• We are trying to catch the excitement they have after an exam, in the exam
Learning Together?

Using 2 Stage (Group) Exams in Your Courses
Video
Goals

Define 2 Stage (or Group) exams (for my context)
Describe 2 Stage exams
Discuss advantages and disadvantages of 2 Stage exams
Group Exams?

- How often do you use group activities in your classes?
- Have you used collaborative assessments with your students before?
- Think you might have used group exams?
What exactly did we do?

During exam time

• Students complete and hand in individual exam

• Then get into groups of ~4 to work on group exam
What exactly did we do?

• The Group Exam is identical to the individual exam - plus a one or two more difficult questions

• Students work on group exam together
  – But with less time

• Important! The group only gets one exam sheet!
What exactly did we do?

Students given the following instructions:

– Sit with your group
– 11:25-11:30 Hand in Individual Exam and get Group exam
– 11:30-12:00 Group Exam
– Please put your group ID on Your Scantron form
Group Exams at UBC

Classes within the CWSEI project using group exams:

PHYS 250 - Modern Physics for Engineers
57 students
Lecture format – 2 hour class
3 group exams (2 midterm, 1 final)
Group Exams at UBC

EOSC 111 – A Laboratory Exploration of Planet Earth

110 students

lab format

18 students per lab

12 pre lab group quizzes (less than 5 minutes)

one each week
Group Exams at UBC

EOSC 114 – The Catastrophic Earth
150 students
Large lecture format – 3 hour class
Immovable seats 😊
Condensed 3 week summer class
2 group midterms 1 group final
Group Exams at UBC

EOSC 114 – The Catastrophic Earth
450 students
Large lecture format - 50 minute class
Immovable seats 😊
3 group midterms 1 group final
Advantages

- Just in time learning they have just studied
- Feedback – they get ideas and feedback right away
- Hints if they get stuck
- Answer more difficult Qs
- Relax get more ideas
Advantages

• Nearly instant feedback - excellent for retention
• Develops “soft” group work skills
• Lower achieving students get extra explanation
• Reduces anxiety
Advantages

• Higher achieving students benefit from explaining and reinforcing knowledge
• **ALL** students participate!
• Quieter students get a chance to contribute even in large classes
• Normalizing effect
• Students like it and believe it helps their learning
Some Student Comments Phys 250 and EOSC 114

“Great idea! The group exams give you a chance to go over your answers to the exam while you still care about the questions.”

“Some problems, its a good way to find out what you did wrong on the individual exam almost immediately.”
Some Student Comments Phys 250 and EOSC 114

“Discussion over tricky questions facilitate learning immediately and the answer/concept is stuck in your brain FOREVER!”

“You actually learn what you got wrong right away from a student perspective”
Some Student Comments Phys 250 and EOSC 114

“... That said, there was the issue of excessive discussion in the group exam. That is, there were several times where a part of a question was contentious within our group and the ensuing debate, frequently ended only by calling over Louis, often took up so much time that doing the last few questions was hurried and messy.”
Feedback from EOSC 114

Group Exams are...
## Positive Comments

<table>
<thead>
<tr>
<th>Comment</th>
<th>Count</th>
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</thead>
<tbody>
<tr>
<td>Discussion</td>
<td>48</td>
</tr>
<tr>
<td>Learn why you were wrong</td>
<td>37</td>
</tr>
<tr>
<td>New Perspectives</td>
<td>29</td>
</tr>
<tr>
<td>Better grades</td>
<td>21</td>
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<tr>
<td>Instant feedback</td>
<td>16</td>
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<tr>
<td>Review</td>
<td>10</td>
</tr>
<tr>
<td>Build confidence</td>
<td>8</td>
</tr>
<tr>
<td>Understand questions better</td>
<td>6</td>
</tr>
<tr>
<td>Learn techniques from others</td>
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<tr>
<td>Other</td>
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<td>Coming to consensus</td>
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<tr>
<td>Time consuming</td>
<td>13</td>
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<tr>
<td>Unbalanced knowledge in group</td>
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<tr>
<td>Convinced of wrong answer</td>
<td>3</td>
</tr>
<tr>
<td>Realize did poorly individually</td>
<td>3</td>
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<tr>
<td>Worth too much</td>
<td>2</td>
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<tr>
<td>Other</td>
<td>8</td>
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<tr>
<td>Total</td>
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</table>
Possible Disadvantages

- hard in short classes (50Min)
- Time
- Marking?
Disability Centre
Could limit Questions
Possible Disadvantages

- Social loafing
- Dominant group members
- Sidetracked by process
- Assigning Marks
- Student inexperience with groups!
- Time!
- Getting wrong answer
How Groups Choose (EOSC 111)
<table>
<thead>
<tr>
<th>How group members performed individually</th>
<th>All individuals in group correct</th>
<th>Majority of individuals in group correct</th>
<th>50% of individuals in group correct</th>
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</thead>
<tbody>
<tr>
<td>(# of instances) % of instances</td>
<td>(600) 39%</td>
<td>(448) 29%</td>
<td>(197) 13%</td>
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<tr>
<td>Group performance</td>
<td></td>
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<tr>
<td>(# of instances) % of instances</td>
<td>(600) 100%</td>
<td>(436) 97%</td>
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<td></td>
<td>(0) 0%</td>
<td>(12) 3%</td>
<td>(28) 14%</td>
</tr>
</tbody>
</table>

Group Correct Group Incorrect Group Correct Group Incorrect Group Correct Group Incorrect
Minority of individuals (>1) in group correct

(144) 9%

Group Correct (92) 60%
Group Incorrect (52) 40%

All individuals different answers - 1 correct

(84) 5%

Group Correct (64) 74%
Group Incorrect (19) 26%

All individuals wrong More than one answer

(38) 3%

Group Correct (30) 79%
Group Incorrect (8) 21%

All individuals - wrong - same answer

(17) 1%

Group Correct (1) 6%
Group Incorrect (16) 94%
Revisit video

- Video from this summer (only students who gave permission)
- What things do you notice?
Barriers?

Are there any barriers that might prevent you from doing group exams in your own classes
Future Plans

Testing whether students learn group exam material better than those who only do individual exam

How?
Summary

Groupwork and timely feedback
Acknowledgments

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Questions?