## Strategies for Creating Student Groups

## By Dayna Henry

Students famously hate group work, citing unequal distribution of work, grades not reflecting effort, and the logistical challenges of completing the work with others vs. individually (see for example LaBeouf, Griffith, \& Roberts, 2016). Yet we continue to require group work for a variety of reasons, including their many documented benefits. Few careers require solo work and learning to work with others is an important skill to develop, at least according to employers. Previous research has indicated that instructors value group work for this applicability to the workplace, though students report they would avoid a course with group work if the purpose was to learn how to work in a group (LaBeouf, Griffith, \& Schultz, 2014).

If you are planning to assign group work in your courses, it's important to first consider the reasons for doing so, ensuring you can speak to its benefits and aims. If you wish to delve further into approaches for assigning group work, check out this article. Once the decision to use groups has been made, though, the question then becomes: how do we group students?

Programs abound for generating groups, including random groups, groups based on student preferences, and more, including the Canvas group generator. However, which should you use? The strategy depends on the purpose of the group and the work students will be assigned to do together. If you allow students to select their own groups, they will typically select people they already know, those they believe will be good group members, or those who are seated near them. Some research has shown positive outcomes for self-selection into groups, due to increased group cohesion, group dynamics, and positive attitudes, especially when compared to random groups (described below). The downsides are that the groups will be less diverse and that some students may be left out.

To avoid these drawbacks, instructors can group students together using a variety of strategies. One is randomized grouping. This is likely to create heterogeneous groups in terms of the individuals, and, hypothetically, results in the groups having equal "ability" since the aptitude of the students would be randomly and evenly distributed across groups. This is contrasted with homogeneous grouping-much used and also much derided (though not universally) in K-12-where students of similar aptitudes (like those who are labeled as "gifted") are grouped together.

But what does the research say is the most effective for learning? It turns out that it is aptitude grouping, but with some studies suggesting that allowing students input and choice is important. While random grouping may theoretically ensure all groups are able to perform equally, this is not what happens in practice. Studies have identified some of the more common issues with group work, which include "social loafing" (i.e., free riding or not contributing equally to group work).
In the Health Sciences courses I teach, I use groups for large, applied group projects requiring collaborative work both inside and outside the class. Therefore, the method that I have chosen to use involves collecting information from students and using this information to develop intentional groups.

The goal for me is to develop homogenous groups of students based on working styles to reduce conflict, increase motivation, and prevent social loafing.

In addition to my "getting to know you survey," once past the add/drop date, students in my courses are required to complete a "group work information survey" that asks questions about their academic achievement, goals, and working styles. This survey includes information about current GPA (with an opportunity to explain if needed), future career plans (our major attracts students with a wide variety of interests), grades and perceptions of knowledge for pre-requisite courses, comfort with any other assignment requirements (e.g., SPSS, reviewing articles), and information about when and how both assignments and group work have been completed in the past. Questions have included:

What is your typical work style when it comes to assignments?

- I sometimes don't complete assignments on time and submit them late
- I complete the majority of the assignment the day before or on the due date
- I complete the majority of the assignment within the same week as the due date
- I complete the majority of the assignment about a week before the due date
- I complete the entire assignment at least one week before the due date and try to get feedback from the instructor to revise before submission

When you have done group work in the past, what has been YOUR typical role?

- I do what is asked of me by others in the group
- I fill in where needed after others have completed more of the assignment
- I take the lead by assigning others work and ensuring the work meets the guidelines/deadlines
- I do my fair share but want others to take the lead

When working in groups, I prefer the group:

- Work together
- Work together some of the time and split work some of the time
- Split the work

I prefer to meet/work with my group:

- In person mostly
- Online mostly (text, GroupMe, etc.)
- I don't care either way

The questions above reflect some of the most commonly cited conflicts within group work and I've found that grouping students using these characteristics helps develop homogenous groups with less overall conflict and increased ability to meet the demands of my courses. In fully online courses, I also assess their schedules to determine availability to work with their group members synchronously. This is
something that could be done for face-to-face courses if you don't plan to allow scheduled course time for this purpose.

I also ask students if there is anyone in the course they prefer not to work with and always honor these requests with no rationale required. Finally, I ask if there are students they prefer to work with, but acknowledge that these requests will not necessarily be honored. I have had BIPOC students and those who identify as men (because our major is mostly women) request to be grouped with like-identified students and this practice is supported by research on the negative effects of "solo status" (see this review).

At this point, you might be wondering about some of the practicalities of grouping students this way. I use JMU's QuestionPro survey software to collect the data and export to a CSV file, allowing me to sort by answers to various questions to form groups. A former colleague of mine utilized software from Purdue University called CATME, which served to both collect information to develop the groups and to help manage groups throughout the semester. This software does come with a cost. I have used paper surveys in the past and created groups on my living room floor by stacking surveys based on answers (I do not recommend this).

I have, unfortunately, had the experience of students figuring out my grouping method and lying on this survey to get into a perceived "good group." These students ended up not being able to meet the expectations of their group members and, as a result, it negatively impacted their grades in the course. I anonymously share the stories about past students who misrepresented themselves as a warning to be honest for the best possible group experience (and as a reminder about JMU's honor code). Using my techniques, informed by others (see acknowledgements), and tweaked over time, I have found more students thanking me for facilitating "best group they've had in college" (and we're going to be friends forever!) and usually only one group either struggling to complete the work or experiencing conflict, allowing me to give extra time and attention where it's needed.

Of course, forming the teams is not the end, but just the beginning, of the group work process. Check out this article for practical ideas to improve team projects, including some evidence that instructordeveloped teams are more like what will happen in the workforce and lead to better outcomes. Studies have also pointed to the importance of helping students learn how to work effectively in groups to achieve positive outcomes and resources like this one for how to ensure equal participation among group members. For help in deciding how to assess group members participation, check out these tools from Carnegie Mellon. Finally, if you're wondering about how to assign grades for group work, check out the University of Waterloo's comprehensive list.

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