

INNOVATIVE METHODS TO DELIVER CASE STUDIES IN AN ONLINE OR FLIPPED CLASSROOM

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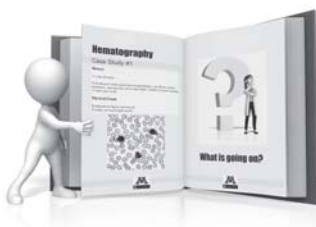
Session Objectives

At the successful completion of this unit, the participant will be able to:

- Discuss the utility of various technologies for the implementation of online case study exercises
- Provide an example of how a case study can be implemented in the online or hybrid classroom using each of the technologies discussed
- Compare and contrast the advantages and disadvantages of each technology discussed with regard to case study implementation

What is a Case?

1. Cases are **well told stories**
2. No one method used by all
3. **Subject matter defines** the nature of the case (fact-driven versus context driven)
4. Well-defined **knowledge as a starting point**



Why use Cases?

1. **Active Learning** - Require active participation compared to lectures
2. **Collaborative Learning** - Promote learning from peers
3. **Critical Thinking** - Require a higher level on Bloom's taxonomy
4. **Problem-based learning** - Acclimate students to practical, real-life problems

Why not use Cases?

1. Not useful to cover all content
2. Require instructor time in preparation and evaluation
3. Evaluation can be subjective
4. Students may not have sufficient expertise

What is a Good Case? The case....

- Tells a story
- Focuses on an interesting, engaging issue
- Relevant to the student
- Set in the past five years
- Has pedagogic utility
- Forces a decision or is thought provoking
- Has generality (applicability)
- Is concise

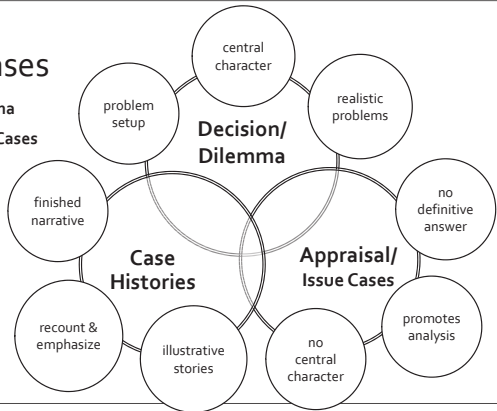
How to Write a Case - Sources

1. **Preexisting materials**
 - Scientific Journals (examples: Clinical Chemistry, ASM..)
 - Newspapers
 - Television
2. **Writing cases (3 basic types)** (Reynolds, 1980)
 - **Decision or Dilemma Cases** – present problems for the decision maker (student)
 - **Appraisal Cases** – “issue” cases used to teach skills of analysis (stops short of decision)
 - **Case Histories** – illustrative stories used to recount and emphasize



Types of Cases

1. **Decision/Dilemma**
2. **Appraisal/Issue Cases**
3. **Case Histories**



How to Develop a Case

Steps in Case Development

1. Decide on a topic
2. Review and research the topic. Find a hook.
3. Write down all principles you might teach (cover) using this topic
4. Make a list of characters
5. Write a draft using the main character's perspective
6. Write the discussion questions

General Tips

- Know your audience (student, learner, trainee)
- Include more than the facts to give it authenticity and story quality
- Use conversational writing and short sentences
- Include a human interest perspective – name the patient
- Avoid unnecessary lengthy words. Learner can then key in on important terms and information
- Garner initial interest with a catchy title (hook)
- Maintain a chronological order

How Not to Teach a Case

CLASSIC MISTAKES, LACK OF:

1. clear goals
2. time
3. preparation
4. commitment
5. relevance to the curriculum
6. evaluation
7. experience

To avoid these mistakes, **DON'T:**

1. Fail to prepare (always prepare)
2. Start a discussion with a close-ended question (use open-ended questions with multiple answers)
3. Lead with controversy (Lead with facts)
4. Fail to organize the instructional context and sequence (use the LMS in an organized way)
5. Limit the number of students responding (call on all potential respondents)
6. Don't forget to introduce students before the case (students should know each other)
7. Forget to listen carefully and specifically respond
8. Expect to just discuss (students should produce a product)

Case Evaluation

1. Ask for a product
2. Tie the grading rubric to your goals
3. Don't be afraid to include participation
4. Provide grading rubric to students in advance to guide session
5. Consider team grading in addition to individual grading (be sure to minimize social loafers and compulsive workaholics)
6. Include peer evaluations – most students are reasonable but provide a clear scoring rubric to guide student evaluations

Case Formats

1. **Discussion Format** – decision or appraisal cases (instructor directed or guided) Best used with more participants – larger class size (20 – 60 students) for diversity of opinion
2. **Wiki Format** – collaborative decision cases in small groups (4 -7) to ensure participation. Usually student-directed or instructor guided
3. **Clinical Vignettes Format** – closed-ended decision cases intended for individual student practice and can be used to measure student's knowledge of commonly accepted clinical algorithms



Discussion Format

PLACEHOLDER – At this time we will spend 5 minutes going into a discussion case study in Blackboard



Pros and Cons with Discussion Cases

PROS

- Can set up the discussion so that individual students have to post before being able to see other student post
- Better for larger numbers of students for robust discussion
- Can copy cases from one semester or course to another

CONS

- Difficult for individual student grading if using group or team-based discussion cases
- If not facilitated by a team leader or instructor it can become unfocused

Wiki Format

- A website that provides ongoing collaborative modification of its content within the web browser
- Requires wiki software, typically included in course management systems such as Blackboard
- Wikipedia is the most popular-wiki-based website
- Invites users to edit any page or create new pages



Wiki Format – Example 2: Case of Laura

Week 3 – Human Resources Management – Elements of Staff Management Overall Assessment of Laura Winters

Laura is a Medical Technologist in Hematology laboratory. She is dedicated and knowledgeable. Laura has been with us for over 30 years and we truly appreciate her commitment. As Laura getting ready to retire, Laura does try and assist with training of the new generation of Medical Technologists, but has a challenging sharing her knowledge and mentoring in a positive encouraging way.

Laura comes to work on time and rarely takes time off. When we need assistance Laura volunteers to stay, but gets discouraged when she is not offered a chance to get OT.....



Wiki Format – Example 2

Wiki Instructions ^

You are a clinical laboratory manager and must evaluate Ms. Laura Winters, one of your hematology technologists. You will be completing this evaluation as a team. In order to successfully complete the following WBI assignment, each member of this group must:

1. Read the narrative of the case analysis of Laura Winters, Case Analysis: Laura Winters.pdf
2. Complete one of the first four sections of the evaluation by entering the ratings (N, M, or E) for that chosen section (each student will choose only one section of Sections 1 - 4). To add input to this form, click on the "Edit Wiki Content" to the right above the PERFORMANCE EVALUATION form.
3. Provide justification for the scores entered in the comments section to the right of each score.
4. Set five SMART goals for Laura to achieve in the next 12 months.
5. Provide at least one comment regarding the scoring and/or SMART goals provided by other team members. To provide comments on wiki content, click on "Comment" located in the lower right under the PERFORMANCE EVALUATION form.

PERFORMANCE EVALUATION			
PERFORMANCE	REQUIREMENTS	COMMENTS	GOALS

Wiki Format – Example 2

Criteria	Novice	Competent	Proficient	Exemplary
Participation Weight 100.0%	0 % DID NOT participate in this engagement at all demonstrated by one or more of the following: no posting in the discussion board, no assignment uploaded, no contribution to the wiki, etc.	60 % Participated in this engagement ONLY TO A MINIMAL DEGREE as demonstrated by one or more of the following: initial posting with little to no follow-up posts in the discussion board, uploaded assignment does not meet all criteria, inadequate contribution to the wiki, or work does not generally satisfy the stated requirements of the engagement	80 % Participated in this engagement SATISFACTORILY by fulfilling all requirements as demonstrated by one or more of the following: initial posting with sufficient follow-up posts in the discussion board, uploaded assignment meets all criteria, adequate contributions to the wiki, or work generally satisfies the stated requirements of the engagement	100 % Participated in this engagement while EXCEEDING ALL THE REQUIREMENTS as demonstrated by one or more of the following: initial posting, follow-up posts, and inclusion of new ideas in the discussion board, uploaded assignment exceeds all criteria, exemplary contributions to the wiki, or work generally exceeds all requirements of the engagement

Wiki Format

PLACEHOLDER - We will spend 5 minutes going into a wiki case study in Blackboard

Pros and Cons with Wiki Cases

PROS

- Great for group or team-based cases or collaborative interaction
- Ability to grade individual students even in a group-based case
- Entire class can review all of the cases even if they did not participate in a specific case
- Student-directed

CONS

- More complex for student so they require more detailed explanation up front
- Not as useful for larger groups
- Grading individual students takes more time
- Cannot copy the wiki from one semester or course to another

Clinical Vignettes Format

- Requires use of development software and an LMS
- Common software used such as Articulate Storyline, Adobe Captivate, etc
- Branching can be used for alternative responses
- Scores would be based on pre-determined responses



Clinical Vignettes Format

PLACEHOLDER - We will spend 5 minutes going into a clinical vignette case study

Pros and Cons with Vignette Cases

PROS

- Can be used repeatedly to practice commonly taught algorithms
- Scores are a reflective of the individual's, not group's knowledge
- Easily recycled from semester to semester or between courses
- May be set to automatic grading and entry into the LMS grade book

CONS

- Software can be expensive and may require a substantial learning curve
- Requires significant development for each module
- Student must receive sufficient training on content prior to using the module
- Does not reflect the ambiguity of authentic clinical cases

Social Sense-making Format

- Cognitive gap = a large volume of information causes cognitive overload and anxiety
- Sense-making = need to make sense of observed info or data
- Human collective intelligence is used
- Technology provides shared access to data
- Shared goal – to analyze info for patterns or anomalies



Social Sense-making Format



- HyLighter uses....
- Machine-assisted social sense-making



For a complete set of notes after the presentation, please contact:

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