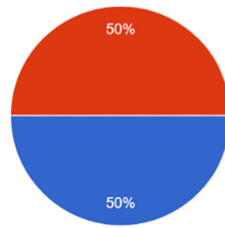


FIGURE 4

Student feedback on flipped classroom and blended learning.

Have you taken an online course or part of one before?

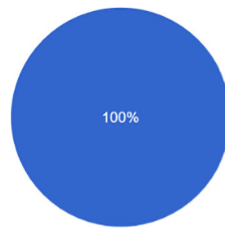
6 responses



- No
- I have taken a free course on edX
- I have taken a free course on another platform (e.g. Coursera, Udemy, Versal, etc.)
- I have taken a paid online course for credit (e.g., course credit)
- Other (please specify)

How do you watch the MITx Videos?

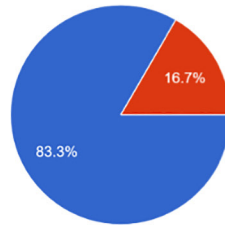
6 responses



- I stream them on my own on my computer
- I stream them on my own on my phone/tablet
- I stream them with my colleagues on campus
- I stream them with my colleagues off campus
- I download the videos and watch them...
- I do not watch the videos

How frequently did you watch the assigned MITx Videos?

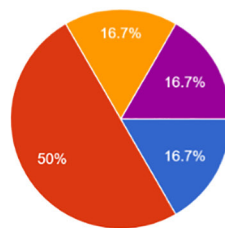
6 responses



- I watched all of the assigned MITx material
- I regularly watched the assigned MITx material
- I occasionally watched the assigned MITx material
- I rarely watched the assigned MITx material
- I never watched the assigned MITx material

Which of the following would you consider to have been a challenge this semester in this MITx-enriched course?

6 responses

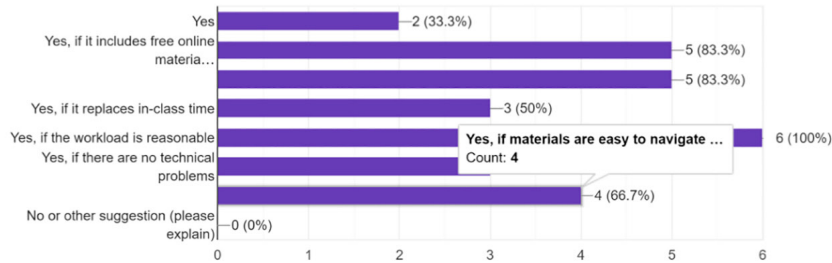


- High workload
- New teaching approach
- Difficulty of online materials
- Technical difficulties using online materials
- Other (please specify)

FIGURE 5**Student feedback on the advantages of flipped classroom and digital learning.**

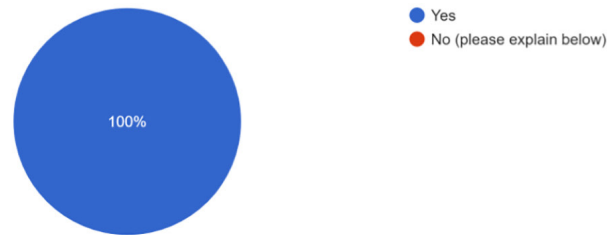
Given your experience this semester, would you be interested in taking more courses that include an online component? (check all that apply)

6 responses



Would you recommend an online-enriched course like this to other students?

6 responses



What was the best thing about using the online materials in this course?

6 responses

1. The professor's explanation. The visuals aids. The different assays.
2. The quizzes helped further in my understanding and having the professor in class explain any misunderstood concept was beneficial
3. Being able to study/learn/review the materials at my own pace
4. The availability of the content at anytime
5. Being able to go back and reference something.
6. I could always repeat the videos or go back to it to confirm my understanding.

Did you find the online materials interesting and engaging? Please provide feedback

6 responses

1. Yes, the content was different that what we usually take in normal classes. The fact that we took different assays and experiments, instead of theoretical information was really good.
2. Yes, the option of being able to go back over a concept is useful
3. Yes, specifically the assays. It was really interesting to learn about several assays and how they work. Also, the online quizzes were very interesting and creative, as I believe they tested our comprehension of the content and not our ability to memorize the content.
4. Yes, especially the part that Professor Bill taught. I didn't like the two lectures taught by Tania Baker.
5. They were, the professor who did the videos was fun and did an excellent job and simplifying the harder explanations.
6. Yes, the professors explaining in the videos were very engaging and made the material seem easy and simple.

FIGURE 6

Student feedback for future courses adopting flipped classroom and digital learning.

Did having access to the online materials help you fill in "gaps" from previous courses or help you in other courses in your major? Please explain

6 responses

1. Yes. It complemented the genetics course really well.
2. Yes as some concepts were mentioned in other courses like "Genetics" and
3. Yes
4. Absolutely. The course was focused on the logical design of assays. There were too many assays, but they all made sense. The best thing about the course is this logic element and the thinking style we gained throughout the process of discussing the design, advantages and disadvantages of the different assays.
5. It allowed for connections to be made from other biology courses. As they are all inter connected to some extent. so by understanding a portion of this course, it has allowed to connect/relate that specific topic to other topics relevant. So for example there was some overlap when taking this course and Developmental biology.
6. To an extent, I don't really remember if it did.

Would you like to see other courses in your major adopt a similar format?

5 responses

1. Other molecular based courses yes, however I think that this method would not work in other major courses that rely more on practical work rather than mechanisms, etc.
2. Yes, however my only concern would be the high workload that would result because of taking several courses that would follow this same format.
3. I would to see all the courses adopting the same format.
4. I think this type of learning would be applicable to the majority of the major courses. With the exception I think to bioinformatics, laboratories (hands on experience is always ideal over videos in this regard.) If balanced correctly, I do believe it would be an effective means of education, whether as the primarily source of information or secondary as a means of solidifying concepts.
5. Yes

What suggestions do you have for improving this type of course in the future?

5 responses

1. the post video exercises were much easier than the midterms and edx exams. I would suggest increasing the level of these exercises or giving the students parts of the exams prior.
2. More in-class activities and take home assignments rather than quizzes as they are already offered online
3. I would recommend more quizzes. Also, I would go for a weekly journal club activity.
4. If there is an ability to go into more depth on the lecture side of things. As the videos do a good job of explaining the basics, but the more in depth information tends to be more challenging yet far more engaging.
5. I think it would be better to get a feedback after the first midterm from the students, and see who is struggling and who is not and adjust to that