

Exploring student opinions on two-stage group-exams for development of best practice recommendations

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Introduction to Two-stage Group- Exams

Two-stage group-exams consist of an individual exam component, usually the longer portion, followed by a group-exam completed in groups of 3-4 students. These types of group-exams are deployed in many classes across disciplines at UBC. They are used for midterm exams and or final exams. Studies have demonstrated the benefits of group-exams for student knowledge retention and learning (citation). Typically group exams have multiple choice questions recycled from the individual exam, and use either scratch cards or scantron cards for reporting answers. The premise of the group-exam component is that students will be able to discuss questions and gain insights into alternative points of view and approaches to questions, and together be able to improve on their performances and hopefully better understand course content.

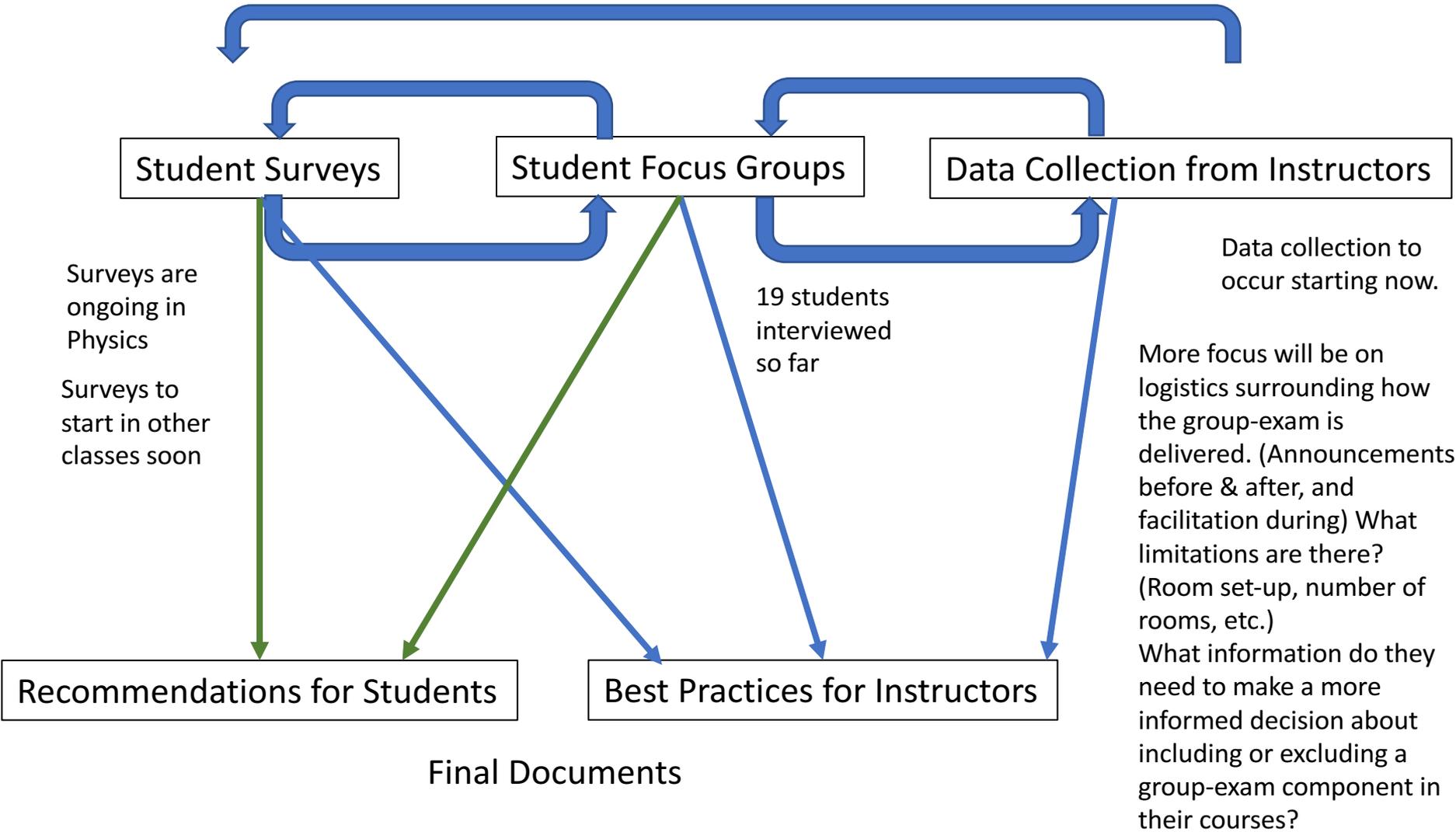
Our Project Goals

- 1) Learn** more about undergraduate students and their experiences completing group-exams.
- 2)** Learn more about how instructors conduct group-exams to see what instructors do to set-up their group exams: from online announcements, in class announcements, to in exam facilitation.

Approach:

- 1 a)** Focus Groups – In progress, verifying survey questions, collecting data for further questions
- 1 b)** In class surveys - In progress in first year physics classes, preliminary data from chemistry classes
- 2)** Instructor surveys/interviews/observations

Data Collection & Timeline



Survey Question Themes

Group dynamics: what makes a good group, what derails groups' collaborations, how are groups formed?

Member Roles: how are they chosen, which are required?

How do students **engage in discussion** within their groups?

Methods for decision making used during group exams. (I.e. Voting, consensus, splitting of questions)

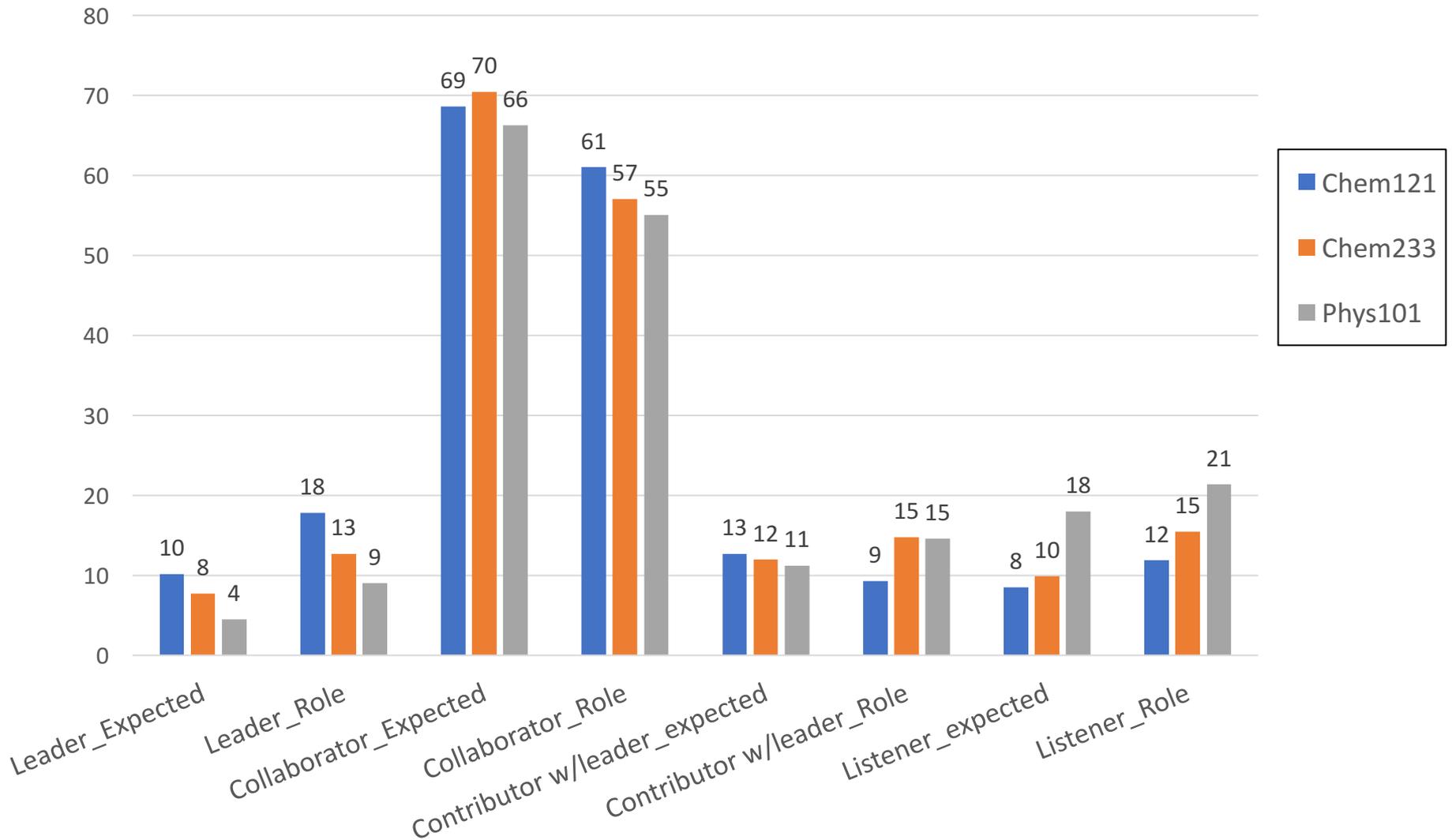
General opinions on group-exams

What are students' **perceived benefits** of group-exams?

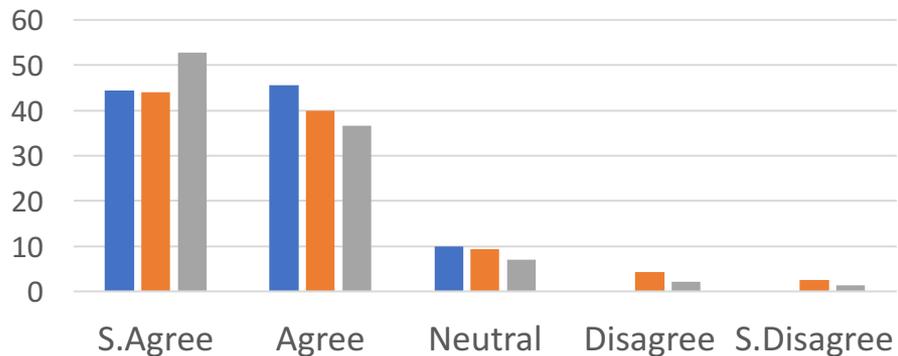
What causes **negative experiences** in group exams?

Scratch Cards vs. Group Scantron vs. Individual Scantron

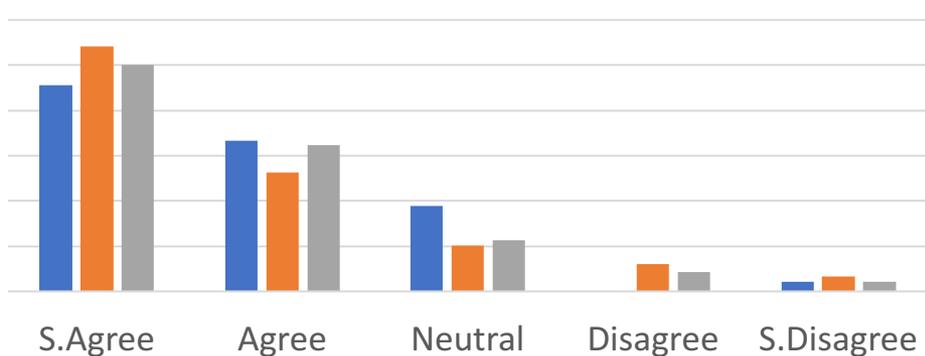
What role did you expect to play in your group vs. What role did you actually play in your group?



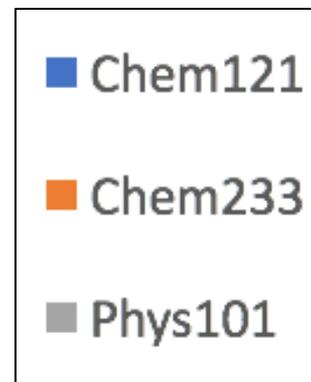
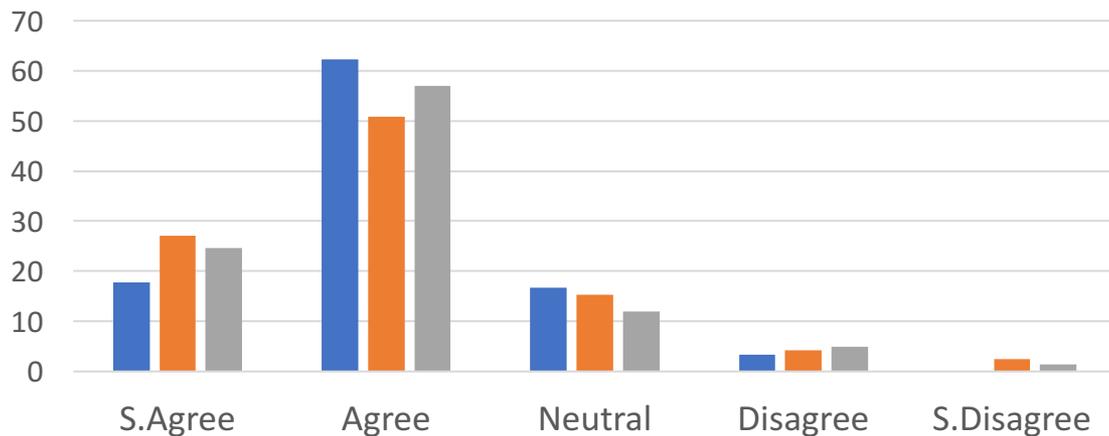
I would recommend a group exam format for midterms



I would recommend a group exam format for the final exam.



I am happy with the relative weights of the individual vs group parts of this exam.



Summary of Focus Group findings so far:

- Students like group-exams, especially if they have a little context of why they are doing them
- Students will still study just as hard for an exam even if the group portion is worth more of the overall grade
- There is a 50/50 split on if students would prefer to form groups before the exam, or if they are ok getting a group at the exam
- The room layout can hinder group-work, or group formation during the transition period
- Lots of enthusiastic discussion about the use of scratch cards, and comparing their use to scantrons (getting immediate feedback vs. feedback later)
- Some students get increased anxiety by discovering they got answers wrong in their individual portion
- Group discussion on each question is key to learning during group-exams and making sure that everyone in the group is in agreement with the logic of the answer
- Students have a variety of different strategies to work in their groups that would be useful to communicate to future students. Some reduce anxiety, and some encourage & ensure group discussion.

Conclusions:

It is clear that the majority of undergraduate students have positive experiences in group exams. Many report that they would work with their groups again, and that they would like to perform a group-exam again in their course. Looking at the results of questions across three classes, it looks like the trends are very similar. This suggests that students in chemistry and physics at UBC have very similar experiences in their classes with group-exams. Future research hopes to expand to additional classes in different disciplines and levels of study. We look forward to producing a best practices document to help instructors execute two-stage group-exams in their courses.

Due to the benefits seen for students in focus groups discussing their experiences with group exams, a student recommendations document will be of use to future students to learn about how their peers approached group-exams and what worked and didn't work.

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