Introduction

In workshops, students rely on one another, outside resources like lecture notes and the internet, and on the workshop leader. Exams, on the other hand, allow none of these resources. Although workshops provide excellent means for learning, some students may have difficulty in transferring their acquired knowledge to a written exam setting.

We investigated whether weekly, ungraded quizzes given at the end of workshop and returned with written feedback the following week could improve exam performance and/or reduce exam anxiety.

Study Design

- **n = 28**
- **Quiz Group** Quiz administered at the end of workshop for three weeks. Quizzes returned the following week with written feedback. Quizzes did not count towards students’ grades.
- **No Quiz Group** Workshop conducted as usual.
- **Exam & Post-Study Survey**

Results

**How Students Performed on the Exam:**
Average Difference between Student Standard Deviation from Class Mean on Post-Study Exam and Student Standard Deviation from Class Mean on Pre-Study Exam

- **Quiz Group,** 0.07197
- **No Quiz Group,** -0.22316

**What Students Had to Say:**
Answers to “Do you feel like having weekly workshop quizzes impacted your learning of the material presented in those workshops?”

- “It was a good way to review material learned in the workshop.”
- “It helped to see if you understood the material learned in workshop.”
- “Yes, because it’s actually doing the work and what we are learning.”
- “Yes, they show how much material I retained from the workshop.”
- “Yes. It reinforced some other information I had learned.”
- “Helped (a lot).”

Conclusion

- Students in the quiz group performed slightly better on the exam than students in the no-quiz group.
- This was true even when controlling for differences in student achievement and difficulty of the exam (see Results).
- Students generally reacted favorably to the quizzes and reported that they felt the quizzes were helpful.
- Students in the quiz group reported no difference in exam anxiety from those students in the no quiz group.
- Workshop leaders found that weekly quizzes provided feedback on what students had learned during the session, and helped them assess the understanding of their students.

Acknowledgements

We would like to thank Professors Alistar Kwan and Anthony Olek, as well as the Fall 2011 students of Biology 110.