Team Roles and Responsibilities

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Context: In-class; Engineering 100 – Careers in Engineering
Keywords: teams, group activity, first-year experience
Student Activity Time: 50-minute class period

Students reflected on their group project experiences and applied a role-based, team framework to ensure future group activities would be successful.

Introducing the Reflection Activity

Group projects are a common experience in engineering courses, yet many students are unsure of their roles and responsibilities in the group. This often leads to delays in forward progress on the assigned task. In order to help students remain engaged in their group assignments and develop a functional team, an educator used team role assignments to structure group activities. The purpose of this activity was to prompt students to reflect their prior experience with teams and what they learned about teams as a result of the activity.

The team roles and responsibilities activity is central to the Careers in Engineering course at Green River. To ensure success, students maintain the same role for a particular unit and then rotate through the remaining team roles throughout the term. To introduce the activity, the educator explained how team roles support high quality outcomes in engineering projects and distributed the handout with the responsibilities for each team role. The team roles are:

- Manager: responsible for ensuring that the team achieves its goals on time.
- Recorder: responsible for documenting group activities.
- Reporter: responsible for disseminating group consensus.
- Reflector: responsible for development of the teams’ process skills.
- Explorer: responsible for expanding the team’s focus and providing technical assistance.

The educator then allowed students to select a group of five and gave the class 15 minutes to complete the activity. Each student selected their desired team role and shared with the group the most important responsibility of their role on the team. Each group then developed a prioritized list of the three most valuable responsibilities within their team and the reasons why they made those selections. The educator then facilitated a report-out session for each group to share their findings with the class. The educator then explained that the team roles and responsibilities would be used for the remaining activities in the class. At the end of the class session the educator gave students a 5-question survey about the activity using the course management tool.
The primary purpose of this activity was to support students’ appreciation of and value for a structured team environment. The survey allowed students to consider their prior understanding of teams and make sense of the team roles that they were introduced to in class. The activity also prepared students to be successful in the remaining course assignments, and other engineering team activities in the future.

### Recreating the Reflection Activity

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<th>Description</th>
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<td>1. Introduce team roles and responsibilities as a concept for ensuring team success.</td>
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<td>2. Assign or allow students to select their groups and role assignments. Give students the initial assignment of discussing the responsibilities of each member of the team and develop a prioritized list of the most valuable responsibilities to be performed in the team and why.</td>
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<td>3. Facilitate a class report out of the most valuable responsibilities to be performed in the team and why.</td>
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<td>4. Continue to require student teams to use the team roles and responsibilities throughout the term.</td>
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### In the words of the Educator: Tips and Inspiration

*Assign groups and roles, or let students choose their own, but choose wisely.* One way to do this activity is to have students mix through all of the team roles throughout the term. I think this approach is more like an actual engineering teamwork environment. When I do this, I often let students start in a role that they choose, that is more like their own comfort zone. This gives them a chance to talk about it with a little more comfort because they are with their friends and talk about it. They probably get a lot out of the activity, but what they don’t get is having to overcome challenges in teams. The alternative is to assign all roles and teams, because I find that students go for their comfort zone. When I assign them, they have to adjust, and figure out their role in a new team. Either option is a choice, but impacts how successful the activity is over time.

*Help all students reflect on their roles.* Reflector is one of the standard team roles, but each team member should use the opportunity to reflect on their own role, the team processes, and how they can improve in the next activity. A lot of times students will say, “We all did a great job and everything went well,” and that’s not always the case. The group reflector helps remind the team to reflect, but each team member needs to reflect individually and how they have achieved their role responsibilities.

*What was the inspiration for the reflection activity?* For this activity, students have a chance to think about a successful team in a way that they have not thought about it before. This activity inspired by the ABET 2000 criterion and getting students to understand what makes a successful team. We wanted to get students to look at group projects as team projects – that everyone has a responsibility in accomplishing the goal.