



Tips for Successful Two Stage Exams

In two stage exams students complete an individual exam as normal, then immediately redo the exam in groups. Used properly, two-stage exams can improve feedback, increase learning, and correct misconceptions. For more on benefits see : http://www.eos.ubc.ca/research/cwsei/eossei-times/EOSSEITimes_4.1GroupExams.pdf

Preparation and Planning

- ❖ Use two exam sheets. Develop the individual exam as usual. Then make the second, group part of the exam, identical or perhaps add one or two very difficult questions.
- ❖ Some instructors consider removing portions of the individual exam from the group exam to save time. This should be avoided as it may cause students to assume those questions are less important.
- ❖ The individual exam should be about half the length of a normal exam. If this is a concern, add another midterm to the course (to increase questions tested over the term), book an evening exam slot, or take solace in research that shows longer exams are not necessarily better or more reliable exams.
- ❖ On the group portion include four lines for student names and numbers plus space for a group number. Use your photocopier's "count" functions to add unique numbers to each sheet, or do this manually.
- ❖ If exams are marked electronically (i.e. Scantron) each group can enter their group number on the answer key under student ID. When collecting marks you need only enter which group each student was in and use the VLOOKUP function in MS Excel to find their marks.
- ❖ Two-stage exams can use any question type except for longer essay type questions. Most other types of questions (even calculations) are short enough or structured such that everyone can contribute. Writing an essay in a group and under a time constraint is very difficult and not recommended.
- ❖ For group finals be sure that exam booking puts you in a room suitable for two stage exams. Students will need to move around a little (this does work in lecture halls) and will be quite noisy. You cannot share locations, such as a gym, with other classes.
- ❖ Prior to the exam explain to students the rationale of the format, preferably more than once. Describe the exam early, put it on the course syllabus, and reinforce that it will only improve their mark (see Post Exam below). When preparing them for the exam, encourage students to sit near their group in the individual portion. Also consider giving students strategies for dealing with deadlocks during the group process (for example appealing to arguments from the class – NOT just "Trust me" or flipping a coin).



Note that running the group component first defeats the purpose of these exams in two ways:
- First, the individual portion of the test holds students accountable for their studying and preparation. If the group component is first it removes motivation and students will be less prepared.
- Second, discussions in the group portion, which is when the significant learning and feedback occurs, are contingent upon all students seeing the questions, thinking about them, and committing to answers prior to the group interaction.

During Exam - Individual Portion

- ❖ Start the exam as normal. We like to place exam sheets under chairs before allowing students into the room.
- ❖ As students finish the individual portion we ask them to hold onto their exam sheets until time is up. It is much quicker to get students to hand the exam in all at once by passing exams to the aisles. Also, when students still have their exams they are less inclined to whisper to their neighbours and disrupt others.

During Exam - Group Portion.

- ❖ After all individual exams are collected, tell students to get into groups of 4 then raise their hands.
- ❖ Students who do not have full groups or who do not have a group are asked to come to the front where they can be placed in groups. There may need to be a few of groups of 3 or 5 to balance numbers.
- ❖ Invigilators give one exam sheet per group to those with raised hands. It is very important that each group gets only one exam sheet. They must come to consensus on their answers. If each student has their own sheet they give up on discussion too easily and don't correct their errors.
- ❖ Limit groups to 4 students. More than 4 students find it difficult to share the exam paper as they cannot all see it at once. Groups of 2 or 3 do not perform as well as groups of 4 on average, so groups with fewer than 4 will be at a disadvantage. We allow students to select their own groups.
- ❖ During the group exam try to identify students who are not participating. If you find students who are not participating, approach them, find out why, and see if you can help. We inform these groups that everyone's help is important and that groups of less than 4 underperform.
- ❖ Do not worry about cheating in the group portion. The room will be very loud and lively. Scores do not improve much after more than 4 people per group and people who listen to other groups will still get the benefit you are hoping for without gaining a significant advantage.
- ❖ For large classes we recommend roughly 1 invigilator for every 50 students (eg 6 for a class of 300).

"In our experience, non-participating students are very rare; much different from in-class activities. In groups of 1000 students we find only one or two students not actively involved."

Post Exam

- ❖ Marking two stage exams may be a little quicker than normal although for machine marked exams the time difference is negligible. A small amount of extra administrative effort may be needed to coordinate students' marks and combine individual and group scores. Well organized spreadsheets will make this more efficient.
- ❖ Each student's grade will be a combination of their individual and group exam scores. Do not give the group portion of the exam too much weight. 85% /15% is enough to convince students to engage, but does not overly compensate people who are unprepared.
- ❖ Do not penalize students who score higher than their groups, unless you have a good reason and spend lots of time explaining to students why you would do this. Our preference is to allow those few students who may beat their groups to keep 100% of their individual mark.