

# **Oral Presentations: Let's Talk About It!**

## **MAA Committee on the Teaching of Mathematics**

Joint Mathematics Meetings – Phoenix, January 2004

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### **Workshop Program**

1. Introduction: Getting Started with Oral Presentations (Su Dorée)
2. Discussion Groups
  - a) Why should students give oral presentations and how do we incorporate speaking into a course or program?  
(Dick Jardine and Tracy Bibelnieks)
  - b) How do we help students prepare to give oral presentations?  
(Nancy Hagelgans and Leah Berman)
  - c) How do we assess student presentations?  
(Catherine Miller, Tom Linton, and Steve Leonhardi)
3. Closure: Plan for Action (Su Dorée)

# Getting Started with Oral Presentations

Suzanne Dorée, Augsburg College, Minneapolis, MN, [doree@augzburg.edu](mailto:doree@augzburg.edu)

1. Suppose you were asked by the MAA to prepare guidelines for presenters at the Meetings. Name three things you'd be sure to tell every speaker.
2. Think back to the last talk you gave. What did you do to prepare? How did your talk go?
3. Why do you (or might you) want to have *students* give oral presentations?
4. Where in your courses or program do students give oral presentations?
5. What challenges do students face in preparing and delivering an oral presentation and how might you help them prepare?
6. How do you assess students' oral presentations?

# How & Why Discussion Group

Richard Jardine, Keene State College, Keene, NH, [rjardine@keene.edu](mailto:rjardine@keene.edu)  
Tracy Bibelnieks, Augsburg College, Minneapolis, MN, [bibelnie@augsburg.edu](mailto:bibelnie@augsburg.edu)

## Possible Discussion Questions

1. Why do we want students to give oral presentations?
  - a. How might speaking improve students understanding of the mathematics?
  - b. Is it important that students learn to communicate mathematics orally?
  - c. How might oral presentations be used to assess student learning?
  - d. How might oral presentations prepare students for a future career – in business, in graduate school, as a high school teacher, etc.
2. How might we incorporate speaking into a course or program?
  - a. In what ways to oral discussions serve as a learning tool in your classes?
  - b. Do you require formal oral presentations in classes?
  - c. How do students doing undergraduate research present their projects?
  - d. Does your department use oral presentations to assess student learning?
  - e. Does your college require oral presentations or public speaking?

# Preparing Students Discussion Group

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Leah Berman <[lberman@ursinus.edu](mailto:lberman@ursinus.edu)>, Ursinus College, Collegeville, PA

## Possible Discussion Questions

1. How do you help students prepare to speak?
  - a. What type of talk is it?
  - b. What is the topic?
  - c. What is the structure of the talk?
2. What is your advice about preparing visual aids (PowerPoint and overheads)?
3. How should they practice the talk?
4. What should they keep in mind during delivery?
5. What common problems might you alert students to?

# Assessing Presentations Discussion Group

Catherine Miller, University of Northern Iowa, Cedar Falls, IA [millerc@math.uni.edu](mailto:millerc@math.uni.edu)

Thomas Linton, Central College, Pella, IA, [lintont@central.edu](mailto:lintont@central.edu)

Steve Leonhardi, Winona State University, Winona, MN, [sleonhardi@winona.edu](mailto:sleonhardi@winona.edu)

## Possible Discussion Questions

1. How can we assess student presentations?
2. What criteria do you use?
  - a. How do you balance understanding, organization, and delivery?
  - b. Do you use a rubric to grade? (Some examples appear in resources section at end.)
3. What role might peer evaluation have in the process?
4. The really bad talk – what to do during and after?
5. How well does a talk measure student understanding?
6. Looking ahead – how do we translate what we've learned from the assessment into future student talks?
7. How do we assess student presentations within our curricula or program?

# Plan for Action

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1. Name three ideas from this workshop that you want to remember.
  
2. This semester
  - a. Identify one action you will take this semester regarding student presentations. *For example, will you adjust what you are already doing in some way? Will you add presentations to a class? Will you have your research student speak? Will you initiate departmental discussions on oral presentations?*
  
  - b. What challenges or obstacles will you face?
  
  - c. What resources or support will you need?
  
3. The next two years
  - a. Identify additional one action you plan to take over the next two years.
  
  - b. What challenges or obstacles will you face?
  
  - c. What resources or support will you need?

# A Few Resources on Mathematical Speaking

*The Speaker's Handbook*, 6<sup>th</sup> edition by Sprague and Stuart (Wadsworth/Thompson), a good general resource on public speaking but not geared to mathematical presentations.

MAA Committee on Undergraduate Program in Mathematics (CUPM) Curriculum Guide 2004, especially Part I pp.4-7 and Part IIC pp.3-4.....<http://www.maa.org/cupm/>

A few references provided by the CUPM guide:

- ✓ Barr, T. 1995. *Integrating mathematical ideas through reading, writing, and speaking: A senior seminar in mathematics and computer science*. PRIMUS 5 (1). 43--54.
- ✓ Buysek, S. 1995. *Student communication in the advanced mathematics classroom*. PRIMUS 5 (1). 23--32.
- ✓ Franzblau, D. S. 1992. *An undergraduate seminar emphasizing oral presentation of research mathematics*. PRIMUS 2 (1). 16--32.
- ✓ Ganter, S. 1993. *The use of student presentations as a learning tool in calculus*. PRIMUS 3 (3). 277--283.
- ✓ Gorini, C. A. 1991. *An integrated program of writing and speaking in the undergraduate mathematics curriculum*. PRIMUS 1 (3). 244--252.
- ✓ Meier, J. and T. Rishel. 1998. *Writing in the Teaching and Learning of Mathematics*. MAA Notes #48. Washington, D.C.: Mathematical Association of America.
- ✓ Myers, N. 1991. *Writing and speaking to learn geometry*. PRIMUS 1 (3). 287--294.
- ✓ ————. 2000. *An oral-intensive abstract algebra course*. PRIMUS 10 (3). 193--205.

“Assessing Student Oral Presentation of Mathematics” from *SAUM: New Case Studies*, Dick Jardine and Vincent Ferlini, Keene State College.....

.....<http://www.maa.org/saum/new%5Fcases/new%5Fcase%5F11%5F03/assesskscr2.html>

“Speaking Skill Handouts from Su’s Linear Algebra Class” Suzanne Dorée, Augsburg College, 2004 version.....

.....<http://www.augsburg.edu/math/faculty/doree.html>

Guidelines for Presenting Mathematics Papers at the Joint Mathematics Meetings”, American Mathematical Society, 2004.....

.....<http://www.ams.org/meetings/guideline-present.html>