SUPPLEMENTAL MATERIALS:

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Appendix 1: Rotating Front Row Guidelines

Rotating Front Row Guidelines

Students are expected engage in their education. One way to engage is to volunteer and answer questions during lecture and discussion. As such, we will use a rotating front row to encourage and reward verbal participation. Below please find guidelines and examples for our rotating front row.

1. Please refer to the rotating front row schedule (on Canvas: under Modules, under the Student Information header).

2. Each student will be a part of the rotating front row for three assigned lecture periods.

3. Students are expected to say their name when participating.

4. Students must contribute at least once to class discussion when scheduled on the rotating front row. Examples of contributions:
   a. Asking a question and explaining your reasoning
      i. E.g.: Can you go over the difference between the nucleus and nucleoid? I know they both contain DNA, and I’m confused how they are different.
   b. Answering a question posed by the instructor, and explaining your reasoning
   c. Answering a question posed by another student, and explaining your reasoning
   d. Volunteering an opinion on course content, and explaining your reasoning
   e. Agreeing or disagreeing with another opinion, and explaining your reasoning

5. Single word answers and answers that do not explain your reasoning will not count as contributions to class discussion. If an insufficient answer is given, the instructor will prompt students for more information. If an insufficient answer is still given, the instructor will ask another student to help in answering the question. The original student will be expected to answer a different question, ask a question, or share an opinion to fulfill their rotating front row contribution.

6. All students are welcome to volunteer, ask questions, answer questions, and share opinions when not scheduled on the rotating front row.

7. The instructor will cold call students scheduled on the rotating front row in the event of no volunteers.
8. Incorrect answers that fully explain the student’s reasoning will count towards fulfilling the rotating front row expectations.

9. Students are not required to physically sit in the front row when part of the rotating front row.
Appendix 2: Sample Rotating Front Row Schedule

Rotating Front Row Schedule

| Student last name begins with: | Week responsible for RFR participation |
|-------------------------------|----------------------------------------|
| A-D                           | Week 3 (and 8)                         |
| E-J                           | Week 4 (and 9)                         |
| K-N                           | Week 5 (and 10)                        |
| O-S                           | Week 6 (and 11)                        |
| T-Z                           | Week 7 (and 12)                        |
| Make up weeks                 | Week 13 and 14                         |

Appendix 3: Survey questions and directions

Final Exam Extra Credit

4 points added to your final exam score

This is an anonymous, voluntary activity. Should you choose not to participate, it will NOT impact your standing.

Your responses may be used for educational purposes (shared with other educators or published in an educational, peer-reviewed journal). Should you not want your responses shared, please only answer questions 3 and 4.

Directions: Answer the following questions. If you do not want your responses shared, only answer questions 3 and 4.

Questions:

1. Consider the rotating front row. Did participation in the rotating front encourage you to participate more during lecture (either in MIP250 or another class)? Why or why not?

2. Consider your turn on the rotating front row. Did you better understand the lecture material covered during your turn on the rotating front row (in comparison to material covered on days when you were NOT part of the rotating front row)? Why or why not?
3. What was your favorite topic? Why was this topic your favorite?

4. What was your least favorite? Why was this topic your least favorite?

Fold this paper in half, and place in the manila envelope. Thank you!
Appendix 4. Instructor Guidelines

Instructors are advised to consider the following when incorporating the rotating front row:

- Give students the RFR schedule by the end of the first week of class.
- Provide frequent verbal and visual reminders of which students are responsible for the RFR (schedule posted on the LMS, written on the white board, projected and verbally cued in the few minutes before class begins, etc.).
- Establish guidelines for respectful discussion and differing opinions.
- Follow a predictable lecture flow such that students know when their responses will be welcome.
  - Pause to solicit questions/opinions.
  - Ask and wait for more than one hand to be raised.
- Acknowledge that public speaking is a difficult skill, but like any skill, can be honed with practice.
  - Give examples of strategies to ease discomfort associated with public speaking (practicing out loud beforehand).
  - Share stories of overcoming fear of speaking.
- Remind students that the RFR is an equitable technique designed to hear and respect all voices and gain more perspectives.
- Establish clear guidelines, such as a rubric, and share with students prior to their turn on the RFR.
- Celebrate incorrect responses by pointing out learning comes from mistakes rather than immediate and perfect mastery of the material.
- Thank participants.
- Update scores/grades regularly.
- Provide opportunities for participation that are not verbal in nature (twitter feed, online forum, etc.).

Appendix 5: Potential modifications

The rotating front row could be scaled to smaller courses by asking students to participate more times, to ask students to respond to a certain number of other student questions/responses, or by expecting longer and more detailed student responses.

The rotating front row could be scaled to very large classes by grouping nearby students and then having one student represent the group’s opinion to the entire class.

The rotating front row could be modified to accommodate students with anxiety surrounding public speaking by using a class twitter feed that students can post to, or by another social media format.

The rotating front row could be modified to an online format by asking students to participate in discussion rooms.

Appendix 6: Potential grading rubric

| Response   | Full Credit | Half credit | No credit |
|------------|-------------|-------------|-----------|
| Response one | Student asks or answers a question thoughtfully, explaining their reasoning. | Student asks or answers a question using very short or difficult to understand terms. | Student response is yes/no without an explanation or student did not participate. |
| Response two | Student asks or answers a question thoughtfully, explaining their reasoning. | Student asks or answers a question using very short or difficult to understand terms. | Student response is yes/no without an explanation or student did not participate. |
Response three

| Description                                                                 | Example                                                                 |
|-----------------------------------------------------------------------------|-------------------------------------------------------------------------|
| Student asks or answers a question thoughtfully, explaining their reasoning. | "Yes, it encouraged me to participate because of the environment it created. I felt that I could speak more freely in the class compared to others." |
| Student asks or answers a question using very short or difficult to understand terms. | "Yes, it did? I felt more comfortable stating my opinion and asking questions without be judged." |
| Student response is yes/no without an explanation or student did not participate. | "Yes, participation in the rotating front row did encourage me to participate more because it helped me engage more and became more interested in what is going on. I like this teaching method a lot because it made me feel comfortable and helped me learn the material better." |

Appendix 7

Survey question 1: Consider the rotating front row. Did participation in the rotating front row encourage you to participate more during lecture (either in LIFE205 or another class)? Why or why not?

LIFE205 Survey response 1: Positive, Authentic Participation

1. Yes, it encouraged me to participate because of the environment it created. I felt that I could speak more freely in the class compared to others.
2. Yes it did? I felt more comfortable stating my opinion and asking questions without be judged.
3. Yes, the rotating front row gave me the mindset that everyone has to participate at least once. Knowing that everyone was talking and putting themselves out there made more comfortable in doing so.
4. Yes, the rotating front row was a confidence booster to participate within the discussion in many courses. Whether a point is valid or not is starts conversation to better grasp certain concepts.
5. Yes, participation in the rotating front row did encourage me to participate more because it helped me engage more and became more interested in what is going on. I like this teaching method a lot because it made me feel comfortable and helped me learn the material better.
6. My participation in the rotating front row did absolutely encourage me to participate during lecture. I had my rotating front row early on and it paved a path of comfort and confidence for speaking to the instructor and in front of the class. Additionally, because everyone was required to speak at least once, I felt less pressure when speaking because everyone did it.
7. Yes, I felt more comfortable speaking up/asking questions. If everyone has to do it, it allows room for questions/clarifications.
8. Yes I think that RFR is very useful in helping kids be heard and come out of their comfort zone. There was a lot of room for comments and questions during lecture.
9. I think that it did help me. I don't usually answer questions in class but after doing the rotating front row I felt more confident to speak up. It also helped hearing other people contribute.
10. I think it did encourage me to participate, but not really much because I am usually not shy to participate. During my rotating front row week, I likely participate once or twice more than I would have had it not been my rotating front row week.
11. I try to sit in front and ask questions. I think it helps me pay attention and I believe it creates an environment for others to ask questions as well.
12. Yes, it got me out of my comfort zone and encouraged me to speak during class and absorb material better.
13. Participating in rotating front row helped me to create expectations from the start to finish of the class to be engaged and participate.
14. It did, it made me stay aware, be prepared, and pay attention in class.
15. I did participate in the rotating front row and it did encourage me to participate more in lecture. I looked over the book more before and payed more attention so I could ask specific questions over the material.
16. Yes, the rotating front row encouraged me to speak up during class sessions. I am generally too embarrassed to speak up in a large class, but this activity made it more comfortable.
17. Yes, I was intimidated at first, but knowing that everyone had to participate made it less intimidating. It made it an all-inclusive environment.
18. Yes, my rotating front row week was early in the semester so it made me more comfortable answering questions & participating the rest of the semester.
19. Yes it did because not only did it ‘force’ me to answer questions, it made me realize I knew a lot more than I thought & wasn't scared to answer/ask questions.

20. Yes, I felt like I was engaged and looking for answers in my notes to be more open and to see if I knew the material.

21. I believe it did. After having done my turn of the rotating front row, I felt more confident and wasn’t as afraid to participate. I felt better as everyone had to do I felt more at ease.

22. I think rotating front row did encourage me to be involved in rotating front row. I did review lectures more carefully before class, and to answer and ask questions. I did participate more in class.

23. Yes, it did, by creating a safe and welcoming environment to answer questions I felt more inclined to participate.

24. It most definitely did. I felt more confidence in participating because I knew so many other people were going to be participating, it wasn’t just me. It also was encouraging because not everyone answered correctly, so it wasn’t scary to be incorrect in front of the class. It made everyone very respectful to each other.

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**LIFE205 Survey response 1: Positive, Authentic to Complicit Participation**

1. It did encourage me to participate in lecture. Without it, I probably would not have spoken up. It was also nice to get points just for talking.

2. The rotating front row succeeded in encouraging participation during the lecture to achieve the points, although it was at times difficult to know who was on the front row. It encouraged different students to pipe up during class.

3. It encouraged me to participate on the week that I was on the rotating front row for sure. I will say on the other weeks I didn't want to share because I didn't want rotating front row people not to have the opportunity.

4. Yes. I believe the rotating front row did encourage me to participate more during the lecture because I became more attentive knowing that I would be able to earn those points. I felt as though I became more prepared with answers as well as encouraged to me to keep thinking after things we had talked about.

5. The front row did encourage me to participate more during lecture because it gave me the extra 'nudge' to speak up when I normally would not. It was also nice to have that extra grade in the gradebook.

6. Yes as it proved an incentive to participate at least once. It also encourages me to pay attention to the questions asked by students.

7. The rotating front row encouraged my participation as I do not normally share my opinions in science classes. It encouraged me as I wanted to receive the points and Dr. Huseby was very receptive when I answered questions and helped me understand why my answer was right or wrong.

8. The rotating front row did encourage me to participate in lecture because it felt like a comfortable environment. Although this was beneficial, it was stressful making sure my name was counted and I earned proper points.

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**LIFE205 Survey response 1: Positive, Complicit Participation**

1. Participation in the rotating front row did encourage me to participate more during lecture because I normally do not like speaking in front of a class because it gives me anxiety, but when you add points to the participation-it forces me to participate because I care about my grades deeply.

2. Yes and no. It made me participate that week I was on the rotating front row but otherwise I didn't speak because I don't like to talk in front of the whole class.

3. Only for the credit that was the encouragement of doing the rotating front row.

4. Yes-but only to achieve the points because they were easy points.

5. Yes, it kept me more focused knowing I had to contribute something to class for credit.
6. Yes, it encouraged me more to volunteer because there was an incentive for achieving points and a good grade overall.

7. No, I just did it for the points, otherwise I just listened.

8. The rotating front row encouraged me to participate in lecture almost only when I was on it for the week. Even though I often knew the answer to the question, I would not raise my hand for fear of being wrong.

9. Yes, because I wanted to make sure I got full credit for participation during those class periods.

10. Yes, getting points for participating is definitely incentive. The class is so discussion based already that it didn't seem like anything that required extra work or effort.

11. I can't say it personally motivated me more but I did observe some students only speak to get points for the rotating front row, so it was effective.

12. Generally I learn best by observing and listening. So the rotating front row did force me to participate on my chosen week. Because of my learning style I do not feel it was super beneficial for me to participate but I did like and benefit from my classmate’s participation.

13. It did engage me more, this is due to points being involved.

14. Participation points for the rotating front row did encourage me to participate because I did not want to lose points for the class.

15. Yes, it is. It encourages me to prepare more before the classes so that I can answer the questions.

LIFE205 Survey response 1: Negative, did not increase participation.

**Regular Participation: 6**

1. Personally, I feel as though I already participate in lecture by asking questions so it did not help me personally, however I could see how it would encourage participation in those that don't. However, despite it being in place, I felt as though many did not utilize it because they don't care and don't like being forced to share/ask questions.

2. I'm a pretty participating person as it is, so I don't think it encouraged me to participate more, just to participate period.

3. I thought that the rotating front row would make me want to participate more but it ended up being an activity that me just raise my hand at the first thing I could answer. I wonder if there is a way to make this more involved because I really do think it’s a great idea! I think knowing I only had to speak once made me not as involved, but I do try to talk in class anyway.

4. Not really. I always ask questions in class when I have questions. I did like hearing other people's questions, though.

5. No it did not because I participate a lot anyways despite the rotating front row.

6. No, because I use lecture time to have questions I need answered anyways.

**Inhibited Participation: 4**

1. It didn't really encourage me because it made me more anxious to speak within a crowd.

2. I didn't participate because I was too nervous to answer in class. I don't feel confident in this class and couldn't bring myself to answer something incorrectly.

3. No. I really don't like speaking in public so it just added anxiety the week I was on the rotating front row. That was the only time I spoke in class during the semester.

4. I felt that there was more pressure which caused me to be more nervous than usual. It just caused a lot of anxiety.

5. No, I don't enjoy speaking in class, but it didn't hurt my grade too much. I wish there was another way to get involved to get participation points.

**Unhelpful for participation: 3**

1. Not overall, just when it was my week did I participate.

2. Not really, I'm super shy & only participate if I have to.
3. No, I did not because either I never knew what to comment or I didn't know the answer to the questions being asked.

Survey Question 2: Consider your turn on the rotating front row. Did you better understand the lecture material covered during your turn on the rotating front row (in comparison to material covered on days when you were NOT part of the rotating front row?) Why or why not?

LIFE205 Survey response 2: Positive, Authentic Understanding

|   |   |
|---|---|
| 1. | I enjoyed asking questions after being in the rotating front row. Before that week I didn't feel comfortable talking in front of everyone. I did seem to have more engagement and understand the material. |
| 2. | Yes, in an attempt to participate and answer questions correctly, I listened intently when I was on the rotating front row and lectures slightly prior. The intense attention helped me understand the lecture more than days that I was not in the rotating front row because I was not listening as carefully to ensure I accurately understood the information. |
| 3. | Yes I did. It made me review my notes before coming to class and helped me get out of my comfort zone to talk. |
| 4. | I did better understand the material going into the lecture so that I could answer the questions. Because I prepared adequately, it allowed me to be primed to hear the information in class and participate/understand. |
| 5. | Yes, I do because I needed to verbally explain things and was able to clarify things may have not fully understood. |
| 6. | I did better understand the lecture material on rotating front row days because I wanted to have good input so I paid attention more. |
| 7. | I may have understood the material a little better. I tried to understand the material every week during class, so I don't know if it had a great effect, but I did try especially hard to understand the material during that week, especially as it was the end of the semester and I was starting to fall behind a bit. |
| 8. | Yes, I was aware when I was part of the front row. I was less likely to pay attention or volunteer when I wasn't on it. |
| 9. | Yes, speaking in class helped me better understand the material and pay more attention in lecture. |
| 10. | Although I tried to participate in class discussion throughout the entirety of class, I paid extra attention to my week of rotating front row. |
| 11. | Yes, my turn was at the very beginning of the semester so I understood the information well. In comparison to later in the semester, when I was not as familiar and my participation was more questions rather than answers. |
| 12. | Yes. Because I was nervous about if I came prepared and studied the material before class. |
| 13. | Yes, it helped me understand the lecture material before and after class. I was able to come prepared and practice the material afterward. |
| 14. | I did understand the lecture material more because I asked questions that helped me get a better grasp on the material. |
| 15. | Yes because I actually answered a question partially wrong and because of the discussion that took place I better understood the material. |
| 16. | I was in the front row on the first week, and this set me up for success during the whole semester. |
| 17. | I did prepare more for class during my front row week. |
| 18. | I noticed I paid more attention more but I chose not to participate. |
| 19. | Slightly. I made more of an effort that week to understand the material, but it made me realize I knew more than I realized. |
|   |   |
|---|---|
| 20. | Yes because I came to class the week of and before my turn on RFR and really went over my notes & focused better so I could know what to answer. |
| 21. | Yes, because I used time before lecture to make sure I understood the material. This led me to better conceptualize the response to my question. |
| 22. | Yes I did better understand the material since I researched the material before class. |
| 23. | I felt as if I did because I was engaged in my notes looking for answers and the answer almost stuck with me because I felt I understood it. |
| 24. | Yes, I did have better understanding on material during participation. Like active learning, by participating somehow my brain remembers lot after! |
| 25. | I tried to participate every day just for my benefit. But when it was my turn for rotating front row I did make sure I reviewed last class notes to feel more prepared which allowed me to see the material one extra time. |
| 26. | Participating in the rotating front row did help with my understanding of the lecture material. For me I would look at my notes prior to speaking/sharing which reinforced the information even more. |

**LIFE205 Survey response 2: Positive, Complicit Understanding**

|   |   |
|---|---|
| 1. | Yes, because I wanted to be sure I was knowledgeable enough to and the questions asked in class or contribute to class discussion with accurate information. |
| 2. | I did have a better understanding because I prepared more ahead of time so that I would have an idea on what to answer to gain participation points. |
| 3. | I already had a pretty good grasp on the material otherwise I wouldn't have attempted to answer, honestly. Ha. |
| 4. | Yes as I had to think of a question to ask about the material or to understand the material enough to answer a questions. |
| 5. | Yes, I wanted to answer a question correctly and not embarrass myself. |
| 6. | Because I was forced to participate, I did notice myself listening more. I had to listen to get the points so yes it did help. |
| 7. | Yes because I reviewed before coming to class. |
| 8. | I feel like I covered the same amount of material. I tried to cover a bit more before my turn as I wanted to be able to participate for points. |
| 9. | No, my understanding was the same but this is because I tried to participate in lecture even in the weeks that it was not my rotating front row. |
| 10. | Yes, I did. To answer the question correctly, I need to study more in it before class. |

**LIFE205 Survey response 2: Negative Response**

|   |   |
|---|---|
| Always Understood: 9 |   |
| 1. | I did not understand the material covered during class (during my turn on the rotating front row) anymore/less than I would on a normal class period. Reason being, I focus in class regardless if there is participation involved. |
| 2. | I would say no just because I was always in class, taking notes and paying attention anyway but I can see how the rotating front row would make people pay attention and learn better. |
| 3. | I would not know, I talked when it wasn't my turn. It helps when asking in class. |
| 4. | No because I was never afraid to ask questions. But I enjoyed other people's commentary. |
| 5. | I didn't do any extra preparation for the rotating front row so I feel like I understood it pretty evenly. |
|   |   |
|---|---|
| 6. | I don't think so. I always tried to participate actually. However, my understanding of the material was really impacted by my attendance. Missing even on day made my understanding go down. |
| 7. | I don't think it had that much of an impact because I still paid attention no matter what. |
| 8. | Not really, I regularly asked questions anyways, but it was nice to get 10 points for it |
| 9. | No, because I always speak up in class |

**No difference: 11**

|   |   |
|---|---|
| 1. | Personally, I did not notice a difference, but that has to do with study habits and work ethic. |
| 2. | No, I utilized notes the same way I did in weeks I was not on the front row to understand the material. |
| 3. | No, it spiked my anxiety when I had to go which was not helpful throughout the day. |
| 4. | I didn't notice much of a difference when comparing participation to how much information was retained. |
| 5. | No I did not. I did not prepare any differently for class than I normally do. Perhaps if the rotating front row had to help us fill out worksheets or lead something for the class this would have been different. |
| 6. | I understood it just as much. (very little) I was pretty lost the whole semester as it's demonstrated in my grade. |
| 7. | No I felt like I had to ask or answer things, rather when I did ask question. Any time there were questions I did get help. |
| 8. | Not necessarily because I understood most of the material regardless of the rotating front row. |
| 9. | I did not find a difference between my understanding of information when I was on the rotating front row or was not. My understanding greatly resulted from interest in the subject and group conversation. |
| 10. | did not feel like I understood the material any better or worse on front row days than normal days. |
| 11. | No, I felt it was all the same. |

**No benefit: 5**

|   |   |
|---|---|
| 1. | I do not think it really helped understand better. My week was at the beginning of the semester so most of the material was already review. |
| 2. | I did not pay extra attention to the lecture material during my time on the rfr. In fact, I was somewhat distracted attempting to think of questions or other ways to participate when I usually take notes. My style is to quietly engage in the lecture so needing to speak up was distracting. |
| 3. | No really, most questions were over review material that we already went over or slides had plenty of information to supplement an answer with. |
| 4. | No-because my rotating front row week was during the first week and I had forgotten what I participated in. |
| 5. | I tried to come to class with the notes well read over, yet still could not answer publicly. |
Appendix 8 MIP250 Student responses

Survey question 1: Consider the rotating front row. Did participation in the rotating front row encourage you to participate more during lecture (either in MIP250 or another class)? Why or why not?

MIP250 Survey response 1: Positive: Authentic Participation.

| Number | Response |
|--------|----------|
| 1      | Yes, it did. Rotating front row helped to engage more in the class and understand the concepts in detail. |
| 2      | Yes, however I did not get to speak during my week and lost points because of it. I like participating anytime and it's hard when I don't get called on. Helped me clarify concepts. |
| 3      | Yes, it encouraged me to participate. However, I participated more before my turn so I am not sure how much it encouraged me. |
| 4      | Yes, because it always kept my mind going during lecture. I would always act if I always needed to ask a question after each slide. |
| 5      | Yes, it encourages those who are shy that it is not scary/singular to speak up |
| 6      | Yes, it actually made me raise my hand more after. |
| 7      | I think it encourage people to participate because it caused more people to speak up. When more people speak up, even more will participate as well. (Kinda (sic) like a positive feedback loop). |
| 8      | It encouraged me to ask question pertaining to the lecture. |
| 9      | I think that the rotating front row worked well to encourage initial and continuous participate in class by giving everyone a chance to have their voice heard and to feel involved in the greater discussion. |
| 10     | I found it an interesting way to stay engaged that I had not seen before. |
| 11     | Yes because if I ask questions that I think about during lecture, I can apply the material more. |
| 12     | I did, but I feel like it should be an extra credit opportunity to not harm those with anxiety but instead encourage students in a more positive way. |
| 13     | Yes! It also helped remind me to study the information before each class! I really liked this opportunity because it also made sure the same persons was not answering each time. |
| 14     | I believe that this did encourage participation and learning as it pressures discussion and got students out of their comfort zone. |
| 15     | It did encourage by urging me to think about the material while it was being covered to see what questions I had. |
| 16     | Yes, I feel like rotating front row now encourage me to participate more. I feel as though it gave me a reason to step out of my comfort zone and speak up. |
| 17     | Theoretically it should, but as a participation heavy learner, I participated regardless. This made sure everyone was contributing, and I had a lot of questions related to others questions. |
| 18     | Yes, it encouraged me to speak mores so that when I had to speak it wasn't so nerve-wracking. |
| 19     | Yes, I felt that my attention was better. I knew the lecture better. |
| 20     | Personally, I already enjoy participating in class so that wasn't an issue for me but I believe it opens the classroom up to new or quiet voices. |
| 21     | Yes, but I would have participated anyway without it. But it was good to have a variety of voices combining. |
| 22     | While it probably should have allowed me to feel better about speaking in class and actually doing it wasn't all that nerve wracking. I didn't like the rotating front row. Mostly because I don't like speaking in front of the classes, I do understand the purpose of the activity though and think its a good idea. |
| 23     | Yes, I do. Although I missed it but I think this rotating front row is unique and useful for study. Students will have more chances to ask and answer questions. |
| 24     | Yes, it forced me to participate in lecture, which is quite beneficial since I tend to be introverted! |
| 25     | Yes-I only had experienced this in MIP250, and I like it because you could give any input, questions, answers, asking for clarification. This allowed for many different responses. |
| 26     | Yes because it made me think more about the material and helps me better understand what I do know where there are gaps of knowledge that need to be filled. |
| 27     | Yes, it encouraged me to participate more. It made the classroom feel like a safe environment because everyone had to contribute. |
| 28     | I think it did, but I was in the first week so I'm not sure it affected people in the last weeks. |
## MIP250 Survey response 1: Positive: Authentic to Complicit Participation

|   |   |
|---|---|
| 1. | Yes because it would affect my grade if I didn't. It made me more comfortable to talk in front of the class. |
| 2. | It encouraged me a little to participate. However I was more scared to answer wrong than anything. I was never someone to answer questions in the first place. |
| 3. | Yes, I felt like I should answer a few questions to be safe. Afterwards it was easier to answer question the rest of the semester. |
| 4. | It did encourage me to participate. When I don't understand what is going on, I don't participate. This forced me to, though. |
| 5. | Yes. I wouldn't usually answer a lot of questions but this forced it. |
| 6. | It did in a way because since participation was expected I was less intimidated to speak in front of the class. |
| 7. | The rotating front row actually encouraged me to participate during lecture because even through it was a part of my grade it was more lenient than cold calling. |
| 8. | Yes it did. I felt that everyone should participate. I was also motivated by the points it gave me. |
| 9. | Yes, expectations were clear and alleviated semester long anxiety about being cold called. |
| 10. | Yes, because were going to be graded on it, I wanted to try participating more outside of my rotating front row days to practice for when I am graded. |

## MIP250 Survey response 1: Positive: Complicit Participation

|   |   |
|---|---|
| 1. | Yes it did because it made me listen to the lectures and pay attention if I wanted to get credit. |
| 2. | Yes. Being graded on the front row day made me participate. |
| 3. | Yes, because I was held accountable to talk for points. |
| 4. | It did, the incentive of points worked well. |
| 5. | Not so much as participate but motivate me to focus so my questions were of a good quality. |
| 6. | I generally like to participate in class discussion /lecture but the rotating front row allowed me to be recognized for doing so. |
| 7. | Yes, I felt obligated to pay attention because I didn't want to embarrass myself in front of my peers when it was my turn to participate. |
| 8. | Yes, this encouraged me to share my opinion because it reinforced participation with points. |
| 9. | Yes and no, it just ended up making me nervous and felt like there was increased pressure to answer a question asked in class. |
| 10. | I normally am OK participating during lecture, so all rotating front row did was ensure I spoke that particular week. In fact, after that week I felt less included to contribute, as I knew I had already gotten my points. |
| 11. | Yes, having my name up meant I had to say something. |
| 12. | It did make me want to participate in class discussion because of the 10 points behind it. |
| 13. | It encouraged me to participate when I was in the rotating front row however more than that I did not participate verbally in lecture. |
| 14. | I did not find that participating in the rotating front row encouraged me to participate. As someone with social anxiety it made me uncomfortable but the number points associated with it made it worth it. |
| 15. | Yes, because when there is an opportunity to gain points towards my grade I am more inclined to do something. |
| 16. | Yes, having the point value associated with participation incentivized me to participate. |

## MIP250 Survey response 1: Negative

### Regular Participation: 6
1. Rotating front row did not encourage me to participate more than a normal lecture day. My participation was the same. Rotating front row made participation more nerve wracking as I didn't know if I contributed enough information.

2. No because I was always active in participation.

3. I participated during lectures but was not here on my week so I did not do rotating front row but it did not affect my participation.

4. Not really, because I normally participate if I have questions or answers. I mostly just stressed me out on my week.

5. No, I normally already participate, and I felt making so many people do it interrupted time we could be learning new material.

6. For me, it didn't really change my motivation to participate during lecture because I usually do participate a lot during class.

Inhibited Participation: 4

1. No, I've never been one to participate vocally in lecture. I actually hate it and was dreading when I would have to raise my hand and talk in front of the class.

2. It did not for me just because I don't like talking out loud in general.

3. Participation in the rotating front row did not encourage participation beyond the required day. Mostly because of all the restraints that normally prevents such participation are still there.

4. I would say no, just because I am a very shy person. I would rather ask questions after class or at office hours.

Unhelpful for Participation: 7

1. I found it to be more of an annoyance than anything else.

2. Negative. I can't relate to the need for class participation. In my opinion attending class for an hour is like going to a show. You can say what you want after the performance. If specifics on a topic is needed or more detail is needed then please have that discussion. Otherwise, on with the show.

3. It did not, I was only encouraged to participate in the rotating front row to get the 10 points.

4. No, because it was only 1 week. Maybe if it was more often it would have.

5. I personally do not think so, since my name begins with a 'w', I was in the last section of the rotating front row and found it pointless.

6. No, I would rather have participated organically.

7. No, because I felt the need to only speak when it was my turn.

Survey question 2: Consider your turn on the rotating front row. Did you better understand the lecture material covered during your turn on the rotating front row (in comparison to material covered on days when you were NOT part of the rotating front row?) Why or why not?

MIP250 Survey response 2: Positive: Authentic Understanding

1. Yes, I definitely believe that because it helped me forcefully engage in the class and hence better understanding when I was in the front row.

2. Yes because I knew I had to engage with the classmates and instructor to pitch my answer/question.

3. I think it would have been more helpful if it was open for the whole semester so I'm encouraged to always ask question. Open discussion really helps!

4. Yes, because it increased interactions between students and ULAS/professor and enriched the academic environment.

5. Yes, as I was actively trying to think of deeper levels questions on the topic.

6. Yes. It encouraged me to think better about the material.

7. It allowed me to understand better because I was able to answer questions and receive feedback from my classmates.
|   |   |
|---|---|
| 8. | I do think that the rotating front row helped me understand concepts because by asking the question, I received instructor and peer feedback, offering me a more diverse perspective. |
| 9. | Yes, I usually volunteered for the activities before class where we reviewed last lecture. This helped. |
| 10. | Yes but that was due to the material being more review than new. |
| 11. | I guess it decreased my understanding when I wasn't participating. It reduced because there wasn't a intentional level of focus. |
| 12. | Yes! Like I said early it helped me because I made sure I reviewed the topics covered in the class so I could answer a question each day. |
| 13. | Yes because it get you to think about the subject more. |
| 14. | There more I engaged in the class the better I understood the material. Additionally, it also pushed me to communicate on days where I was not in the front row. |
| 15. | Yes I understood material better on my rotating front row. |
| 16. | I did understand it better as I had to more deeply analyze the material the day it was my rotating front row. |
| 17. | I did feel like I understood the information during my 'front row' week, however it still would be beneficial to participate during weeks where things make less sense. Perhaps a rotating front row or a review day where questions are asked and you can get points this way also. |
| 18. | I did have more familiarity with the material during my front row week turn but this is because I had some existing understanding of that material in particular. |
| 19. | Yeah! I learned more before I need to be rotating front row but I miss it! I learned for next class and try to understand the powerpoint earlier than the class but I make a mistake and the next day is not my rotating front row. But I do think it is very useful. |
| 20. | Yes-because my inquiries/comments allowed for new topics to be discussed that would advance my knowledge. |
| 21. | Yes-I had actually asked for clarification (I think on protein structure). I'm a lot more comfortable drawing protein structure now than at the beginning of the semester. |
| 22. | Yes because I tried to remember things better so when I had the chance I could answer a question or I was more likely to ask a questions. |
| 23. | Yes, because it forced you to contribute and get more clarification. |
| 24. | Yes because I was actively thinking about questions to ask on the material. |
| 25. | Absolutely, because I wanted to be able to better contribute with my questions. |

**MIP250 Survey response 2: Positive: Complicit Understanding**

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|---|---|
| 1. | Not really. It was the same. But it forced me to participate and actively learn. |
| 2. | Yes, I engaged more with the material in order to make an intelligent and informed comment. |
| 3. | To a degree, I think I paid closer attention for the purpose of formulating a response. |
| 4. | Yes! I was required to pay extra attention on those days to make sure I could actively participate in discussion. |
| 5. | Somewhat, I paid attention more so that impacted my understanding but I still had question and misunderstandings either way. |
| 6. | I would say so, as I had to make sure my answer was right before participating in front of the class. |
| 7. | Yes, I wanted to know what I was talking about when I was participating in the rotating front row. I prepared better. |
| 8. | No, I followed the material covered in class no matter what was going on, It did make me feel pressured to better understand the material, though. |
| 9. | Yes, because I was forced to know it to answer questions. |
| 10. | No, the question I answered didn't really pertain to material in class…I think begin well prepared for my front row turn was important but scary. |
| 11. | I did not. I made sure I answered a question that I already knew that answer to, but all of the reviews at the beginning of class were very helpful. |
| 12. | I did, I felt I had to know what I as talking about to tell the entire class. |
| 13. | No, I was really nervous the whole time and only focused on what question I would ask. |
| 14. | No, I did the same studying but I paid more attention during my week. |
### Always Understood: 9

1. No. The type of questions I asked was affected by my understanding of the subject.
2. I don't think so. Whether or not I was participating or not didn't have much of an effect on my learning. I would usually just write down what was said no matter what.
3. No. I felt like I understood the material about the same.
4. Whether it was my turn or not did not impact my comprehension. Either I understood it or I didn't, regardless of rotating front row.
5. No, because I always tried to participate, which required keeping up with the material.
6. I did not understand the material more per se, but I was more involved in discussion about said material.
7. No, I always somewhat try to know the material and I knew the material just as well.
8. I did not. I understood the same amount either way.
9. I feel as though it was equal. I kept myself engaged during each class period and learned.

### No Difference: 10

1. I do not believe I understood the material any better or worse but it is hard to say for certain.
2. I don't think it made a huge difference because it was only one day.
3. No, I put the same effort into all weeks of the class.
4. I don't think so, and I that that because I paid equal attention to all parts of the material, not just the part when I was required to say something.
5. For me, lecture alone is enough for me to get a pretty firm grasp on the concept. I don't think that having to participate in rotating front row really helped me one way or another.
6. No. I always do the reading and such in advance.
7. I would say it did not have an effect on how much it helped me understand because I listened.
8. I don't believe I noticed any difference between my comprehension of the material between rotating front row days or not. I don't feel it caused me to engage with the material as much as it may be expected.
9. I understood the material the same during my rotating front row day when I was not on rotating front row day because I always participate.
10. No, not really. I study hard.

### Unhelpful for understanding: 12

1. No, because my question could not be answered.
2. Being in the rotating front row did not impact my overall learning experience. Again, it was more of a (indecipherable word). For people to ask questions so that they would not be penalized in the long run.
3. Negative. I get the answers to my questions from classmates outside of class time. Forcing someone to ask a question only forces them to generate a question. I can't see the benefit.
4. No, I wasn't more or less likely to ask questions.
5. No, I was more looking for something I did know to answer, not learning new stuff.
6. No because I did not only participate during my front row turn.
7. Not really because I only had to participate once but if I needed to participate more than once it would help.
8. Not really because some of the lecture material is harder to understand on some days than others. During my rotating front row, I found the lectures to have easier information to understand, but earlier in the semester, the material was very hard to understand.
9. No, it was on stuff I learned the week prior and my freshman year of college. I'm a senior now and it was useless.
10. No, because peoples (sic) responses didn't help with my understanding of the material.
11. No, I did not prepare extra on my rotating front row day.
12. No, because I was more focused on making sure I answered something or asked a question rather than learning the material.