All Together Now: Using Group Tests to INcrease Student Learning

Dr. Gaea Hock - Kansas State University
Emily Keeton & Dr. Christian Baldwin - Mississippi State University
Dr. Courtney Meyers - Texas Tech University
Introduction/Literature Review

• Enhancing students’ ability to work on teams is an important part of the college experience.
  • Teamwork is one of the 7 Soft Skill Clusters identified by Crawford, Lang, Fink, Dalton & Fielitz (2011).
  • The “teamwork” cluster includes such behaviors as positive and encouraging attitude, maintains accountability to the team, and productivity.

• Assessment is defined as the activities undertaken by teachers and students that provide information to be used as feedback to modify learning activities (Black, Harrison, & Lee, 2004).

• Individual assessments delay feedback and this sometimes results in a long waiting period for students to receive their results (Giuliodori & DiCarlo, 2008).
• Group testing enables students to take tests with peers and allows students to discuss questions and their reasoning for an answer, resulting in immediate feedback and filling in knowledge gaps (Cortright, Collins, Rodenbaugh, & DiCarlo, 2008).

• There are more positive than negative outcomes to be gained from cooperative testing (Hanshaw, 2012).
  • Evidence includes: an increase in memory and learning, decrease in test anxiety, enhanced listening skills, and enrichment of social interactions.

• Students express their levels of test anxiety and sense of competition for a grade reduce significantly (Hancock, 2007).
How I Used Group Tests

Fall 2015
Mississippi State
Introduction to AIS
75 min class period

40 students
• 3 majors
• Freshmen - Seniors

11 groups
• 3-4 students per group

Homogenous Groups
• Achievement and attendance

Found out their group the day of the test
Day of the test

<table>
<thead>
<tr>
<th>Grouping</th>
<th>Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students looked at list on the projector screen</td>
<td>One copy of test per group</td>
</tr>
<tr>
<td>Found their team number</td>
<td>Allowed to discuss</td>
</tr>
<tr>
<td>Sat at the table with their group number</td>
<td>Write one response for each question</td>
</tr>
<tr>
<td></td>
<td>Allowed to dissent and write rationale on the exam</td>
</tr>
</tbody>
</table>
After finishing the test

- Satisfaction Instrument
  - Students could share their feelings toward the group test

- Group Assessment
  - Each group member was allowed to assess the others
  - Not used to change individual’s grade
  - Used as a tool for reflection
Next class period

- Graded tests handed back to each group
- Review their responses
- Seek clarification for missed questions
- Reflect on whether the grade the group received is what they deserved
Results to Date

Test 1
76% (70% previous fall)

Test 2
90% (81% previous fall)
Satisfaction with the group test process

<table>
<thead>
<tr>
<th>Item</th>
<th>Test 1 (N = 40)</th>
<th>Test 2 (n = 37*)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Enhanced Learning</td>
<td>4.20</td>
<td>.75</td>
</tr>
<tr>
<td>Understand difficult concepts</td>
<td>4.15</td>
<td>.88</td>
</tr>
<tr>
<td>Enjoyable</td>
<td>4.30</td>
<td>.72</td>
</tr>
<tr>
<td>Nice change of pace</td>
<td>4.60</td>
<td>.73</td>
</tr>
<tr>
<td>Distracting</td>
<td>1.75</td>
<td>.70</td>
</tr>
<tr>
<td>Confusing</td>
<td>1.95</td>
<td>.74</td>
</tr>
</tbody>
</table>

Note: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree
*three students did not take the second test
Lessons Learned/Advice

• Consider the objectives of the course

• The structure of the group test can be done in a variety of ways.
  • Same groups for each test
  • Test completed outside of class time
  • Grading could reflect input (group assessment)

• Determine groups prior to the test date

• Need adequate classroom space

• Decide how to handle students who don’t want to work in a group for the test

• Write test to encourage discussion
Thank you!

Any Questions?
References


