Improving Undergraduate Oral Communication of Research Results

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Global Environmental Science (GES) Program Details
- ~85 students and ~15 graduates per year (first graduate in 2000)
- Supported by 30 Oceanography faculty
- Degree requires students complete an environmentally-related UHM faculty-mentored undergraduate research experience
- Publicly-delivered, oral presentation of research results
- Written thesis

Target Student Learning Outcome
Demonstrate skilled delivery of well-organized informal and formal oral presentations

Oral Presentation Assessment Challenges
- Feedback primarily from student’s faculty mentor
- No assessment mechanism for student other than mentor input
- Lacked of systematic, quantified evaluation for student and GES program to help improve student outcomes and curriculum

Curriculum-Assessment Improvements
1. Oral Pitch Exploring Research Topic
   - In OCN 100: Global Env. Science Seminar, the requirement has changed from students giving a PowerPoint presentation of their research topic to a 3-minute compelling pitch using infographics.

2. Hardwire Curricular Oral Presentation Training
   - Students receive presentation training, strategies, and practice time in OCN 490: Communication of Research Results. They begin preparing their GES Symposium presentation in this course.

3. Added Expert Feedback on Talk Rehearsal
   - In addition to getting feedback from their mentor, students now receive feedback from two designated “assessors,” who give global & slide-by-slide feedback using a detailed rubric.

4. GES Symposium Presentation
   - Through the publicly attended GES Symposium, students experience presenting and answering questions from a real academic audience. They receive graded rubrics at the end.

Oral Presentation Results
(Scale 0 – 3)
- Presentation Overall: 2.2
- Organization: 2.1
- Delivery: 2.2
- Accuracy: 2.2
- Methods: 2.1
- Data Presentation: 2.1
- Conclusion: 2.2
- Respond to Questions: 2.2
- Answer Questions: 2.3
- Practice: 2.8
- Symposium: 2.9

- 98% SCORED HIGHER on symposium vs. practice presentation
- 100% SCORED > 2 and 88% SCORED > 2.5 on symposium presentation

Insights
- Over the last 2 years, GES students won 2 first place and 1 honorable mention awards at UHM Undergraduate Showcase
- Students benefit from the scaffolded curricular experience
- Faculty from 8 units (OCN, ES, HIMB, PBRC, HNEI, HIGP, ATMO, ORE) have enjoyed participating in the practice sessions and completed 40+ expert evaluations over the last two years

Next Steps
- Give students the evaluation rubric when they enter the program and throughout the program (OCN 100, OCN 490)
- Record “model” presentations, note why they are exemplary, and have students, pre-presentation, watch and evaluate