Is Student-to-Student Interaction in Distance Education Classes on the Minds of Our Students?

A Comparison of Undergraduate and Graduate Students

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Jane Bachelor

Wendy Warner

David Jones
Dedication

• This presentation is dedicated to Sir Francis Bacon who admonished us to “Question All Previous Accepted Knowledge.”
  – Bacon is also known as the father of empiricism or the scientific method
Is This Really True?

• “...student-to-student exchange is a critical part of a quality online class...” (Stanley, 2013, p. 1)

• “...interaction [is] an essential element to student learning and to the overall success and effectiveness of distance education” (Sher, 2009, p. 103)

• “One of the recurrent themes in the literature is the effectiveness of using collaborative activities, group discussions, and other forms of student-student interaction” (Dixson, 2010, p. 2)
What is the basis for the recommendation that student-to-student interaction is important in distance education classes?
The Source!!

Chickering & Gamson (1987)

- Chickering & Ehrmann (1996)
  - Current Authors
  - Current Authors

- Moore (2013)
  - Current Authors
  - Current Authors

Current Authors

Current Authors

Current Authors

Current Authors
Chickering and Gamson (1987)

- Identified 7 Principles of Effective Teaching for undergraduate education
  - frequent and open communication between faculty members and students
  - promotion of collaborative student efforts
  - incorporation of active learning
  - prompt feedback
  - efficient use of time
  - establishing high expectations
  - celebrating differences in student learning

- According to Google Scholar this one article has been cited 4,469 times
Chickering & Gamson (1987)

• The seven principles were developed from research on face-to-face undergraduate classes taught during the 1960s, 70s and 80s
• Their seminal efforts were supported by the Johnson Foundation and the American Association for Higher Education
• The seven principles have been promoted and adopted at many universities
• Revisited the 7 Principles to show how technology could be used to accomplish them
  – Many universities adopted the work of Chickering and colleagues as “The Gospel”
  – This article has been cited 1,382 times
But Are the Principles Applicable in 2015?

– The students of that era were different from the students of today
– Distance education classes are different than face-to-face classes
– Technology has changed
Conventional Wisdom

- Definition: the body of ideas or explanations generally accepted as true by the public or by experts in a field. Such ideas or explanations, though widely held, are unexamined.

- From Wikipedia
A paper presented at this conference found that distance education graduate students at North Carolina State University taking courses in Agricultural and Extension Education did not value or desire student-to-student interaction in DE classes.

Do undergraduate students have the same views??
An Idea

- Replicate study with undergraduate students in agricultural classes to see if they desire student-to-student interaction in their distance education classes
UF/NCSU Collaboration

IRREC: “South” District 5
An Idea

- Study focused on University of Florida undergraduates in Fall 2014 and Spring 2015
- Used the NCSU “Student Interaction Preference Assessment”
The University of Florida Study

• **Fall 2014**
  - AEB 3133 Principles of Agribusiness Management (N=128)
  - AEB 3341 Selling Strategically (N=125)
  - Responses: 225 (89%)

• **Spring 2015**
  - AEB 3133 Principles of Agribusiness Management (N=132)
  - AEB 3341 Selling Strategically (N=94)
  - Responses: 179 (79%)
The Students

Majors (Percent)

<table>
<thead>
<tr>
<th>Major</th>
<th>Percents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food &amp; Resource Economics</td>
<td>35</td>
</tr>
<tr>
<td>Agricultural Education &amp; Communication</td>
<td>16</td>
</tr>
<tr>
<td>Animal Science</td>
<td>10</td>
</tr>
<tr>
<td>Engineering</td>
<td>10</td>
</tr>
<tr>
<td>Business</td>
<td>5</td>
</tr>
<tr>
<td>Others (20+)</td>
<td>16</td>
</tr>
</tbody>
</table>
The Research Questions

• What are the expectations of undergraduate students regarding student-to-student interaction in distance education classes?
• How do undergraduate student views compare with those of graduate students?
The Instrument

• 18 Likert-type items: 12 positive, 6 negative

  – Strongly Agree = 5
  – Agree = 4
  – Neither Agree or Disagree = 3
  – Disagree = 2
  – Strongly Disagree = 1

• Instrument Reliability - .90 Fall, .93 Spring
## Expectations of Distance Education Students Regarding Student-to-Student Interaction in Distance Education Classes

<table>
<thead>
<tr>
<th>Statements</th>
<th>UF Undergrads Fall 2014 n=225</th>
<th>UF Undergrads Spring 2015 n=178</th>
<th>NCSU Grads F 2013 n=135</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I think student-to-student interaction should be a high priority for a distance education class.</td>
<td>3.06 (1.09)</td>
<td>3.08 (1.16)</td>
<td>2.96 (1.00)</td>
</tr>
<tr>
<td>2. I like the chance to read and comment on my classmates' discussion board posts.</td>
<td>3.05 (1.05)</td>
<td>3.03 (1.01)</td>
<td>3.05 (1.07)</td>
</tr>
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## Expectations Continues….

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<tr>
<td>3. Interaction with other students enhances my learning of the content.</td>
<td>3.02 (1.14)</td>
<td>3.07 (1.10)</td>
<td>3.13 (1.04)</td>
</tr>
<tr>
<td>4. I care about other students in my DE courses.</td>
<td>3.02 (1.05)</td>
<td>3.04 (0.92)</td>
<td>3.19 (0.83)</td>
</tr>
<tr>
<td>5. I feel I learn more in a course when I have the opportunity to engage with my peers.</td>
<td>3.02 (1.09)</td>
<td>2.88 (1.01)</td>
<td>3.22 (1.02)</td>
</tr>
<tr>
<td>6. I have better things to do with my time than spending it interacting with other students in the class.</td>
<td>2.84 (0.99)</td>
<td>2.87 (0.98)</td>
<td>3.01 (1.00)</td>
</tr>
</tbody>
</table>

Note: Negative Statements are in italics and were reverse coded.
Expectations Continues....

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<td>11. I enjoy participating in on-line forums, bulletin boards, Google hangouts, Skype and other such approaches that promote student-to-student interaction.</td>
<td>2.63 (1.17)</td>
<td>2.54 (1.15)</td>
<td>2.64 (1.10)</td>
</tr>
<tr>
<td>12. It is important for me to feel connected to others in my DE courses.</td>
<td>2.68 (1.12)</td>
<td>2.60 (1.00)</td>
<td>2.58 (0.89)</td>
</tr>
<tr>
<td>13. I desire a substantial amount of student-to-student interaction in my DE courses.</td>
<td>2.52 (1.04)</td>
<td>2.38 (1.03)</td>
<td>2.22 (0.87)</td>
</tr>
<tr>
<td>14. The relationships I have established with other DE students have continued after the class is over.</td>
<td>2.16 (1.19)</td>
<td>2.25 (1.12)</td>
<td>2.07 (0.99)</td>
</tr>
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<td>15. I prefer to work alone on assignments. 😞</td>
<td>2.13 (1.05)</td>
<td>2.22 (0.88)</td>
<td>2.10 (10.91)</td>
</tr>
<tr>
<td>16. I am more concerned about course content than participating in a classroom community. 😞</td>
<td>2.18 (0.90)</td>
<td>2.16 (0.82)</td>
<td>2.20 (1.01)</td>
</tr>
<tr>
<td>17. I would prefer not having “group work” in distance education classes. 😞</td>
<td>2.12 (1.07)</td>
<td>2.02 (1.00)</td>
<td>2.05 (1.07)</td>
</tr>
<tr>
<td>18. I only participate in discussion board exchanges if they are a graded component of the course. 😞</td>
<td>2.07 (0.95)</td>
<td>2.10 (0.89)</td>
<td>2.27 (0.96)</td>
</tr>
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Note: Negative Statements are in italics and were reverse coded.
Expectations Grand Mean

- Neither Agree or Disagree = 3
- Disagree = 2

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<td>$\bar{x}$ (s)</td>
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</tr>
<tr>
<td>The Grand Mean</td>
<td>2.66 (0.69)</td>
<td>2.63 (0.66)</td>
<td>2.66 (0.70)</td>
</tr>
</tbody>
</table>
**Spearman Rank Correlations:**

NCSU Grads – UF Undergrads Fall = .921  
NCSU Grads – UF Undergrads Spring = .905  
UF Undergrads Fall – UF Undergrads Spring = .976
Summary of Findings

• University of Florida Undergraduate distance education students **DO NOT Value or Desire** student-to-student interaction in distance education classes!!

• NCSU Graduate Student study FINDINGS WERE **EXACTLY THE SAME**!!
Conclusions

• In general, undergraduate and graduate students in College of Agriculture distance learning classes do not desire student-to-student interaction in their classes.

• Even though some students tended to be positive about having student-to-student interaction, there were more students who didn’t...
Recommendations for Practice

• Having extensive student-to-student interaction in undergraduate and graduate distance education classes **DOES NOT** need to be a high priority for the instructor
Recommendations for Practice

• If an instructor chooses to incorporate student-to-student activities into a class, they should be voluntary
  – Students who do desire and benefit from student-to-student interaction should have the opportunity to engage in those activities
  – Students who do not want student-to-student interaction should not be forced to engage in those activities
Recommendations for Additional Research

• This study did not look at student achievement
• Additional research should examine the student performance and comprehension in courses with a great deal of student-to-student interaction as compared to courses with minimal or no student-to-student interaction
References


