Is an Online Gathering Place Important for Distance Education Student Success? A Comparison of the Perceptions of Online Professors and Student

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NC STATE UNIVERSITY  NC STATE UNIVERSITY  UF IFAS UNIVERSITY OF FLORIDA  NC STATE UNIVERSITY
What The EXPERTS Say About Student-to-Student Interaction in Distance Education Classes!

• “...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 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 5,494 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.
But Are these Principles Applicable in 2016?

– 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
Research Question

• Are there differences in the views of undergraduate students, graduate students and professors regarding the importance of student-to-student interaction in distance education classes?
Why is this Research Important?

- Enrollment in distance education continues to grow at a 9-10% annual growth rate.
- Over 90% of public universities offer online courses and programs.
- With the continuing growth in distance education offerings, it is important to critically examine the pedagogical strategies most appropriate in distance education courses.
NCSU-UF Student-to-Student Interaction Research

Phase 1 - Graduate Student Perceptions – Fall 2013 (NCSU)

Phase 2 - Undergraduate Student Perceptions – 2014-15 (UF)

Phase 3 - Faculty Perceptions – Fall 2015 (Nationwide)
The Instrument

• The instrument was created by the researchers, field tested and validated by experts

• 18 Likert-type items: 12 positive, 6 negative
  – Strongly Agree = 5
  – Agree = 4
  – Neither Agree or Disagree = 3
  – Disagree = 2
  – Strongly Disagree = 1
The Instrument

• For professors the wording of the statements on the instrument were altered slightly.
  – “I” was replaced with the word “Students” to reflect the difference in perspectives between students and professors.

<table>
<thead>
<tr>
<th>Student Statement</th>
<th>Professor Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>I gain a lot from interacting with my classmates</td>
<td>Students gain a lot from interacting with their classmates</td>
</tr>
</tbody>
</table>
# The Population

<table>
<thead>
<tr>
<th>Population</th>
<th>Grad Students who took AEE courses at NCSU - 220</th>
<th>Undergrad Students at UF - 479</th>
<th>Agricultural Education Professors - 105</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response Rate</td>
<td>62%</td>
<td>84%</td>
<td>81%</td>
</tr>
<tr>
<td>Cronbach’s Alpha</td>
<td>.95</td>
<td>.92</td>
<td>.90</td>
</tr>
</tbody>
</table>
The UF Students

Majors (Percent)

Courses:
- AEB 3133 Principles of Agribusiness Management
- AEB 3341 Selling Strategically

- Food & Resource Economics
- Agricultural Education & Communication
- Animal Science
- Engineering
- Business
- Others (20+)
# Distance Education Students and Professors Views Regarding Student-to-Student Interaction in Distance Education Classes

<table>
<thead>
<tr>
<th>Statements</th>
<th>NCSU Grads F 2013 n=135 $\bar{x}$ (s)</th>
<th>UF Undergrads 2014-15 n=407 $\bar{x}$ (s)</th>
<th>Ag Ed Profs F 2015 N=85 $\bar{x}$ (s)</th>
<th>Difference Between Profs &amp; Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. It is important for me to feel connected to others in my DE courses.</td>
<td>2.58 (0.89)</td>
<td>2.64 (1.00)</td>
<td>3.93 (0.86)</td>
<td>1.30</td>
</tr>
<tr>
<td>2. It is important for me to feel as if I belong to my classroom community.</td>
<td>2.74 (1.01)</td>
<td>2.77 (1.05)</td>
<td>4.04 (0.70)</td>
<td>1.28</td>
</tr>
</tbody>
</table>
3. I feel I learn more in a course when I have the opportunity to engage with my peers.

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>3. I feel I learn more in a course when I have the opportunity to engage</td>
<td>3.22 (1.02)</td>
<td>2.96 (1.03)</td>
<td>4.25 (0.72)</td>
<td>1.23</td>
</tr>
<tr>
<td>with my peers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Interaction with other students enhances my learning of the content.</td>
<td>3.13 (1.04)</td>
<td>3.01 (1.10)</td>
<td>4.20 (0.63)</td>
<td>1.16</td>
</tr>
<tr>
<td>5. It is important for me to know about the other students in the class.</td>
<td>2.67 (0.96)</td>
<td>2.53 (1.01)</td>
<td>3.71 (0.87)</td>
<td>1.15</td>
</tr>
</tbody>
</table>
### Views Continues....

Note: Negative Statements are in italics and were reverse coded

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<tr>
<td>6. I gain a lot from interacting with my classmates.</td>
<td>2.96 (1.01)</td>
<td>2.90 (1.03)</td>
<td>4.00 (0.76)</td>
<td>1.09</td>
</tr>
<tr>
<td>7. The relationships I have established with other DE students have continued after the class is over.</td>
<td>2.07 (0.99)</td>
<td>2.19 (1.14)</td>
<td>3.18 (1.01)</td>
<td>1.02</td>
</tr>
<tr>
<td>8. I have better things to do with my time than spending it interacting with other students in the class.</td>
<td>3.01 (1.00)</td>
<td>2.95 (0.98)</td>
<td>3.82 (0.90)</td>
<td>0.86</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>9. I think student-to-student interaction should be a high priority for a distance education class.</td>
<td>2.96 (1.00)</td>
<td>3.08 (1.11)</td>
<td>3.89 (0.95)</td>
<td>0.84</td>
</tr>
<tr>
<td>10. I think the value of cooperative learning (students in small groups learning from each other) is overblown in distance education classes.</td>
<td>2.76 (0.95)</td>
<td>2.82 (0.93)</td>
<td>3.59 (1.07)</td>
<td>0.78</td>
</tr>
</tbody>
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### Views Continues....

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<td>11. I am more concerned about course content than participating in a classroom community.</td>
<td>2.20 (1.01)</td>
<td>2.20 (0.87)</td>
<td>2.57 (1.04)</td>
<td>0.37</td>
</tr>
<tr>
<td>12. I enjoy participating in on-line forums, bulletin boards, Google hangouts, Skype and other such approaches that promote student-to-student interaction.</td>
<td>2.64 (1.10)</td>
<td>2.58 (1.15)</td>
<td>2.89 (0.91)</td>
<td>0.30</td>
</tr>
<tr>
<td>------------</td>
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<td>----------------------------</td>
<td>------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>13. I desire a substantial amount of student-to-student interaction in my DE courses.</td>
<td>2.22 (0.87)</td>
<td>2.43 (0.97)</td>
<td>2.58 (0.89)</td>
<td>0.20</td>
</tr>
<tr>
<td>14. I care about other students in my DE courses.</td>
<td>3.19 (0.83)</td>
<td>3.03 (0.98)</td>
<td>3.21 (0.84)</td>
<td>0.14</td>
</tr>
<tr>
<td>15. I prefer to work alone on assignments.</td>
<td>2.10 (0.91)</td>
<td>2.18 (0.99)</td>
<td>2.29 (0.81)</td>
<td>0.13</td>
</tr>
<tr>
<td>16. I would prefer not having “group work” in distance education classes.</td>
<td>2.05 (1.07)</td>
<td>2.08 (0.90)</td>
<td>2.12 (0.89)</td>
<td>0.05</td>
</tr>
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Views Continues....
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<td>17. I only participate in discussion board exchanges if they are a graded component of the course.</td>
<td>2.27 (0.96)</td>
<td>2.08 (0.90)</td>
<td>2.17 (0.90)</td>
<td>0.04</td>
</tr>
<tr>
<td>18. 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>3.00 (1.01)</td>
<td>-0.04</td>
</tr>
</tbody>
</table>
Expectations Grand Mean

Agree = 4
Neither Agree or Disagree = 3
Disagree = 2

## Statements

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<th>NCSU Grads F 2013 n=135</th>
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<th>Mean Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Grand Mean</td>
<td>2.66 (0.69)</td>
<td>2.64 (0.66)</td>
<td>3.30 (0.69)</td>
<td>0.66</td>
</tr>
</tbody>
</table>
Statistics

• ANOVA: F(2,624)=38.12, p=.0001
• Post hoc analysis confirms professors perceptions were different from both undergraduate and graduate students.
• The effect size was $\eta^2=.109$ which is equivalent to a Cohen’s d of .7 which is between a medium and large effect size (Fritz, Morris & Richler, 2012).
Summary of Findings

- Graduate students tended to be ambivalent or slightly negative in regards to student-to-student interaction in distance education classes!!

- University of Florida Undergraduate distance education students had nearly identical views.

- Ag Ed professors tended to be the opposite and thought student-to-student interaction was important.
Comments from Profs

• “It is the instructor's responsibility to build a culture where interaction is valued”

• “I strongly believe that students learn more when they interact and help each other.”
Comments from Profs

• “Our center for technology suggested (strongly insisted) that I add more group assignments to increase student to student interactions. So I made the changes suggested and have never had so many people complain... Long story short my course evaluations were the worst of my professional teaching career.”
We wonder....

• Don’t students know what is best for them?
  – Even though they might not embrace student to student interaction perhaps that is good for them.
We wonder....

• Are professors delusional and out-of-touch with the real world of our students?
  – Does having student forums and other forms of student-to-student interaction really make a difference in distance education classes?
  – Are we like academic lemmings blindly accepting the conventional wisdom (which is probably out-of-date and built on a faulty foundation)?
“Shut up, you moron! Do as you've been told. It's for your own good!”
We wonder....

- Are professors capable of creating and implementing meaningful student-to-student learning activities?
- Are we skilled at facilitating group work?
What Group Projects Taught Me

- How Much I Hate Other People
- How To Do Entire Projects On My Own
- How To Work With Other People
- The Information

Reinvented by Classy_Jokes for iFunny :)

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We wonder....

• Are our students capable of participating effectively in student-to-student interaction activities?
We wonder....

• Is student-to-student interaction occurring in live classes and is it meaningful?
Conclusions

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

• Professors think student-to-student interaction is essential.
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.
  – This could be with both distance education and live classes.