Chalk Talks in Mathematics

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What were some of the challenges you faced in presenting in this class?
Today we will discuss how to give an effective chalk talk so that you are prepared for your next one.
Let’s start with what we already know...
Skills I Saw in Your First Presentations

- Starting with definitions
- Stating the question / problem
- Stating goal
- Checking for audience understanding
- Establishing the value of ideas
We want to build on your strengths this semester.
But we also want to acknowledge and work on areas for growth.
Let’s start working on areas for growth by asking, “Why is giving a seminar presentation a generally difficult Problem?
In order to understand this Problem, we need to identify the variables involved and how they relate to one another.
First, there’s you.

You have a purpose: communicate ideas about finite groups.
And you gotta do this through a chalk talk.
And you have to **communicate** the **ideas** so that your **classmates** **understand** them.
But *before* you can do that…
You have to understand the ideas.
And you then have to find a way to **translate** these **ideas** into a **chalk talk**.
And you have to **translate** those **ideas** into your own **words** that you will **speak** to your **classmates**.
But you also have to consider your classmates’ varied background knowledge, interests, and needs.
And your **purpose** is to somehow get the **ideas** as you **understand** them to fit into the **puzzle** of background knowledge, **interests**, and **needs** in your **classmates’** minds.
And your purpose is to somehow get the ideas as you understand them to fit into the puzzle of background knowledge, interests, and needs in your classmates’ minds.
This is a difficult problem.
It can’t currently be **solved** with **certainty**.
But we do have models from rhetoric and linguistics that we can use to understand the variables.
And if we can understand the **variables** by using these **models**, we can **design** chalkboards and speech that increase our **chances** of succeeding in our **purpose**.
Problem

Solution
Solution

Rhetorical Situation

Writing Process
Rhetorical Situation

Purpose

Context

Audience
We call this model the Rhetorical Situation.
Rhetoric is the study of communication & persuasion.
So any **situation** that calls for **communication** is a **rhetorical situation**.
And since a seminar presentation calls for communication, we can use the rhetorical situation model to understand it better and make more effective design decisions.
We can do a **basic analysis** of these **variables** in our **rhetorical situation** relatively quickly.
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This is a **basic analysis** of the rhetorical situation for seminar presentations.
This analysis can help us make decisions about how to design our presentation to help us accomplish our purpose for our audience in our context.
It’s a powerful tool.
But if we can understand the rhetorical situation even better, we can make even more effective design choices.
But in order to understand the rhetorical situation better, we need to do a more complex analysis.
Rhetorical Situation

Context
- Where are the ideas conceptually located in the seminar & theory?
- What medium am I using?
- What can it do?
- What can’t it do?
- How do I manage speed?
- How do I manage volume?

Purpose
- What are the goals of the assignment?
- What are my goals as a classmate?
- What are my goals as a student?

Audience
- What is their background knowledge?
- What are they interested in?
- What do they need to know?
We can use the **rhetorical situation** to help us generate **useful questions** for making **decisions** in our **writing process**.
Focus
• What ideas are hard or complex?
• Why should your classmates care?
• How does it fit into the overall class?
Writing Process

Learn the Content

Focus

Help Classmates Understand Material

Learning Seminar

Classmates
Writing Process

1. Learn the Content
2. Focus
3. Structure
Writing Process

Structure

• How can you organize the information to help your classmates to understand the material?
Writing Process

Learn the Content → Focus → Structure

Help Classmates Understand Material

Classmates

Learning Seminar
Writing Process

1. Learn the Content
2. Focus
3. Structure
4. Outline
Outline

• What **information** can I fit on a **section** of a board?
Writing Process

Outline

• What information can I fit on a section of a board?
• How can I help a confused or distracted classmate?
Writing Process

Learn the Content ➔ Focus ➔ Structure ➔ Outline

- Learning Seminar
- Classmates
- Help Classmates Understand Material
Writing Process

1. Learn the Content
2. Focus
3. Structure
4. Outline
5. Practice
Writing Process

Practice
• Schedule a **rehearsal** with Kent, Michael, WCC, and/or classmates to receive feedback.
Writing Process

1. Learn the Content
2. Focus
3. Structure
4. Outline
5. Practice
Writing Process

Learn the Content → Focus → Structure → Outline → Practice → Revise
Revise

• Leave enough time before your talk so you can revise based on feedback.
Solution

Rhetorical Situation

Writing Process
Schedule a Rehearsal

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