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An Online Course on Academic Integrity for Distance Learning

Foster an environment and culture of academic integrity for remote students.
Evaluate the effectiveness of hands-on, scenario-based interactive modules on academic integrity for remote students.

Project Design

This course was developed as an initial step in a long-term effort to reduce the occurrence of academic integrity violations (AIVs) at Carnegie Mellon University. Specifically, in this work, we target local and remote students engaged in online programming courses.

This effort was a collaboration between faculty at the School of Computer Science, the Eberly Center, the Open Learning Initiative (OLI), the Office of Community Standards and Integrity (OCSI), and students.

We worked with students to incorporate their perspective and focus scope. We designed, developed and deployed content and a video within OLI as shareable and reusable online modules accessible anytime and anywhere.

- One module on overview, policies, scenarios & avoidance mechanisms.
- Working with students, we completed our first video on academic integrity.
- Deployed in 15-513 in M16 (N=265) and 15-319/15-619 in F16 (N=222).
- Modes of data collection:
 - Post-test OLI data for M16
 - Pre-test and post-test OLI data for F16
 - Focus group with M16 students
 - M16 student interviews

Project Evaluation

Student participation:

- M16: 265 local and remote in 15-513
- F16: 222 local and remote 15-319/15-619
- Forty students who completed the course in M16 were removed from the F16 sample.

Analysis:

- Average student performance improved by 5% from pre-test to post-test.
- Even though the pre/post-test gain is somewhat modest in absolute terms, it is statistically significant (i.e., different from no change) according to a one-sample t-test:
 - $t(182)=5.68, p < .001$
- For pre-test questions with a high possible gain, the actual gain in the post-test is statistically and practically significant.

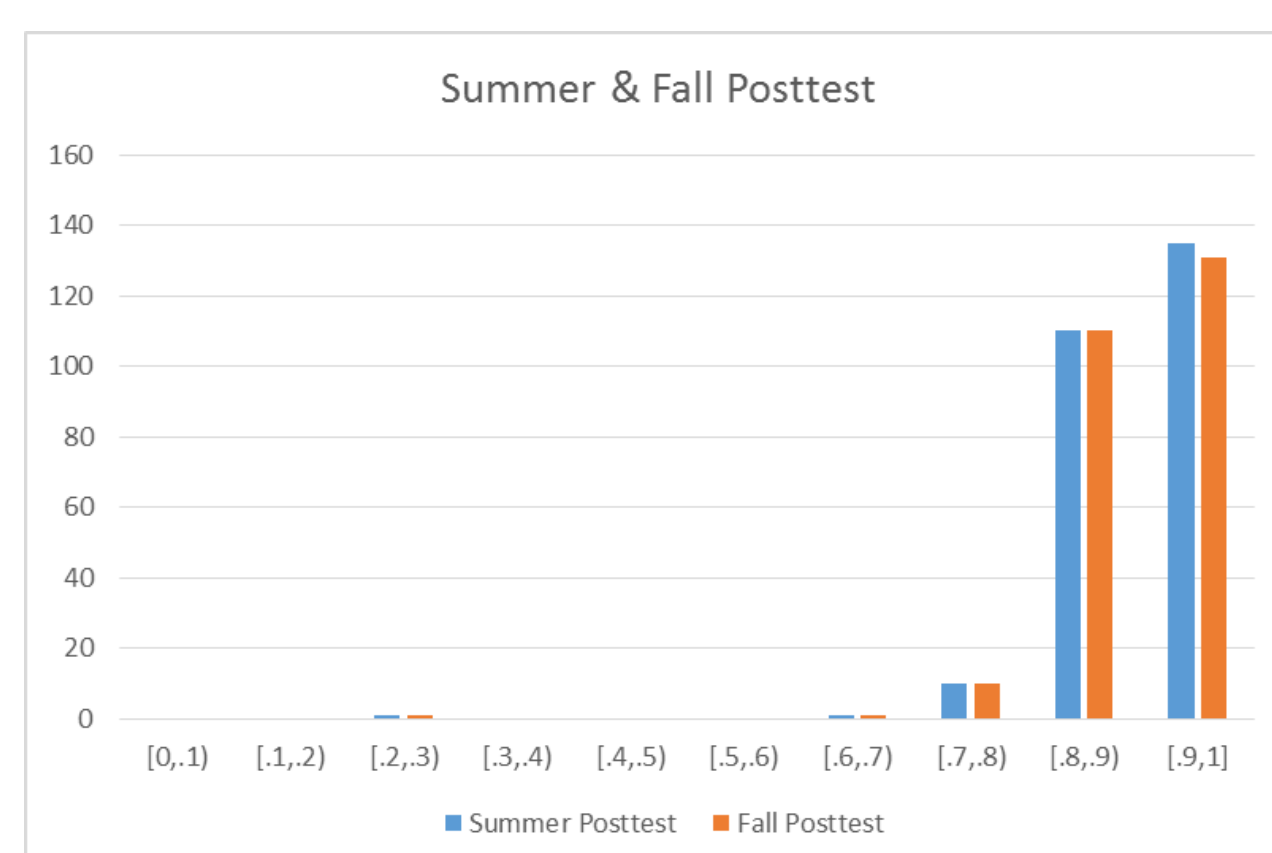


FIGURE 1. Frequency chart of student performance on the post academic integrity module quiz in both M16 and F16. The quiz questions were identical across both semesters. We observe equivalent post-test performance across both semesters. The results indicate that students were able to answer most quiz questions correctly after completing the module.

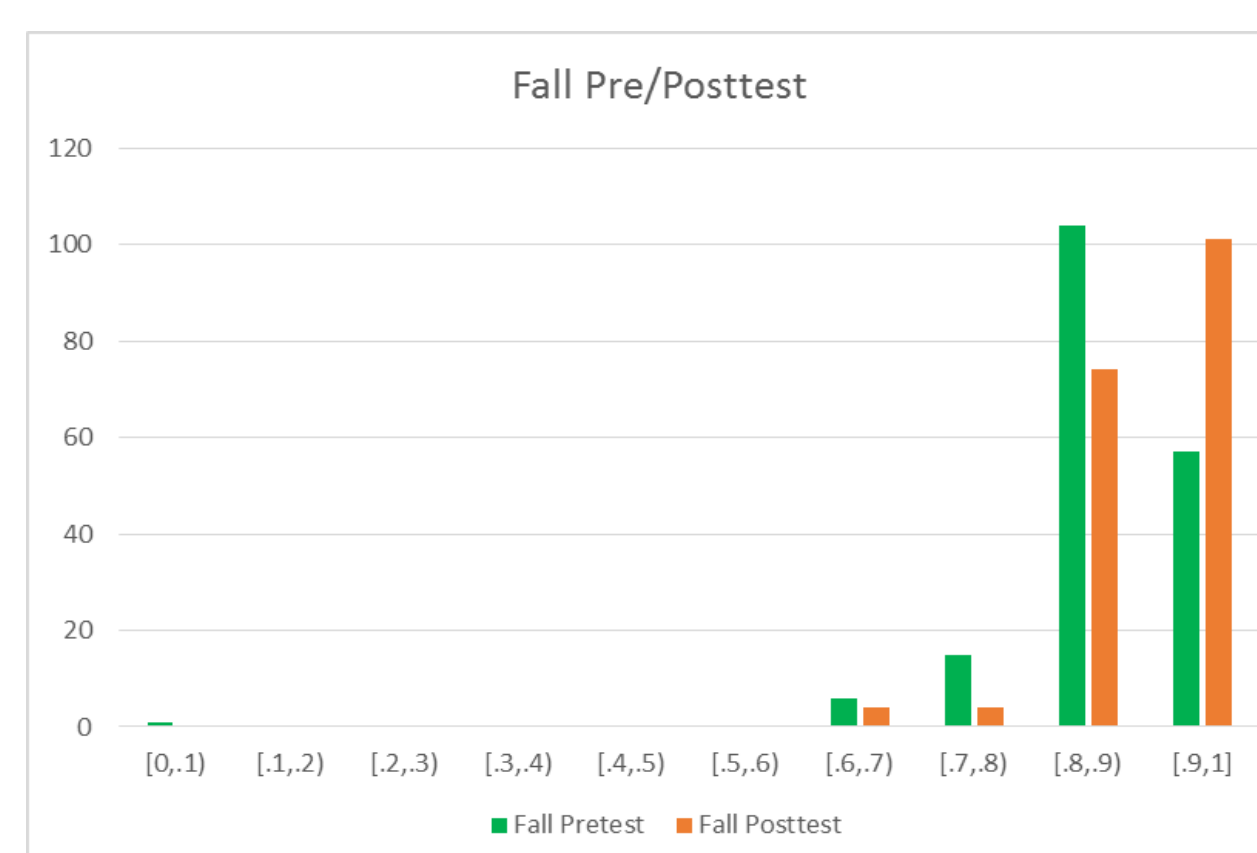


FIGURE 2. Frequency chart of student performance on the pre and post academic integrity module quiz in F16 only. The pre and post quizzes are identical. We observe an improvement in student performance after completing the academic integrity module. The results indicate that students' knowledge about academic integrity improved after doing the module.

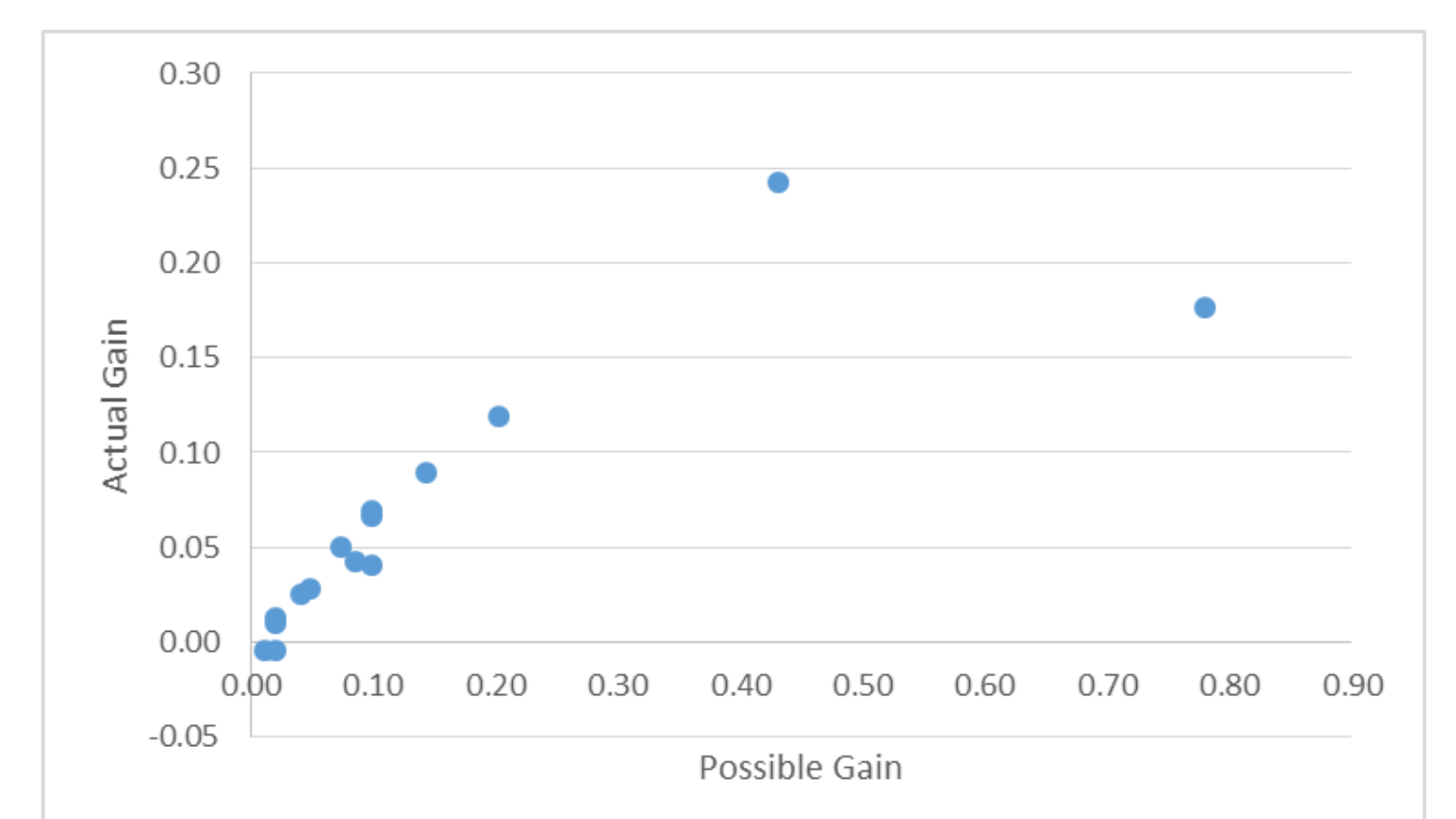


FIGURE 3. A scatter plot of the possible gain that students could achieve from pre- to post-test versus the actual gain achieved on each question. This result indicates that for certain questions, there was no gain to be achieved since students performed so well on these questions in the pre-test. Hence, for questions where significant gain was to be made, engaging with the module did improve students' actual gain and learning.

Future Work

- Work with OCSI to track Academic Integrity Violations over a long period of time.
- Add more collaborative scenario-based videos, design an immersive experience, etc. ➔ evaluate effectiveness through A/B testing.
- Collaborate on development, use and evaluation with other interested units on campus.



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Open Learning Initiative



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