

GIFTS: The secret is in the details. Improving oral presentation skills with a peer and self-assessed feedback module.

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Studies show that there is a need for effective oral communication for engineers in two workplace settings: a formal setting to advocate for products and ideas to upper personnel or clients and an informal setting to have confidence in voicing suggestions to a team [1]. At Northeastern University, the Cornerstone of Engineering course is designed to teach first-year engineering students fundamental skills including oral communication. Instructors have observed students come in with different background experiences, and many have notable weaknesses in oral presentation. As a result of this, a module was created to supplement a pre-existing oral communication lecture with peer assessment, self-reflection, and instructor feedback.

The first section of this module was structured to be low-stakes, taking the format of an in-class lecture and assignment. In the lecture prior, a prompt was provided for students to design visuals in a four-minute presentation with one minute being dedicated to Q&A. The next day, a brief lecture was given covering the basics, accompanied by a best practice example presentation and a handout with tips. A fifteen-minute revision period allowed students to adjust their presentations to accommodate the material covered. Finally, students were divided into small groups, where they gave their presentations and received feedback from their peers.

Following this lecture, solo presentations took place in a town hall setting. Students were required to act as a representative for their team, advocating their project design. This presentation was recorded using classroom streaming technology and posted on the course site. Each student was asked to review themselves on this recording with a rubric and make comments in an individual reflection. They also received feedback from both their instructors and peers in an online survey format. While this later section was designed to challenge the student in a formal setting, reflection and feedback remained the focal point of the assignment.

In the fall semester of 2020, a class of 28 students was surveyed about this unit and 22 responses were received. Students were asked to scale to what degree they agree with statements covering the unit's materials such as, "My slides are structured in a way that is accessible." Results were normalized with 2 being the strongest agreement and -2 being the strongest disagreement. Overall, the feedback was positive, averaging around 1.2 across all categories indicating student's had new confidence in their skills. Many students noted about self-reflection that it helped them organize their points of improvement. This feedback is encouraging towards the module's goals of reflection. The reflection and feedback in the oral presentation module improved students' ability to present themselves in both types of workplace settings.

References

[1] P. Sageev and C. J. Romanowski, "A Message from Recent Engineering Graduates in the Workplace: Results of a Survey on Technical Communication Skills," *Journal of Engineering Education*, vol. 90, no. 4, pp. 685-693, Oct. 2001.