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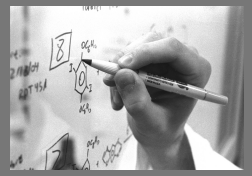
An Established Science and Math "Chalk-talk" Student Seminar Series

Patrick J. Desrochers, Dept. of Chemistry, University of Central Arkansas, Conway, AR 72035

What is a chalk-talk seminar series

Students summarize their research using a chalkboard and aim their talk to a broad math and science audience. Effective student presenters demonstrate the best informal communication skills in the form of lucid, often entertaining presentations. This series helps train students in the art of informal scientific communication.



Why an informal seminar series

Students routinely practice *formal* communication, and these opportunities are essential to their development as scientists and mathematicians. Examples include

- written lab reports,
- peer-reviewed papers, and
- seminars and posters for meetings.

Scientists also regularly use much less formal, more spontaneous methods to communicate their work. This can take different forms including

- napkins at formal meetings,
- scratch paper in their office, or
- chalk-boards at group meetings.

These informal methods have a conversational format, and hand-drawn figures emerge as the discussion progresses. Students trained in this method of communication are better prepared for the inevitable on-the-spot requests that come from

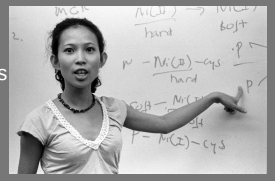
- colleagues in the hallway,
- job and professional program interviews, or
- the question: "What is it you do, *exactly*?"

Elements of a successful program

Two key components have characterized the chalk-talk series at our institution. These are

- persistent faculty support, and
- students willing to risk the process.

A *group* of faculty and not any single person from one department are needed to establish and sustain this program. This naturally results from mentors committed to training undergraduates in original research. Students perceive a risk in stepping out from behind formal PowerPoint slides in order to share their work with other scientists. But this willingness to face such risks has given this program its longevity, and here the role of encouraging mentors is crucial. Good mentors practice with students and participate in an engaged and enthusiastic audience.



Logistics of an established series

Scheduling and planning: A single college representative coordinates dates and meeting rooms, posts schedules, and most importantly sends out calls-for-speakers.

- one session each month (3 per semester)
- four speaking slots (15 min maximum) per session
- refreshments (funded by college dean)
- venues rotate to accommodate all departments
- regularly updated website:

http://chemistry.uca.edu/desrochers/chalktalks/signup.htm

Ground rules for the talks:

- only one transparency, all other is "chalk-talk"
- minimize technical jargon
- conversational audience interaction encouraged

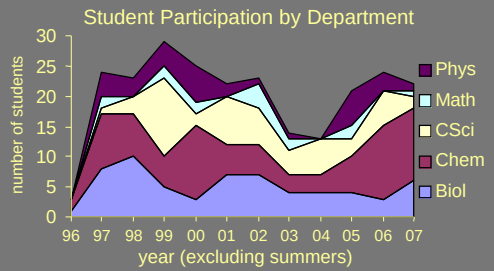
Preparation by speakers:

- develop basic outline
- practice informal format with mentor
- fine tune sketches to convey most essential features
- anticipate audience questions (esp. other disciplines)

Benefits of the program

Several benefits have been realized, and these continue to motivate faculty and student participation. Over its eleven year history this program has provided

- a unique student public speaking experience
- regular updates of current research in the college
- motivation for several interdisciplinary research projects
- a tool for recruiting new undergraduate research students
- a collegial atmosphere in an active five-dept. college



3 – 4 students also participate in an annual mid-summer chalk-talk.

Ongoing challenges of the program

Throughout its history, several recurring challenges have resulted. Some of these are

Jargon overload: Habits formed from speaking to other members of their discipline lead some students to use discipline jargon when less-technical language would suffice.

Faculty dominate discussions: Sometimes faculty jump in to answer questions before giving their students a chance to give a response. Better mentors are more patient and prepare their students to anticipate a variety of questions.

Students *need* practice: This form of informal science and math communication is not common in student experiences. Better chalk-talks and, therefore, more positive student experiences invariably result from practice sessions where mentors help students learn how to best utilize the blank chalkboard and present an effective informal presentation.

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