

EMBEDDING TEAMWORK IN YOUR COURSE

DEFINITION

Teamwork encompasses the attitudes, behaviors, and shared thinking within a team that allow individual contributions (such as personal performance) to come together and produce collective outcomes (such as overall team performance) (Marlow, 2020)

Teamwork can help teach the following skills and dispositions: communication, project management, active listening, time management, problem-solving, critical thinking, organizational and planning skills, reliability, collaboration, and leadership.

HOW TO EMBED

Plan ahead:

Identify learning outcomes that would help students develop skills and dispositions aligned with teamwork.

Plan assignments that align with teamwork/collaboration outcomes. The length and scope of such assignments can vary based on your needs (see the implementation examples below). Additionally, consider adding aspects of teamwork to other assignments, for example, students may do work individually, but they must reach consensus first as a team.

Link group projects to work success:

When students know why specific components are added to a course, they are more likely to be engaged. To motivate collaboration, share explanations and real-life stories on how team projects in this and other courses can help in their future work.

Make collaboration expectations transparent:

If you want students to engage in teamwork to meet specific outcomes, make these expectations clear by adding the relevant information to the syllabus, assignment instructions, and rubric. Additionally, help students clarify their collaboration by embedding team agreements and self- and peer assessment checkpoints.

Form groups and have students take on specific roles (if applicable):

To ensure diversity, it is more effective if you form student teams based on their strengths and skills. For example, you can ask students to identify whether they have specific skills and interests, and then randomly group them to create balanced groups. Encourage students to take on specific roles within groups to create additional structure at the beginning.

Model desired behaviors:

Often, students are not aware of how to work collaboratively, which results in team issues. Model behaviors that you would like students to exhibit. For example, if you feel that a student is not involved, find out whether it is because of a lack of experience and provide support and scaffolding on how to help with that. Likewise, offer constructive feedback on how students can address team issues.

EXAMPLES

Classroom Activities:

Students complete tasks in teams of 2-4 formed among adjacent students and the number depends on classroom layout and furniture.

Teamwork Objective:

- Collaboratively debug code by engaging in shared problem-solving using the line tracing method demonstrated in class.
- Communicate effectively within their teams to identify and explain coding errors and possible solutions.
- Demonstrate shared responsibility by contributing equitably to the task and supporting each other's learning during the debugging process.
- Practice peer support by offering and receiving constructive feedback during the debugging task.

Assessment of teamwork:**Instructor Observation Checklist**

Prof Xavier uses a real-time checklist while circulating to assess teamwork indicators such as:

- Participation of all members
- Clarity of communication
- Equal contribution
- Evidence of joint problem-solving

Quick Team Reflection Exit Ticket (5 minutes at the end of class)

Each student responds to:

- What did your team do well while debugging together?
- What could your team improve for future collaboration?

Peer Assessment (Optional for Extended Activities)

- Simple rubric or Likert scale asking peers to rate each other on:
- Helpfulness
- Communication
- Engagement in the task

Scenario: Prof Xavier explains what debugging is and the need for debugging skills in industry. She highlights the connection to the real world by highlighting that these activities are performed in pairs or small teams in the industry and that collaboration is common in the workplace. She then demonstrates how to debug a code using the line tracing method.

Students then form groups and begin working on the task. Prof Xavier moves around the class to ensure that all the students are participating in discussions and performing the activities. By asking questions Prof Xavier assesses team progress and helps teams that are struggling.

MULTI-WEEK PROJECT:

Diverse teams of 3-5 students created by Prof Xavier. Syllabus defines the team project, expectations about teamwork, and purpose of the team agreement.

Teamwork Objective:

- Apply constructive conflict resolution strategies to address disagreements and maintain team cohesion throughout the app development process.
- Develop active listening skills by engaging respectfully with diverse perspectives, asking clarifying questions, and building on teammates' contributions.
- Engage in collaborative practices that promote inclusion, mutual respect, and shared responsibility in a diverse team setting.
- Deliver a cohesive team presentation that clearly communicates the app proposal, with each member contributing meaningfully to the final showcase.
- Contribute to the creation and implementation of a team agreement that defines roles, responsibilities, and milestones to guide project development.

Assessment of teamwork:

- Self and Peer Evaluations at the midpoint and end of the project
- Instructor Feedback on team agreements and observation of team dynamics
- Team Presentation Review during final showcase

Scenario: Prof Xavier explains the goals of the team project at the beginning of the semester. The University's student body publishes a biweekly newspaper that reports news around the university. They wish to create an app for their newspaper that can deliver news in small bytes and can host different kinds of media that a print paper cannot offer such as videos and podcasts. For this project, the university has invited proposals for possible app designs and the best design that meets the needs would be chosen by the student body. They have been given a copy of this month's newspaper for reference.

Prof Xavier guides the student teams to create team agreements through meetings in the class or outside of regular class hours. Teams define overall team goals, and each members' roles and responsibilities. Prof Xavier grades the team agreements to ensure that students have flexible and inclusive expectations to establish a comfortable environment for all members to share ideas and feelings. She then helps teams focus by asking them to break larger project goals into smaller, achievable steps, to reduce confusion with project related tasks.

When conflicts arise, Prof Xavier takes a hands-off approach encouraging team members to resolve, negotiate and refocus, while being supportive of their efforts. At the end of the project teams showcase their app designs to the rest of the class.

YEAR-LONG CAPSTONE:

Diverse teams of 4-5 were created by Prof Xavier. Prof Xavier provides sufficient in-class time for team discussions. Prof Xavier meets teams regularly to assess team dynamics, monitor their progress, provide constructive feedback, and encourage them as a team.

REFERENCES

Marlow, S. (2020). Teamwork. In: Zeigler-Hill, V., Shackelford, T.K. (eds) *Encyclopedia of Personality and Individual Differences*. Springer, Cham. https://doi.org/10.1007/978-3-319-24612-3_799