areas or NSSE items where differences were found are congruent with the findings of researchers noted in the literature review. These nationally supported differences experienced by students in the learning communities of the College of Agriculture and Life Science include higher marks for the quality of relationships with others and in working with faculty members outside of class. Sources including McKinney et al. (2006) and Tebben (1995) support the relationship between faculty members and students as a positive indicator of satisfaction in a course or with a college. The quality of the relationships with others and with faculty within the College of Agriculture and Life Sciences were found to be significantly better than the other college’s at ISU. These findings suggest that stronger connections are occurring inside and outside of the College of Agriculture and Life Sciences classroom. The results would indicate that faculty and Learning Community students in the College of Agriculture and Life Science are connecting with each other in more significant or intentional ways outside of the classroom compared to the other colleges at Iowa State.
University. This discovery leads to the question of what is occurring in this college that results in these positive connections?

To understand more about the results of this research, further investigation was obtained through conversation with Dr. Steve Mickelson, Director of Learning Communities for ISU and Dr. David Acker, Associate Dean of the College of Agriculture and Life Science. The conversations revealed information that begins to explain why differences exist between the College of Agriculture and Life Sciences and other ISU colleges learning communities’ participants. The conversations yielded information that supports the significant findings of this study. Each NSSE item is followed by Dr. Mickelson’s or Dr. Acker’s summarized response in the following section.

Research Question 1

- Tutored or taught other students (paid or voluntary),
  - Peer mentors and tutoring within the departments are offered in many of the first-year or beginning courses of the college’s programs
- Worked with faculty members on activities other than coursework (committees, orientation, student life, activities, etc.),
  - The College of Agriculture and Life Sciences has a high percentage of faculty who advise students (in contrast with the use of P&S staff).
  - Student involvement in various activities (e.g., clubs) may be enhanced by learning communities.
  - Deans and administrative personnel from throughout the college are often seen at the social events like barbeques and club events.
The College of Agriculture and Life Sciences hosts many social gatherings including barbeques, outings and field trips. Many are hosted by the active student organizations within the college that first-year students are strongly encouraged to join by their peer mentors.

- Quality: Your relationships with faculty members,
  - There is a strong commitment to learning communities across the ISU campus:
    - stipends which encourage faculty to teach in learning communities.
    - The Associate Dean Dr. David Acker and distinguished faculty serve on the campus learning communities committee.
  - Faculty frequently teach the orientation courses connected to learning communities (in contrast with the use of P&S staff).

- Institutional contributions: Solving complex real-world problems.
  - Within the College of Agriculture and Life Sciences undergraduate students are hired to assist with research, in work-study positions and serve on committees.
  - Many first-year courses include hands-on lab experiences creating opportunity for real world application of knowledge.

- Quality: Your relationships with administrative personnel and offices and
- Quality: Your relationships with other students

Research - Question 2

- Participated in a community based-project (e.g. service learning) as part of a regular course.

- Worked with faculty members on activities other than coursework (committees, orientation, student life, activities, etc.),
This conversation uncovered primarily college-wide effects and insights on culture rather than a difference in practices or experience between learning community participants and non-participants within the College of Agriculture and Life Sciences.

**Exploring the Differences**

The conversations with Dr. Mickelson and Dr. Acker support the differences uncovered in this inquiry. So what are the implications of understanding these differences identified in this research? The research related to learning communities ties positive implications associated with these higher rating such as ease of transition (Bass and Enyon, 2009), higher student satisfaction and higher retention (Tinto, 2009).

The positive effects of behaviors related to the significant NSSE items are also cited by Tebben (1995) who “found that the largest contributors to student satisfaction and success were the caring attitude of the instructor and supportive environment created by fellow students.” Supporting Tebben (1995) is McKinney et. al, who found that students’ sense of community or supportive environment within the classroom can be actively stimulated by an instructor who attends to fostering a sense of community. “This sense of community, in turn, has been shown to relate not only to students’ perception of their performance and their satisfaction with the course, but also with measures of their actual performance” (McKinney et. al., 2006). Active student clubs, engaged faculty advisors and college-wide social gatherings are examples of ways instructors and fellow students foster a sense of community.

The second research question explored differences between participants and non-participants within the College of Agriculture and Life Sciences. The results did not reveal any significant differences between the two groups. One possible reason for the lack of differences in
the responses to these NSSE items might be contributed to the pervasiveness of common factors of learning community culture in the attitudes of the faculty in the College and Agriculture and Life Science. It appears that faculty across the college incorporate the good practices of engagement and integration to all students they teach and advise.

The results of this inquiry support a college-wide affect of a culture that supports learning and adjustment, relationships with others and satisfaction within the College of Agriculture and Life Sciences. Rather than a learning community participant versus non-participant relationship being the indicator of difference, this study reveals that the effect may be constructs of the college as a whole and it’s affect on students.

So what does this study reveal that might be useful in reflecting or looking forward on the effectiveness of learning communities in the College of Agriculture and Life Science? It might be helpful for faculty in the College of Agriculture and Life Sciences to gather and discuss the significant findings as well as examine the areas where there were no differences were found. Further, if the significant findings support the effect of college-wide culture rather than specific learning communities, are resources best used in supporting learning communities or in supporting the activities and structures that support the connecting culture of the College of Agriculture and Life Sciences?

Another way to use this information is in the recruiting of new students into the College of Agriculture and Life Sciences. This research begins to quantify the feelings or assumptions of members of the campus community related to the inclusion of first year students into the fabric of this college and the significant impact of barbeques and social events sponsored by clubs. This research could provide support for the importance of maintaining or expanding these types of activities. Marketing materials and conversations with prospective students and their parents
could be shaped to include the message of the ease of transition provided for new students and could emphasize the ways this college works to support the activities (i.e. clubs) and structures (i.e. faculty advisors) for an increased sense of community. It could be that conversations within the college’s faculty and administration identify new activities and perhaps resources to support these high impact activities (Bass and Enyon, 2009) such as peer tutoring, undergraduate research, internships, and service learning.

An additional constructive future use of this study might be to report back to the group of learning community faculty from the College of Agriculture and Life Sciences who helped form the research questions examined. This group also helps to inform the direction of learning community activities. This data could be useful in their future planning.

This data in concert with additional literature, the rich history and future plans for learning communities in the College of Agriculture and Life Sciences might shape future conversations on topics of first-year students related their learning and adjustment, relationships with others, and satisfaction.

**Ethical Consideration**

The Chair of the Institutional Review Board has reviewed this project and determined that it does not meet the definition of human subjects research according to the federal guidelines. Notice was received from the Institutional Review Board of ISU on June 6, 2008 (see appendix).
References


Minkler, J. E. (2002). Eric review: Learning communities at the community college. *Community*
College Review, 30, 46-63.


Appendix
Human Subjects Approval Exemption for IRB

DATE: June 6, 2008
TO: Stephanie Schoening
    905 Pierce Drive
    Storm Lake, IA 50588

CC: Kevin Saunders
    1550 Beardshear

FROM: Jan Canny, IRB Administrator
      Office of Research Assurances

SUBJECT: IRB ID 08-199

The Chair of the Institutional Review Board has reviewed the project “Examining Student Engagement in CALS Learning Communities” and determined that the project does not meet the definition of human subject research according to the federal guidelines, 45 CFR 46.

Because this project does not need IRB approval, you can proceed with the project. We do, however, urge you to protect the rights of your participants in the same ways that you would if IRB approval were required.

Any modification of this project should be communicated to the IRB to determine if the project still meets the definition of not being human subject research. If it is determined that approval is needed, then an IRB proposal will need to be submitted and approved before proceeding with data collection.