

It's more fun the second time: incorporating group-work and immediate feedback into assessments by adding a group component to exams

Joss Ives

2329 West Mall, University of British Columbia, Vancouver, BC, Canada, V6T 1Z4

Abstract. Two-Phase Collaborative Group Exams are an easy to implement technique that leverages students' desire to discuss challenging exam questions with each other immediately after an exam. This instructional technique adds an additional group phase immediately after a group exam. In this workshop we will describe Two-Phase Group Exams and discuss the various implementation choices that can be made, discuss the benefits and drawbacks of this approach, and spend some time looking at the literature for evidence of their effectiveness and suggestions for best-practices.

1 Overview

A Two-Phase Collaborative Group Exam is an exam that students complete twice: once individually, and then a second time in small groups immediately afterward. This abstract outlines a workshop, designed to introduce participants to this easy-to-implement instructional strategy. This strategy is in use in over 100 courses at the workshop facilitator's home institution. We will begin by describing Two-Phase Exams and grounding them in the experiences that are common to the participants as teachers and learners. Next, we motivate their use by looking at their possible benefits and drawbacks, and establish a theoretical framework for why they are effective based on research from teaching and memory. We then spend some time looking at the range of implementation strategies (class size, group composition, etc), while making some recommendations based on the literature and from the experience of the facilitator and colleagues. Finally, we explore the scholarship surrounding Two-Phase Group Exams and related techniques. Numerous opportunities are presented throughout the workshop for reflective discussion.

2 Workshop Content

2.1 What are they? Defining two-phase exams

We define Two-Phase Group Exams by describing the facilitator's common implementation of the technique, with an eye to discussing broader choices in implementation strategies later in the workshop. This section begins with a reflective discussion on participants' experience with group work in their own courses.

In a Two-Phase Group Exam, students first complete and then hand in their individual exam. This first (individual) phase takes approximately two-thirds of the total exam time. Students then arrange themselves into groups of 3-4 to complete the second (group) phase of the exam. The individual and group phase exams are nearly identical to each other, and groups receive only one exam sheet and must come to consensus on their answers. Total exam grades are weighted 85% from the individual phase and 15% from the group phase.

2.2 *Why use them? Benefits and drawbacks*

This section of the workshop begins with a reflective discussion of the possible benefits and drawbacks of this instructional approach. These benefits and drawbacks are then discussed in the context of research from the literature [Reference 1 provides a broad overview], results from the thousands of students surveyed from the workshop facilitator's home institution, as well as the personal experience of the workshop facilitator and colleagues.

2.3 *How? Implementation strategies*

This section of the workshop begins with a broad overview of the types of implementation choices that can be made under the categories of group formation (group size, instructor-formed versus student-formed groups), test design (the types of questions that can be asked and which types work well, how much to vary questions between the individual and group phase, how to modify individual-phase questions to make them work better for the group phase), and other considerations (requiring group consensus versus all students having their own test paper in the group phase, adding additional layers of immediate feedback, reasonable ranges for grade allocations toward the individual stage versus the group stage). Each of these implementation choices will be discussed briefly, but the workshop participants will be encouraged to lead us toward longer discussions of their implementation choices of interest.

2.4 *What is the evidence for their effectiveness? What the literature has to say*

The literature on Two-Phase Group Exams focuses primarily on the following two topics. First, it focuses on their enhancement to student learning, as measured by follow-up learning tests [2, 3] or evidence of student learning in the moment by looking at situations where groups perform as more than the sum of their parts [4]. Second, it focuses on the affective benefits of group exams. The topic of the reduction of test anxiety is the most often studied affective benefit studied [5, 6].

Additionally, the broader literature on group dynamics will be discussed, focusing on the literature related to education contexts.

References

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