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Team Goals – Grades versus Learning

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1 Introduction

When students work collaboratively on a team exercise or project, both in and outside of class, we see students that are engaged in learning by discussing material and asking questions. Yet it seems important to grade results from such work to motivate students to spend their limited time on these exercises. As with any graded course component, many students will focus on what is needed to get a good grade rather than using their curiosity to explore a topic.

In this workshop we explored the delicate balance between the focus on grades and the focus on learning in teams. Participants were divided into groups and asked for their perceptions and experiences with motivating students to learn when working on a task that will be graded.

This document provides the results from the workshop with literature references. Some of the results are contradictory and these same contradictions are often found in supporting documentation. This document concludes with some open questions related to such contradictions.

2 Workshop Results

Participants in the workshop contained undergraduate students, graduate students, educators with limited or no experience in facilitating student team work and educators with significant experience facilitating student team work. Attendants of the workshop were divided into four groups. Each group was asked to discuss ideas that might help or hinder student teams with respect to learning while working on graded projects. Then they were asked to write their ideas in point form on posters. The appendix contains the contents of these posters.

Each group tended to focus on a different idea, but after about twenty minutes of discussion, significant overlap emerged between the four groups. Ideas discussed can be grouped into four issues that need to be addressed to help students focus on learning: (1) the creation of student teams, (2) team processes, (3) topic of team work and (4) team and individual performance expectations.

2.1 Creating Student Teams

There was discussion in all four groups on the creation of teams. Three options were considered: (1) instructor-formed teams, (2) randomly created teams and (3) student-formed teams. Each of these methods has its merits and shortcomings.

When the course instructor creates teams, the instructor can create teams with either a goal of creating homogeneous or heterogeneous teams. Oakley *et al.* advocate strongly for instructor created heterogeneous teams [8]. Randomly generated teams can be viewed as most fair by students. Even though this may be viewed as most fair, there seems to be little support that this results in

well-functioning teams according to Bacon [1]. When students get to choose their own teams they may be more likely to choose those that they will work well with. Bacon *et al.* report that they have had most success with this method [1].

Longevity and size of the team must also be considered when forming the team. The longer a team gets a chance to work together, the more likely that the team dynamic stabilizes allowing most teams to perform better. The size of the team must be catered to the task the team is expected to perform [1].

2.2 Team Processes

There was a lot of discussion in all groups at the workshop about helping students with team dynamics to ensure well-functioning and performing teams. Teams go through various stages or phases. Instructors can help students in this process by providing support through conflict stages and quickly move to high-performance stages. All groups at the workshop agreed that instructor involvement in these processes is important.

Instructors can explain team stages and phases that teams go through as teams move from newly created teams to performing teams. Since conflict is a normal part, instructors can present conflict as something constructive.

In addition to discussing team processes, instructors can evaluate team processes in order to encourage students to focus directly on team processes and indicate to students that this is valuable. Students could be asked to evaluate their own team dynamics as well. To encourage students to evaluate their own teams constructively, the instructor could grade such peer evaluations. The importance of peer and self-evaluation is supported by Hattie and Timperley [4]. Bacon *et al.* argue that peer evaluations often actually hinder team performance [1].

Instructors can also help teams by clearly defining team roles. Students can choose themselves which team members fill which roles or instructors can assign roles to students within the team. To help students clearly define team roles and individual responsibilities to the team, instructors can require team contracts. Such a contract would also contain consequences if a team member does not contribute as agreed. This gives students guidelines on how to deal with team conflict. Carr *et al.* strongly recommend the use of team contracts and identification of team roles [3].

It was also recommended that instructors and teaching assistants regularly check on teams in order to monitor the team process and help any teams that are at an impasse. Hattie and Timperley also stress the importance of frequent feedback that indicates the performance of students with suggestions for improvement in processes used and work delivered [4]. Lombardi [5] also stresses the notion that "[n]ot only do learners want to know the criteria by which they will be judged, but they also want processes in place to help them improve and develop, guided by clear, practical, and specific feedback."

Finally, instructors can aid team processes by making online collaboration tools available to teams and keeping a team together sufficiently long that they can go through the stages of team forming and become a consistently performing team. This links with the suggestion that instructors must have reasonable time expectations to allow time for team processes.

2.3 Topic of Team Work

Several groups at the workshop suggested that students pick at least part of the topic of a team task. One group suggested that tactile exercises are a great way to motivate students to learn.

Requiring teams to present their work to their peers in the class was another suggested method to encourage students to become experts in their topic and encourage deep learning.

Michaelsen and Knight also stress the importance of careful choice and construction of team assignments but focus on components that an effective assignment must have to encourage participation from all team members [7].

2.4 Performance Expectations

The final suggestion to motivate students to learn in teams is to have clear performance expectations that focus both on group performance and individual performance. It was deemed important to ensure that students are evaluated individually. This can be done, for example, by expecting each student in the team to speak during a presentation or have quizzes that test individual students knowledge about the group project topic.

The importance on clear, detailed and precise rubrics was stressed by several participants. These rubrics would be made available to students both for the expected outcome of the team work and for the process that was followed to achieve the outcome. Lombardi [5] notes that assessment of deep learning is challenging: "We are given a wide range of suggestions when it comes to appropriate activities [...]. But once students perform the required tasks, professors are largely left to their own devices when it comes to measuring student achievement and providing meaningful feedback." Lombardi provides some techniques to evaluate group participation and other components of student team work [5]. In addition to the need for clear rubrics, Baeten *et al.* show that student perception of the focus of a rubric is also important. They argue that students will use deep learning strategies if they perceive that deep learning is assessed in the rubric [2].

Assigning grades for participation and attendance were also suggested as ways to encourage participation which might then lead to deeper learning. Assigning grades for participation rather than outcomes of participation seems to be a controversial subject. But Maznevski gives clear guidelines how this can be done effectively [6]. Focusing on participation can also reduce the pressure to come up with the right answer which can hinder students from exploring the subject matter. As noted by Hattie and Timperley [4]: "Student engagement in learning is likely to be constrained by the evaluative dimensions of classroom lessons because there is personal risk involved in responding publicly and failing".

3 Concluding Remarks

Many educators are using or are starting to use student teams to encourage deep learning. But to quote Michaelsen and Knight [7]: "As more and more teachers are using small groups in their courses, some find that the results are as exhilarating as they had hoped. Others, however, are seriously disappointed."

In this workshop, four issues were identified: (1) the creation of student teams, (2) team processes, (3) topic of team work and (4) team and individual performance expectations. To ensure that student teams evolve into effective learning teams, instructors need to carefully consider these four issues when designing a course around such student teams. And one cannot be seen as independent from the others, nor does there seem to be consensus on which approach is most likely to bring success.

There seems to be no straight-forward answers to the following questions. Should teams be

formed by instructors or students? Should peer evaluations be used or are team contracts a better mechanism to help students manage problems in a team? Should there be more focus on outcome bases assessment or should there be assessment of the team dynamics and processes? In addition, careful consideration needs to be placed on team exercises and how it is presented and assessed.

The variety of suggestions, ideas and best practices that came out of the workshop reflect the conflicting results from literature on student teams. It seems that there is no one-size-fits-all method for turning student teams into effective learning teams when they work on graded course components. Each instructor must consider the learning objectives of the course, the discipline of the course, the experience of the students and instructor with team learning and possibly other factors when designing team based learning.

4 Appendix – Group Posters

Help	**Hinder**
Tactile [exercises]	Conflicts, Personality, May also help
Choose own topic	Immaturity
Mechanism/rubrics for individual accountability	
Contracts and consequences	
Discuss conflict as something constructive -¿ norms and expectations	
Choosing members/diversity	
Maturity	
Diversity	
Stability/length of time of group	
Shift roles/responsibilities	

Help	**Hinder**
Group presentation to peers students becomes the expert fosters deep learning	? How do you address both learning and grades? (Is this a valid question?)
If choice around what to cover enhanced motivation	Students require guidance around group process
Require a rubric to provide/outline expectations to achieve successthis could be defined as getting an A encourage both	Struggles of managing group conflict may take away from or hinder learning
Holding students accountable for learning even if dividing tasks / identifying strengths	Holding students accountable for learning even if dividing tasks / identifying strengths?
Each student is expected to speak	? Is self-selection of groups more beneficial or not
Group activity individual quiz post surgery combined from grp grade	Time constraints of effective team work reason
Reasonable time expectations to allow team process	
Online collaboration tools.	

Help	Hinder
Constant check-in by instructor/TA	Personal conficts
Grades for motivating participation not for the assignment	Pressure to be right
Grades for attendance at tutorials	People with very different skills/abilities frustration?
Role playing/workshops	Stubborn students

Help	Hinder
Assign group roles switch around	Lack of structure/cohesion in group roles and process
Skills based /process based rubric (very detailed/descript.)	Lack of criteria or authenticity in group feedback
Timelines for roles + processes	Anchor (deadweight) vs engine students
Feedback on feedback (peer)	Student-selected groups
Evaluation on group dynamic	Instructor-selected groups
Team contracts	
Instructor intervention @ impasse	
Student-selected groups	
Instructor-selected groups - Homogeneous/Heterogeneous	
Demonstrates value of group-think	

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