

IOWA STATE UNIVERSITY

Center for Excellence in Learning and Teaching

*Advancing Your Scholarly Teaching
into the Scholarship of Teaching
and Learning (SoTL)*

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Workshop Objectives and Outcomes

- Upon completion of the workshop participants will have:
 - Identified and developed a researchable question
 - Developed a framework and protocol for data collection
 - Completed a project timeline including milestones

Workshop Agenda

- Introductions
- Sorting activity
- Discuss pre-reading in small groups and summarize in large group
- Identify and develop research question; refine with group input
- Data collection protocol
- Develop individualized research timeline
- Wrap up

Pre-reading Discussion

- Is there a particularly effective method you have used to increase student learning, and can you document its effectiveness?
- What more would you like to know about the effects of your course design and teaching on student learning?
- Are there challenges you have encountered (attendance, incivility, poor performance, etc.) you would like to improve?

Generating a Research Question



<http://www.playbuzz.com/>



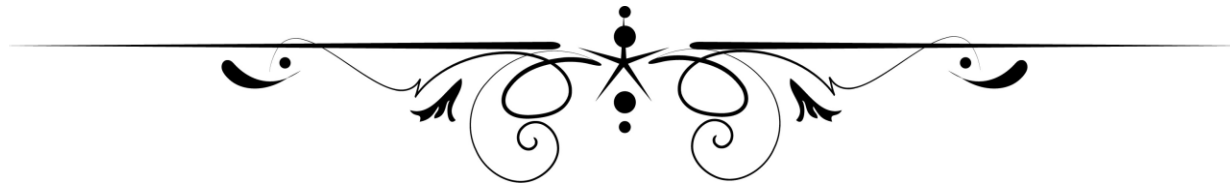
Sample Research Question

- A. Do students learn better in small classes?

- B. Is student performance on a final exam higher for those students in the 20-student section of Hort 481 or the 250-student section of Hort 481.

Designing the Study

- What group do you want to study?
- How many people will be in the group?
- Where will you conduct the study?
- Will you need a comparison group?



- Pilot study?
- Collaborator?

Data Collection Protocol

- What type of data will help you answer your research question
 - direct vs. indirect measures
 - qualitative vs. quantitative data

Data Types

- **Direct measure**
 - Course assignments
 - Exam scores
 - Portfolios
 - Presentations
- **Indirect measure**
 - Student feedback and reflections
 - Survey related to the research question
 - Focus groups

Data Types

- **Quantitative**
 - Deals with numbers
 - Data which can be measured
- **Qualitative**
 - Data can be observed but not measured
 - Deals with descriptors

Latte Example



Quantitative

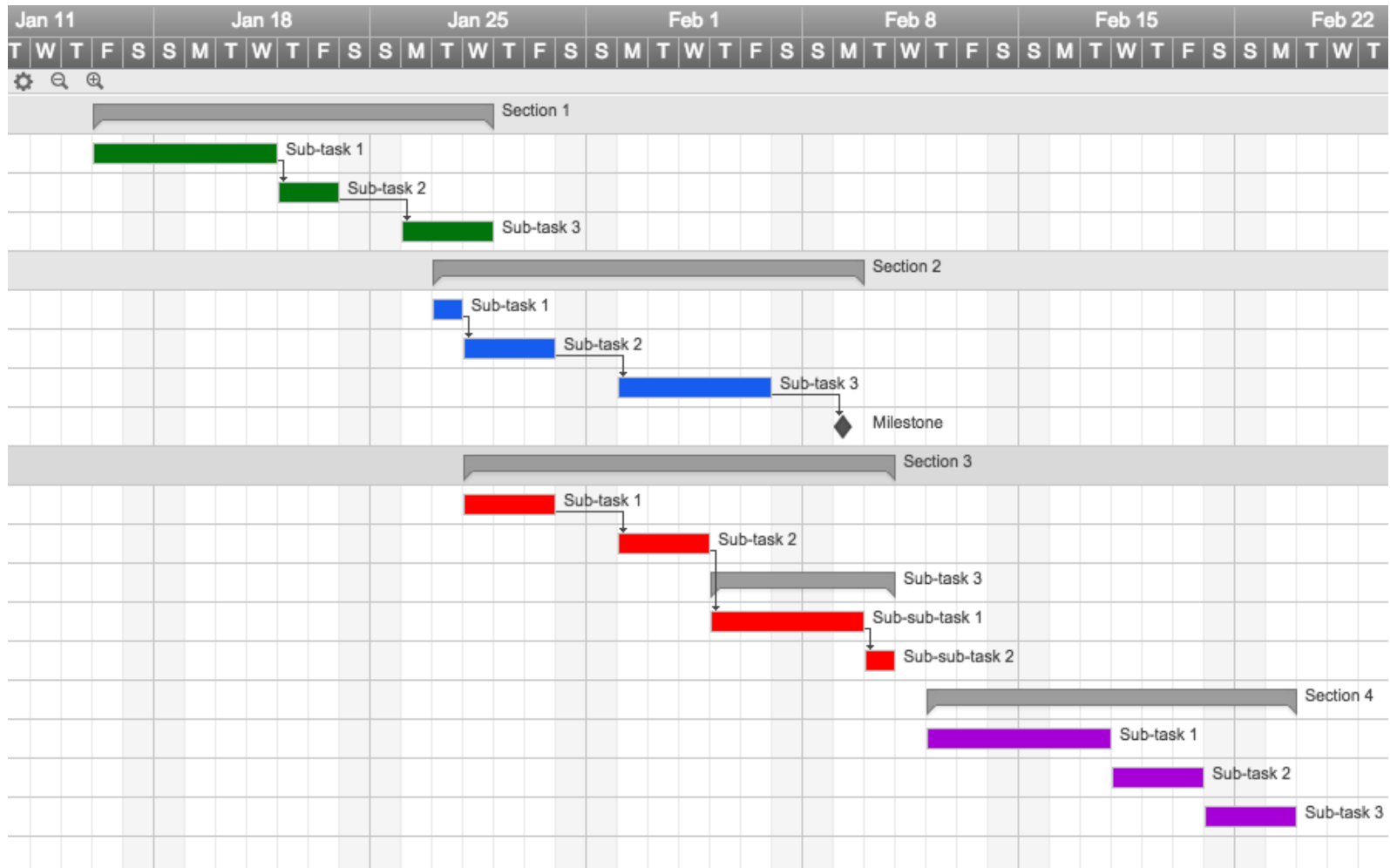
- 12 ounces of latte
- Serving temp.= 150° F
- Serving cup= 7 inches tall
- Cost: \$4.95

Qualitative

- Robust aroma
- Frothy appearance
- Strong taste
- White mug

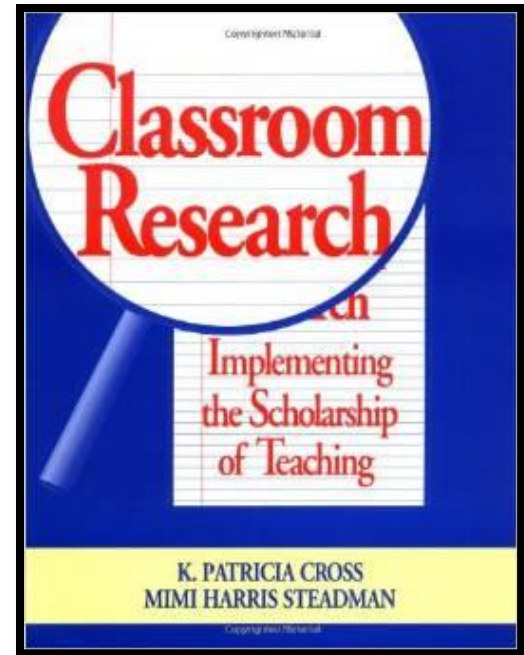
Example adapted from <http://regentsprep.org/regents/math/algebra/AD1/qualquant.htm>

Gantt Chart Research Timeline



Data Analysis

- Statistical analysis
- Thematic analysis
- A combination of both



Cross, K., & Steadman, M. (1996). Classroom research: Implementing the scholarship of teaching. San Francisco, CA: Jossey-Bass.

Individual Research Timeline

- Determine research question
- Background literature review
 - Searchable keywords
- Design the research study
- IRB (Institutional Review Board) application/approval
- Publication venues (timelines)
 - <http://www.celt.iastate.edu/for-faculty/sotl/teaching-related-journals/agriculture/>

Thank you!

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Acknowledgement:

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