

USING SELF AND PEER ASSESSMENT TO IMPROVE THE GROUPWORK EXPERIENCE

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Undergraduate group research projects provide students with an authentic learning experience and foster the development of effective groupwork skills required for the work force. Groupwork skills are a key graduate attribute in higher education and an important employability skill as they encourage communication, collaboration and problem-solving (Guo et al., 2020). However, assessing groupwork can be challenging, as it can be difficult to determine individual contributions (Shishavan & Jalili, 2020). Often assessors give one grade for the assignment and all group members receive the same grade regardless of their contribution. The assignment then becomes a vehicle for free-riders, students who make minimal contribution to the project, yet are rewarded equally with their peers (Webb, 1995). Self and peer-assessment of the groupwork is an effective tool to minimize free-riders, ensuring that assessment is fair and equitable (Shishavan & Jalili, 2020). Students formally assess their contribution and their group member's contribution to the project. This evaluation can then be used to calculate individualized marks for the group project.

In a first-year unit, student groups investigate a cutting-edge molecular question, propose a hypothesis, and design an experiment. The assignment is scaffolded, with students forming groups early in the semester and submitting a communication contract detailing roles and responsibilities. Mid-semester, groups submit a research proposal for feedback. Groups then meet with staff fortnightly for feedback and present their research project in the final class of the semester. The final submission is assessed by staff and peers using the same rubric. The grade for the assignment is then moderated by the self and peer-assessment of the groupwork. To access the self and peer-assessment rubric, students upload evidence of their contribution. This encourages reflection and evaluation of the groupwork process and provides individualized grades based on contribution.

To evaluate the student experience, a survey was administered at the conclusion. Students reported that the research project helped them to learn about the scientific method and develop communication skills required for groupwork. Students felt that the research project encouraged them to develop friendships with peers in their research groups. Students further reported that the research project challenged them intellectually and gave them an understanding of what is required to undertake independent scientific research. Staff reported reduced groupwork issues following the use of self and peer-assessment of the groupwork and the evidence of contribution submission. Fewer students contested grades, suggesting that the use of self and peer assessment improved the assessment process, and the assessment was fair and equitable.

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