Crossing Disciplinary Boundaries: Getting Small Groups to Actually Work in the Classroom

Gary Moore

Yet— the Literature on Teaching says we should use small groups!
My Challenging Course

- AEE 226 - Computer Applications and Information Technology in Agricultural & Extension Education
  - Required of:
    - Agricultural Education
    - Extension Education
    - Agricultural Business Management
    - Agricultural and Environmental Technology
  - Elective for numerous others
AEE 226 Major Instructional Units

- Web Design
- Social Media
- Microsoft Excel
- Microsoft Word
- Microsoft PowerPoint
- Photoshop
Some Issues/Challenges

• Meeting the needs of the various majors
• Overcoming the “I already know this” mentality
• Subject Centered approach
• Substantial time spent grading major projects
Overall, this course was excellent
What is one to do?

Why not try a problem-focused approach with substantial FORMAL small group activity?
What Was Done!

Class divided into 4 teams
- More in a minute

Each class started with a problem scenario
- See next slide

Group Projects replaced Individual Projects
- Stay tuned
AEE-226—Problem Scenario (Class 2)

1. Susan was in a panic. She had received a mid-term academic report for the AEE-226 class and had a grade of D. The instructors’ comments were they could not find several project files she was to create and turn in for a grade. Susan was positive that she had created them and submitted them.

What are some possible reasons why the files were not found by the instructors?

What is the solution to this problem?

2. Ann was frustrated. Late last night she had finished a major project on her computer and saved the file. She had been up 24 hours straight working on the project and was brain dead by the time she finished the project. She was pretty sure she had saved the file in the My Documents folder on her computer but can’t find it because she can’t remember the file name and there are over 2,000 files in this folder.

How could Ann find the lost file?

What should Ann do to prevent this in the future?

3. Tom worked on a Power Point presentation last night and saved it to his computer and USB thumb drive then hurried off to class this morning but forgot to take the thumb drive with him. The thumb drive was still plugged into the computer back in the apartment. He has to present it to a class in 20 minutes but doesn’t have time to go home to get it! He has a laptop with him. Is there any way to retrieve the file from his home computer?
My Guidelines for Forming Groups

- No gender isolated
- Weaker student in between stronger students or vice versa
- Weak students easily accessible to me
Hillsborough High School
Mooreland Cooperative Extension
The Hidden Valley Ranch
Welcome to the Hillsborough High School Agriculture Department!

Here at Hillsborough High School our mission is to provide educational experiences. Hillsborough High School's Agriculture department is equipped with up-to-date classrooms, shops, and skills common in a variety of agricultural fields. We offer programs and courses covering all aspects of agriculture from Agriculture education, to us here at Hillsborough High School.

Facultoy

**FFA Officer Team**

**President - Breeanna Williams**

"The rising sun is the token of a new era in agriculture. If we will follow the leadership of our president, we shall be led out of the darkness of selfishness and into the glorious sunlight of brotherhood and cooperation."

**Secretary - Katie Teator**

"I keep an accurate record of all meetings and correspond with other secretaries wherever corn is grown and FFA members meet."

**Vice President - Erin Brewer**

"The plow is the symbol of labor and tillage of the soil. Without labor, neither knowledge nor wisdom can accomplish much. My duties require me to assist at all times in directing the work of our organization. I promise every meeting in the absence of our president, whose place is beneath the rising sun."

**Treasurer - Danielle Blake**

"I keep a record of receipts and disbursements just as Washington kept his farm accounts carefully and accurately. I encourage thrift among the members and strive to build up our financial standing through savings and investments. George Washington was better able to serve his country because..."
From the Mooreland Extension Site

Welcome to Mooreland County Cooperative Extension!

Mooreland County, as part of North Carolina Cooperative Extension partners with communities to deliver education and technology that enrich the lives, land and economy of North Carolina. Extension professionals in 100 counties and the Cherokee Reservation provide education and technical assistance based on research from the state’s land-grant universities: NC State University and NC A&T State University.

About Our Extension Agents

4-H Youth Development - Abbi Davis
Major: Extension Education | Junior Minor: Agricultural Business Management, Entomology

Animal Agriculture - Lynn Knopp
Major: Agricultural Business Management | Junior Minor: Extension Education

Nutrition - Emily Love
More About The Actual People Behind It All

- **Joe Reece** - Being recent graduate from North Carolina State University, he is experienced in all the latest equipment appraisal practices. He grew up on a family farm that used only Case equipment. They are some of our best customers and would never think of going anywhere else.

- **Andy Michael** - Graduated from The Ohio State with a degree in Mechanical Engineering. After graduating, he then decided that he felt at home working on farm equipment. He went through the Case mechanics program, and is fully qualified to work on your equipment.

- **Shannon Legget** - Having a Masters in Business Management, makes Shannon the perfect person for our office manager and CFO. If it happens in the office, Shannon knows about it. She handles the accounts receivable, account payable, payroll, and all incoming and outgoing phone calls.

- **Maria Restrepo** - Maria graduated from North Carolina State University with a degree in Marketing. Being bilingual makes her the perfect person to handle any and everything that happens with our marketing program. She runs all of our events and helps to promote our growing business. With her help, we will eventually be able to expand into foreign markets.

- **Nick Johnson** - The president of sales makes Nick the perfect person to contact about anything Case related. He is experienced in Case tractors and combines, as well as Case's Advanced Farming Systems. He can set you up with the proper sized equipment for your operation and needs.

- **Ian Swaim** - Ian has the hardest job of all, he is CEO of operations. Keeping us all busy and working can prove to be difficult at times, but it is a job that he takes seriously. Being so dedicated to the growth of the business makes him the perfect person for the job. If there are any questions, please feel free to contact him. His door is always open.
Welcome!

It is our goal to breed and raise quality quarter horses specializing in cutting, cowhorse, roping, and reining lines while providing our customers with both a relaxing and professional experience. Located in South Park, Wyoming, we welcome you to come and stay a while.
Group Projects

• Web Site (at least 6 different pages) (10%)
• Social Media Campaign (5%)
• Newsletter & Brochure (5%)
• Excel Spreadsheet (5%)
• PowerPoint (5%)

30% of the grade
The Autorating System was Used
Autorating System

1. Determine group project or average homework grade.

2. Convert individual verbal ratings to numbers:

   - Excellent = 100
   - Very good = 87.5
   - Satisfactory = 75
   - Ordinary = 62.5
   - Marginal = 50
   - Deficient = 37.5
   - Unsatisfactory = 25
   - Superficial = 12.5
   - No-show = 0

3. On a spreadsheet, enter numerical ratings received by team members in rows. In the “Vote 1” column are the votes given by Betty to herself, Carlos, John, and Angela; under “Vote 2” are all of the votes given by Carlos, etc.

4. Average individual marks, calculate overall team average, calculate adjustment factors as individual average divided by team average. *Impose an upper limit of 1.05 on any individual student’s adjustment factor.* Doing so avoids raising grades of teammates of students with very low ratings by more than half a letter grade.

5. Individual project grade = (team grade) x (adjustment factor). *The instructor reserves the right to disregard anomalous ratings.*

   **Example**

<table>
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<th>Team project grade</th>
<th>80</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Betty</td>
<td>87.5</td>
<td>87.5</td>
<td>75</td>
<td>87.5</td>
<td>84.4</td>
<td>82.0</td>
<td>1.02</td>
<td>82</td>
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<tr>
<td>Carlos</td>
<td>87.5</td>
<td>100</td>
<td>87.5</td>
<td>87.5</td>
<td>90.6</td>
<td>82.0</td>
<td>1.05</td>
<td>84</td>
<td></td>
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<tr>
<td>John</td>
<td>62.5</td>
<td>75</td>
<td>50</td>
<td>75</td>
<td>65.6</td>
<td>82.0</td>
<td>0.80</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>Angela</td>
<td>87.5</td>
<td>87.5</td>
<td>87.5</td>
<td>87.5</td>
<td>87.5</td>
<td>82.0</td>
<td>1.05</td>
<td>84</td>
<td></td>
</tr>
</tbody>
</table>
My Observations

• The “more diverse” the group, the better it “clicked” (majors, gender)

• If a student missed a class or was having a problem, the other team members brought the student up to speed

• Overall, quality of assignments was higher

• Time spent on grading was greatly reduced
Overall, this course was excellent