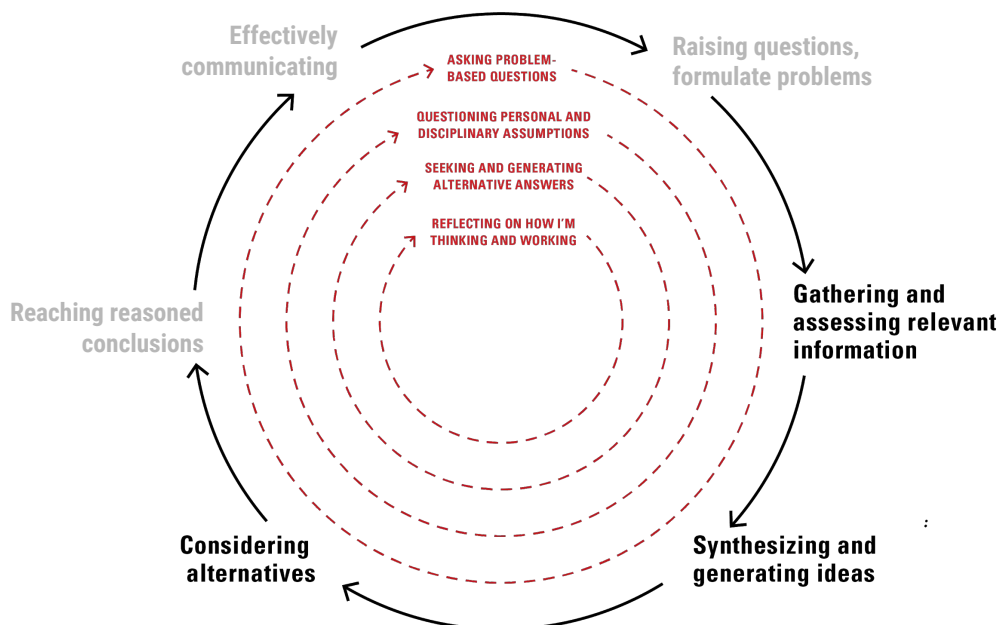


Case Studies



Skills Practiced



What is a Case Study?

1. Introduce the situation or problem.
2. Give background information - describe previous research or give students reading beforehand. Supporting data can range from data tables to links to URLs, quoted statements or testimony, supporting documents, images, video, or audio.
3. Evaluate, ask questions, come up with potential solutions.
4. Report out, summarize, make recommendations, reflect.

Case Study Example

PART I

Ignaz Semmelweis, a young Hungarian doctor working in the obstetrical ward of Vienna General Hospital in the late 1840s, was dismayed at the high death rate among his patients. He had noticed that nearly 20% of the women under his and his colleagues' care in Division I of the ward (the division attended by physicians and male medical students) died shortly after childbirth. Semmelweis noted that this death rate was four to five times greater than that in Division II of the ward (the division attended by female midwifery students).

Case Study Example

PART II

One day, Semmelweis and some of his colleagues were in the autopsy room performing autopsies as they often did between deliveries. One of Semmelweis' colleagues, Jakob Kolletschka, accidentally punctured his finger with the scalpel during an autopsy. Days later, Kolletschka became quite sick, showing symptoms not unlike those of "childbed fever." His friend's subsequent death strengthened Semmelweis' resolve to understand and prevent childbed fever.

Case Study Example

PART III

In an effort to curtail the deaths in his ward due to childbed fever, Semmelweis instituted a strict hand washing policy amongst his male medical students and physician colleagues in Division I of the ward. Everyone was required to wash their hands with chlorinated lime water prior to attending patients. In 1848 (the first full year of hand washing in Division I), 45 of 3556 patients died in Division I and 43 of 3219 patients died in Division II.

Case Study Example

PART IV

Despite the dramatic reduction in the mortality rate in Semmelweis' ward, much of the greater medical community greeted his findings with hostility or dismissal. And despite evidence that hand washing (to remove “cadaverous particles”) could save lives, doctors were reluctant to comply, as expressed by Dr. Charles Meigs, a leading obstetrician and teacher: “Doctors are gentlemen, and gentlemen’s hands are clean.” In 1861, Semmelweis finally published his principal work on the subject of puerperal sepsis, which received a mixed response.

In 1879, Pasteur identified the *Streptococcus* responsible for puerperal sepsis.

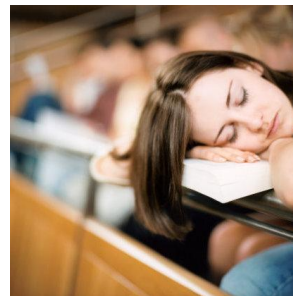
Why Use Case Studies?

To teach problem-solving skills

To foster learning communities

To engage students in genuine exploration of content

Or to keep them awake



How Can You Use Case Studies? Small-Enrollment Classes

- Have students work on and present their case studies to the class.
- Allow students to develop their own case studies based on current events, scientific data, or literary discoveries.
- Consider having students write a case study as an honors project – it builds up your bank of case studies.

How Can You Use Case Studies? Large-Enrollment Classes

- ALWAYS make time in class to introduce the study and allow for questions and discussion.
- Embed them into powerpoints and do them as clicker activities.
- Put information on projector in small digestible pieces and encourage discussion before giving them the next piece.
- Assign groups and have students do them as a take home assignment.

Brainstorm for Your Discipline

- What would make a good case study topic?
- How could you fit it into your class? In-class or out-of-class?
- How would you assess it?

Giving Up Content in a Content-Intensive Course

- Re-write your learning outcomes to address problem-solving skills.
- Students already know how to memorize - most employers value problem-solving over memorizing.
- Remind yourself that it's more important for students to have a big picture than memorize minutiae that they will forget as soon as the test is over.

Pitfalls of Using Case Studies

- Not a substitute for presenting large amount of information/content
- A noisy, often chaotic classroom - bring them together to check in and keep them on task
- Can be labor-intensive on the front end to develop relevant case studies – check case study resources online to see if something can be used or modified.
- Sometimes, a case study doesn't have a clear solution. It's an important skill to learn how to cope with ambiguities so prepare them for that possibility
- Lack of adequate feedback – if there is no time to go over it in detail, post feedback or provide a forum on Moodle

Concluding a Case Study: Assessment from Student Perspective

Grading (especially in large-enrollment classes) can be daunting.

- Consider having students complete and turn in assignments as a group.
- It does not have to be a large percentage of their grade – sometimes just check to make sure they've completed it. Give feedback as general discussion or via Moodle.

Concluding a Case Study: Assessment of Activity

- Anecdotally, case studies are well-received by students and they think they remember concepts presented this way.
- But how can you assess that? Build in test questions or assignments specific to skills addressed in case studies.
- How do their skills compare to students that did not participate in the case study?

This takes FORETHOUGHT!

Acknowledgements/Resources

- National Center for Case Study Teaching in Science
<http://sciencecases.lib.buffalo.edu/cs/>
- Agriculture and Industry
www.agofthemiddle.org
- Using Case Studies to Teach
<http://www.bu.edu/ctl/teaching-resources/using-case-studies-to-teach/>
- Childbed Fever Case Study
http://sciencecases.lib.buffalo.edu/cs/collection/detail.asp?case_id=429&id=429