Problem-Based Learning as Change Agent for Library Instruction
What to expect...
Episode 1: The Facts
Evolution of a Partnership
What is PBL?

PBL is an instructional, learner-centered approach that empowers learners to
• conduct research
• integrate theory & practice
• apply knowledge & skills to develop viable solutions to problems
Common Elements of PBL:

1. Learning is student-centered
2. Problems are ill-structured
3. Problems are authentic
4. Teachers act as facilitators
5. Students work in small groups
How we Integrated PBL

1. Learning outcomes
2. Pre-class materials
3. Icebreaker
4. Instruction: Levels of evidence, brief library website refresher
5. PBL Activity
6. Post class material (discussion board questions & a survey)
PBL Activity Overview

1. Form student groups
2. Brief intro to activity
3. Problems assigned
   Example: A researcher claims that females can withstand greater levels of pain than males. Is there evidence to support this assertion?
4. Brainstorming (5-10 minutes)
5. Searching (40-45 minutes)
6. Group presentations (less than 2 min. each)
Reflective Questions

1. What was your strategy?
2. Where did you look & why?
3. What terms did you search?
4. How did you evaluate the results?
5. What level is your supporting evidence?
6. Did you identify potential research gaps?
7. What questions remain?
“Knowing the elements of the search process & actually doing them in class was a very helpful activity for me.”

What were the results

Evidence Shows??? → No Significant difference between genders. However, evidence suggests men demonstrate a higher pain tolerance. (PubMed, CINAHL, Cochrane)
Why we did it
Episode 2: The Real World
Icebreaker!
Instructions/Rules?

- Not to worry. I have a permit.

I can do what I want.

Ron
Basic Steps

1. Define a problem: Choose a research class (which discipline, level, how much time, etc.) 3 minutes

CHOOSE a research class; Define the problem.

Discipline: Nursing

Level: 3000-4000 level (Junior/Senior)

How much time: 1.5-2.5 hours (negotiable)

Other factors: Computer classroom (ideal) or have students bring laptops.
Basic Steps

2. What do you want your students to get out of the class? 5 minutes

OBJECTIVES – What do you want your students to get out of the class?

1. Analyze sources with evidence-based paradigms.
2. Locate quality information through Nursing resources (& distinguish between what they have access to now and what they will have access to when they leave the university).
3. Use PubMed more effectively.
4. Critically reflect on the research process.
Basic Steps

3. **Pre-class Materials**: Are there pre-class materials that could help with your objectives & extend the time you have with students? **5 minutes**

**PRE-CLASS MATERIALS** – Connect to objectives; Extend time you have with students.

**Potential:**

1. Read: Levels of evidence document.
2. Watch: Levels of evidence video (check YouTube)
3. Activity: PubMed tutorial portions (check the PM tutorial for which portions might be most applicable).
4. Discuss: Pre-class discussion board?
Basic Steps

4. Construct a few authentic, ill-structured problems for students to work on. What do you want them to do with these problems? 5 minutes

PROBLEMS – Construct authentic, ill-structured problems; What do you want to students to gain/learn?

1. What are current best practices for hand hygiene? What does compliance look like?
2. Adolescents with diabetes often struggle with quality of life (QOL) issues. What are some proven strategies for increasing QOL?
3. Are there other evidence-based ways for detecting breast cancers besides the mammogram?
4. Is there a connection between vaccines containing thimerosal and autism spectrum disorders?
5. What are the effects of vaping? Are e-cigarettes an improvement upon regular cigarettes?
Basic Steps

5. Is there an assignment (post-class) you can create that will further encourage students to think critically about the research process? Other evaluation methods? 5 minutes

POST-CLASS— How can you further student learning after class? Other evaluation methods?

1. Discussion Board prompts: All students required to post & comment on 3 other posts.
   a. What were the biggest challenges your group faced in answering the question? Explain.
   b. How will you go about searching for evidence-based info after you have graduated? Explain.
   c. Did this activity change the way you plan to search in the future? If so, how?

2. Survey: To provide quantitative data on the activity & its usefulness. To allow students an avenue to express their thoughts. Deployed in course management system.
The Future