

Active Learning Approaches and Introduction to Group Presentations

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Overview

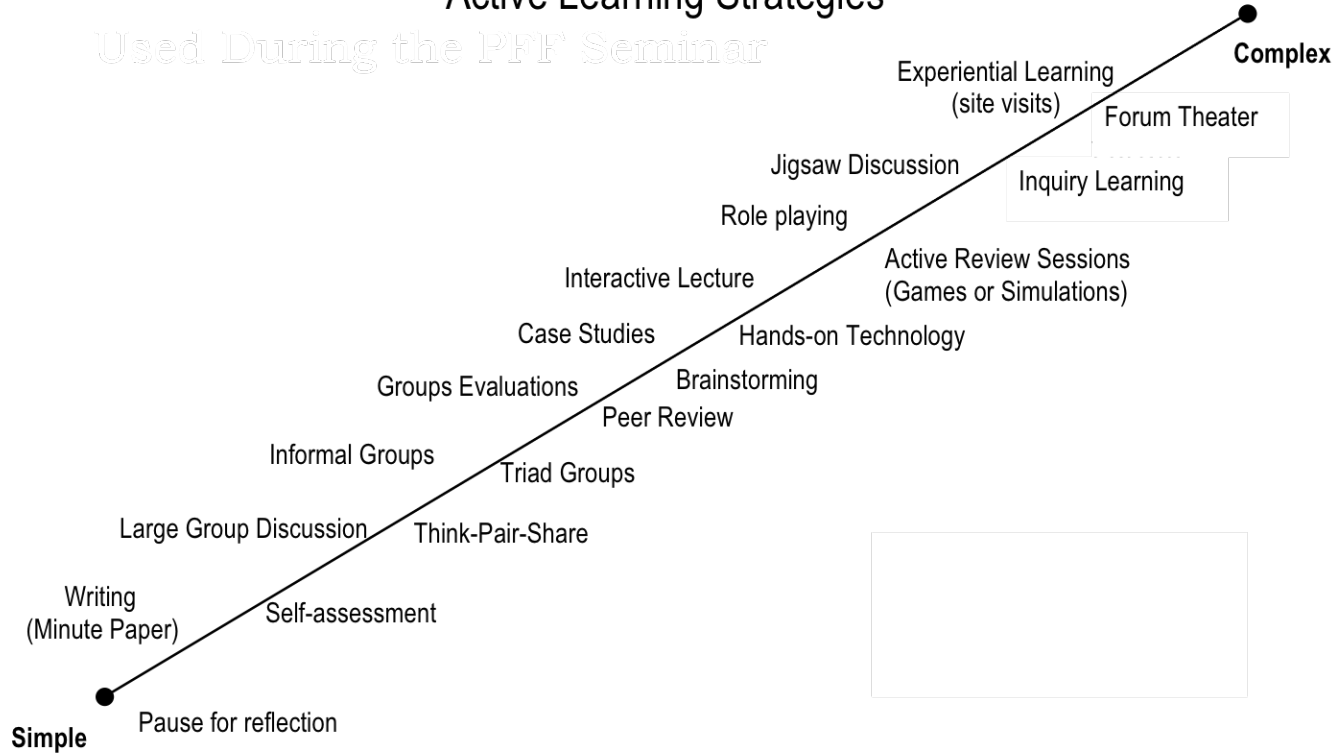
- Introduction to active learning
- Develop active learning activities in teams
- Presentations

Choosing a Group

- Classroom Setting – Tables 1 & 2
- Informal Settings – Tables 3 & 4
- Wild Card – Table 5

Active Learning Strategies

Used During the PFF Seminar



This is a spectrum of some active learning activities arranged by complexity and classroom time commitment.

Prepared by Chris O'Neal and Tershia Pinder-Grover, Center for Research on Learning and Teaching, University of Michigan

Activity: Card Sort

- In your team, sort the cards on the table into at least 4 sets
- Outline your sets on an easel
 - Explain sets
 - Identify activities in each set

Activity: Card Sort Gallery Walk

- Have one member of the team stay with your “poster” to answer questions
- Everyone else circulates to view other “posters”

Learning Objectives, High Level

- Increase ethical sensitivity/moral imagination
- Increase ethical knowledge
- Improve ethical judgement/skills
- Develop vocabulary/ability to articulate ethical issues and possible solutions

Learning Objectives, Tips

- Be concrete, observable and measurable
(Students can demonstrate this)
- Not be vague
(Behave honestly, be a good professional)
- Activities aimed at achieving objectives
- Assessment is connected with measuring your objectives

Learning Objectives, Assessable

Can require a basic level of knowledge and understanding, or be more advanced.

- **Ethical sensitivity/knowledge** - By the end of this session students will be able identify what situations constitute a conflict of interest
- **Ethical judgement/skills** - By the end of this session, students will be able to evaluate actions by referring to the IEEE Code of Ethics

Active Learning Example

BME 100 level course – 56 undergraduates

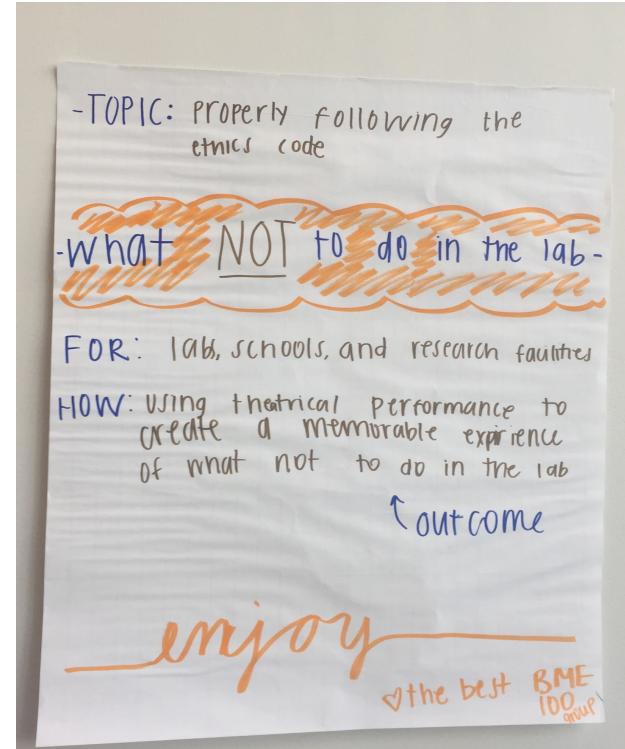
- Session 1: Introduction to Ethics in BME: Short lecture followed by case study discussion
- Session 2: Brainstorming on what are ethical issues important in undergraduate research, pair & share in small groups, choose topic and brainstorm solutions to share topic with fellow classmates
- Session 3: Prototype game & present

BME 100 Learning Objectives

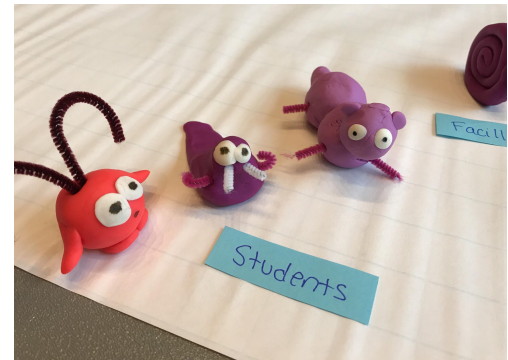
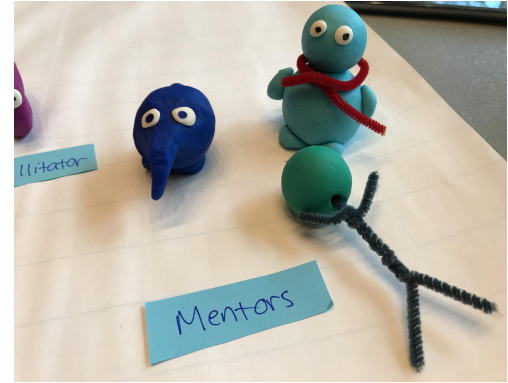
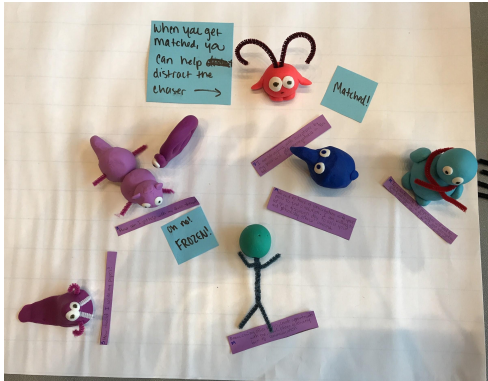
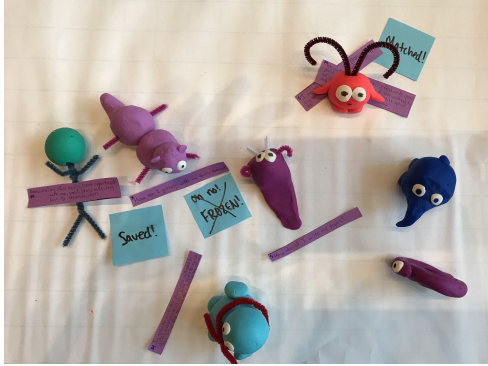
Students will be able to:

- Recognize ethical issues in a simple case study
- Articulate why their chosen ethical topic is important and how it effects the research process
- Discuss how different stakeholders may view their ethical topic
- Identify at least one informational resource on the topic

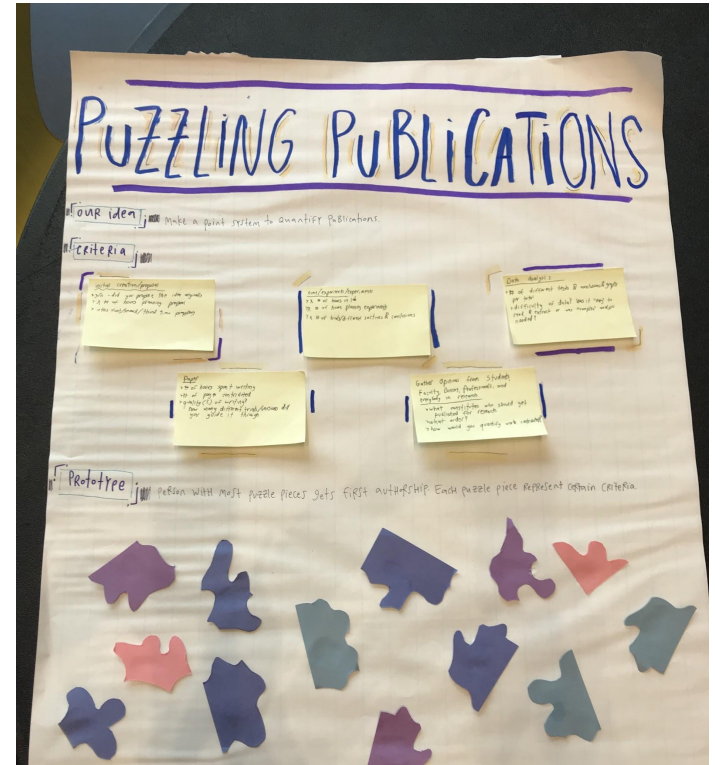
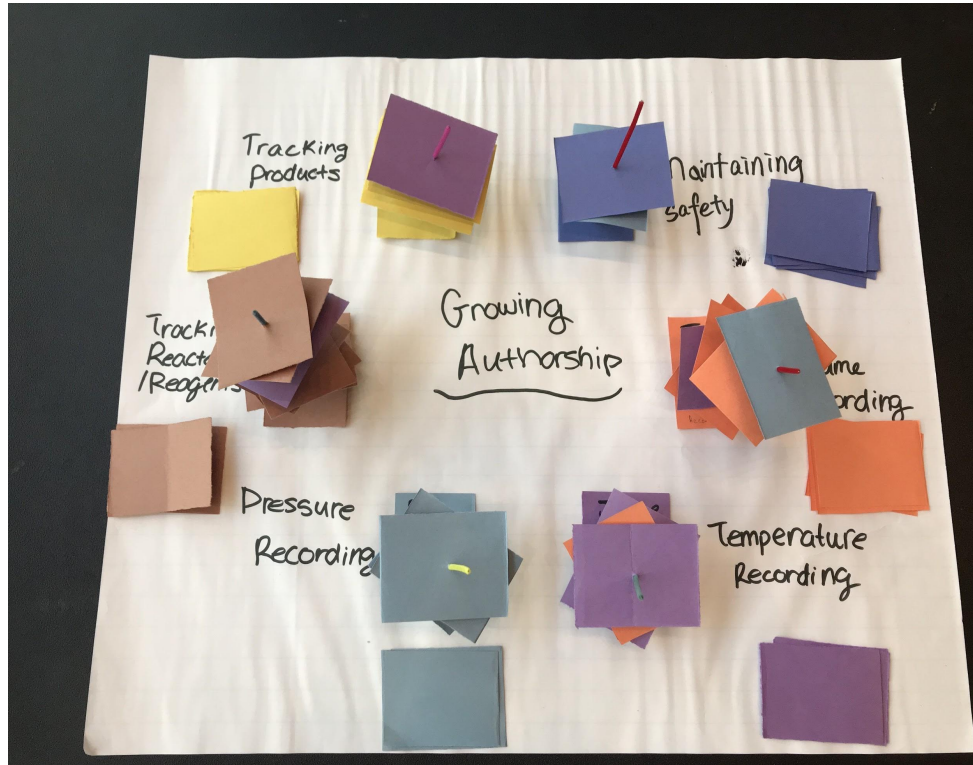
BME 100: Skit, Not in the lab!



BME 100: Game, Mentor Match



BME 100: Authorship as a Puzzle



Group Activity

Design a 75-minute active learning session

1. Work with your table group
2. Instructors will circulate to assist as needed
3. Choose a reporter
4. Articulate learning objective(s)
5. Design session
6. Consider possible outcome(s) and method of assessing

References

"Active Learning Bibliography" Online Ethics Center for Engineering
8/17/2016 OEC Accessed: Tuesday, October 1, 2019

www.onlineethics.org/Resources/Bibliographies/37912.aspx

"Bottom-Up Ethics: Real World Training for Professional Practice.
2019

<http://onlineethics.org/Resources/Bottom-up-ethics.aspx>

O'Neil, Chris, and Tershia Pinder-Grover. "Active Learning
Strategies." In Active Learning. University of Minnesota, Center for
Educational Innovation, 2019. <https://cei.umn.edu/active-learning>.