

Reflections from Piloting the Molecular Case Study

Please complete the following to provide the authors some feedback about the molecular case study that you piloted. This feedback is meant to help the authors improve the case study for submission to Molecular CaseNet. Please make sure that your comments are authentic and wherever possible, your critique(s) is/are accompanied by constructive suggestions for improving the case study. Thank you in advance for your time.

Section 1. Piloting Context:

1. Rate your own experience and comfort level with using molecular visualization software (e.g., Mol* from the RCSB PDB, iCn3D, PyMOL, and ChimeraX).
1 – Never use
2 – I use them for demonstration purposes only
3 – Students use them infrequently (e.g. - 1-2 times per semester)
4 – Students use them somewhat frequently (e.g. - 1-2 per month)
5 – Students use them frequently (e.g. - weekly)
2. Rate your comfort level teaching molecular modeling and visualization software.
1 – Never use
2 – I use them for demonstration purposes only
3 – Students use them infrequently (e.g. - 1-2 times per semester)
4 – Students use them somewhat frequently (e.g. - 1-2 per month)
5 – Students use them frequently (e.g. - weekly)
3. Rate the extent to which you incorporate data from the Protein Data Bank (PDB), molecular visualization software, and/or other bioinformatics databases and tools in the classes you teach.
1 – Never use
2 – I use them for demonstration purposes only
3 – Students use them infrequently (e.g. - 1-2 times per semester)
4 – Students use them somewhat frequently (e.g. - 1-2 per month)
5 – Students use them frequently (e.g. - weekly)
4. Do you have any additional comments to provide context to the delivery of this pilot case study? (e.g. it did not count toward their grade, it was delivered remotely, first introduction to molecular exploration, formative assessment after instruction)

Section 2: Implementation Context

1. Please enter your email address
2. Title of the MCS you piloted:

3. Course name, number, and level (introductory vs. upper division) in which the MCS was piloted
4. Department where the course is taught:
5. Was this case study piloted as part of a laboratory experience? Yes/No
6. Majority participating student identity (select one):
 - a. High School
 - b. Undergraduates (not majoring in STEM)
 - c. Undergraduates (majoring in STEM)
 - d. Graduate (specializing in non-STEM field)
 - e. Graduate (specializing in STEM field)
 - f. Faculty (non-STEM)
 - g. Faculty (STEM)
7. Course enrollment:
 - a. 12 or fewer
 - b. 13-20
 - c. 21-35
 - d. 36-50,
 - e. 51-100
 - f. >100
8. Students completed the case study...
 - a. Independently
 - b. In pairs
 - c. In groups of 3-4
 - d. In groups of 5+
 - e. Other
9. How did you and your teaching assistants (if any) supervise the completion of the case study?
 - a. Supervised during class
 - b. part HW/part supervised
 - c. HW only
 - d. in class exam
 - e. other

Section 3: Logistics

1. How much of the case study did you implement?
 - a. All
 - b. Most (>75%)
 - c. Half
 - d. Some (25-50%)
2. How did the recommended instructor preparation prepare you to deliver the MCS?
 - a. I felt over prepared.
 - b. I felt sufficiently prepared.
 - c. The recommended instructor preparation was insufficient (explain below).
 - d. I did not prepare as recommended (add comments below).
3. How did the recommended student preparation prepare them to complete the MCS?
 - a. I felt my students were overprepared.

- b. I felt my students were sufficiently prepared.
 - c. The recommended instructor preparation was insufficient (explain below).
 - d. My students did not prepare as recommended (add comments below).
4. How did the actual time it took to implement the MCS compare to what the author suggested?
- a. Less
 - b. Roughly the same
 - c. More

Section 4: Content

5. Were the instructions provided in the case study clear enough for students to complete the assignment....
- a. With total independence
 - b. With a small amount of TA or instructor intervention
 - c. With extensive help from the TA or instructor

If extensive help was needed, explain:

6. Did your students achieve the stated learning objectives?
- a. Yes—all objectives provided
 - b. Yes—students achieved all the objectives I attempted to deliver.
 - c. Some—students achieved some of the objectives I attempted to deliver.
 - d. Few - only a few objectives were achieved.
 - e. No objectives were achieved.

For answers other than a, please explain:

7. Were there points in the implementation where most students got stuck and required additional assistance from the TA or instructor? If so, where? What do you think could help remedy this bottleneck?

Section 5: Recommendations

- 8. Would you use this MCS in a future course? Explain.
- 9. If the author was to revise this case, list your top three recommendations for the improvement of the MCS based on your experience.

Online survey to provide feedback:

https://rutgers.ca1.qualtrics.com/jfe/form/SV_aVsm5Ok28GhIG0u

Once you have completed the survey, please inform Shuchi Dutta (sdutta@rcsb.rutgers.edu) about this with an email. Thanks.