




UNDERSTANDING
CLASS YEAR AND
PERCEIVED EFFICACY
OF REMOTE CLASSES
AT DARTMOUTH

SOCY91: Qualitative
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Understanding Class Year and Perceived Efficacy of Remote Classes at Dartmouth

1. Introduction and Significance

In response to the COVID-19 pandemic, Dartmouth College shifted to a remote learning model in the spring of 2020. How effective this model is to Dartmouth undergraduate students remains a key question for Dartmouth's Center for the Advancement of Learning (DCAL). To aid DCAL's goal to promote effective learning, our study focuses on the central research question: *How and why does student perceived efficacy of remote classes vary by class year?*

Our team decided to focus on class year after reflecting on our own experiences with remote learning as seniors. Understanding how students perceive the efficacy of remote classes varies by class year is important for DCAL moving forward as Dartmouth seeks to develop future classes that are effective.

We hypothesize that students of older class years will perceive remote classes as less effective. We predict that upperclassmen, having had more experience at Dartmouth during in-person times, will have more expectations of classes and that the shift to remote learning will force these expectations of classes to be violated, and consequently decrease their perceived efficacy.

2. Background

Understanding that expectations impact the way that students perceive and understand experiences, we hypothesized a negative relationship between our independent variable of class year and dependent variable of perceived efficacy of classes in remote learning. This hypothesis rests on the theories of socialization and status inconsistency. Socialization theory is the process of internalizing norms in society and creating shared understandings (Weidman 2006). This theory suggests that college students are socialized by their campus environment. Classroom experiences like physical participation in class, getting to know fellow students who sit nearby, or becoming familiar with professors are all factors that play into the socialization of college students. Recognizing that upperclassmen have the most prior socialization, we predicted that these acquired norms would firm their expectations of Dartmouth classes. On the contrary, underclassmen are less socialized because they have limited experience during in-person times and therefore fewer expectations.

Another theory that shaped our hypothesis was status inconsistency, or the degree to which an individual's position remains consistent within a hierarchy and former understanding (Stryker and Macke 1978). In the context of Dartmouth College, class year functions as a specific status. For example, seniors have a unique status as the eldest on campus. This status, however, has been violated by the unprecedented shift to remote learning and, due to this violation, we predict a disjunct between the expectations and perceived efficacy of remote classes from seniors. Overall, we predicted that these social and structural differences between class years at Dartmouth impact the way students conceive expectations and perceive the efficacy of their classes.

3. Data and Methods

This study draws on five in-depth, semi-structured interviews with undergraduates of various class years at Dartmouth College (see Appendix A for more detail). Participants were recruited using a purposive sampling method and contacted via email for participation with a 100% response rate. Interviews were conducted either in-person or remotely over Zoom and

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ranged from 30 minutes to 1-hour. A \$10 gift card was offered as compensation in return for participation in this study. Our interview guide focused on expectations, experiences, and perceived efficacy of remote learning (see Appendix B for more detail).

Our team decided to choose undergraduate students from each class year, with two students from the senior class, because our conceptual model relies on seniors having a distinct perception of remote class efficacy based on their expectations of Dartmouth classes. We also ensured to sample students of various academic backgrounds because their range of class subject experience may affect their expectations of Dartmouth classes.

After transcription, interviews were coded deductively using codes derived from theory and existing DCAL data (see Appendix C for more detail). Inductive codes were added thereafter as they became relevant through the coding process. We ensured at least two team members coded each interview line-by-line for increased reliability and attention to detail when coding. After refining our coding scheme, we edited our coding of the interview transcriptions to include the new inductive codes. We summarized the key findings from each interviewee and shared the most common codes and themes to determine our results.

4. Results

In our study, we found no relationship between class year and perceived efficacy. We found that class year shapes students' expectations of remote learning, but these expectations are not linked to perceived efficacy. We found that students arrive at expectations in different ways (See Appendix D for more detail). Underclassmen were without enough prior experience at Dartmouth to form clear class expectations. As a result, their expectations of remote learning were formed concurrently with their experience. Upperclassmen, however, did have clear-cut expectations of what classes should be and acknowledged that remote learning would not meet these expectations. Although under and upperclassmen arrived at expectations differently, both of their expectations were met by their remote experience because underclassmen did not have any, while upperclassmen set their expectations incredibly low. Although class year affects expectations, expectations are not linked to perceived efficacy because there was no variation among expectations being met or violated by class year. Instead, we found that expectations of remote learning may be linked to satisfaction. This was not the intent of our study; however, it was brought up by respondents enough to lead us to this conclusion.

Despite the lack of relationship between class year and perceived efficacy of remote classes, we used our data to identify key factors that contribute to the perceived efficacy of a remote course. These underpinnings of efficacy can be explained by two key categories: Engagement and Resources (see Appendix E for more detail).

In terms of engagement, students found classes more effective when they were engaged and felt a relationship with course content, professors, and classmates. Some features specifically named to help prompt engagement include breakout rooms, class discussion, guest speakers, and office hours. In addition, students found communication with their professor or other students to be central to staying engaged, and thus central to class efficacy. Communication can take many forms, whether it be professor participation in synchronous class, or breakout room discussions. This engagement was crucial to remote learning efficacy because students found it difficult to hold themselves accountable to have an effective remote class experience.

In terms of resources, students felt that knowing support resources were available was important for class efficacy. Specific examples of support included: office hours, TAs, and the

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Zoom chat function. Students also found flexibility to be central to an effective class. Because the remote learning experience is new for everyone, students found that flexibility made this transition easier because accidents or mistakes do come up. We deem flexibility as a resource because it is up to the discretion of professors to allow for flexibility in their classrooms, or not. Specific examples of flexibility included: pre-recorded lectures, allowed absences, extensions, and extended office hours.

These factors emerged across all class years and help explain the underpinnings of how students determine the efficacy of a remote class.

5. Discussion

Although under and upperclassmen arrived at expectations differently, both of their expectations were met by their remote experience. This lack of variation led us to conclude that expectations were not linked to remote class efficacy. Fortunately, our quantitative partner team was able to increase the validity of our results by confirming a null relationship between class year and perceived efficacy through consistent findings. Although we could not find a correlation between class year, expectations, and perceived efficacy, we identified engagement and resources as key factors that students associate with remote class effectiveness.

This study faces limitations, including the small size of our sample, interviewee comfortability, and insufficient theoretical resources given a gap in the literature regarding what shapes remote class efficacy. However, as a student-led team, we find that we were able to establish rapport in a way that yielded more forthright, nuanced responses in our interviews. As a result, our qualitative approach afforded us an understanding of the inner workings of how and why a null relationship exists between class year and perceived efficacy. Qualitative research allows us to better understand narratives and experiences that may contribute to or explain the findings of the quantitative team.

Moving forward, we suggest that DCAL considers expanding how they measure class efficacy to better understand what makes a remote learning class effective. Our team found several factors that contribute to student perceived efficacy; however, DCAL may benefit from having a strict definition of efficacy—one independent of satisfaction—for future studies. We also found that students' expectations—and unmet expectations—may be related to other considerations like satisfaction. Thus, it could be helpful for DCAL to expand on learning more about the interconnectedness of satisfaction and efficacy for students. We also found that underclassmen, specifically first-year students, seem to be going through a unique experience with regards to expectations. An interesting step to better understand how to advance learning at Dartmouth could be to focus on how learning might be different for incoming students without prior class expectations.

Furthermore, we suggest that DCAL could build off of our findings of what factors make remote learning most effective for students in future studies to identify best practices for how engagement and resources can be implemented in a remote learning setting. Understanding these questions is key if Dartmouth considers continuing online courses in the future, even after the pandemic ends.

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6. References

DCAL. 2020. "Report on Findings from Spring 2020 Survey: Qualitative Metrics." Dartmouth Center for the Advancement of Learning.

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Stryker, Sheldon, and Anne Statham Macke. 1978. "Status Inconsistency and Role Conflict." *Annual Review of Sociology* 4(1):57-90.

Tierney, W. 1997. "Organizational Socialization in Higher Education." *The Journal of Higher Education*, 68(1):1-16.

Weidman, John. C. 2006. "Socialization of Students in Higher Education: Organizational Perspectives." Pp. 253-261 in *The Sage Handbook for Research in Education: Engaging Ideas and Enriching Inquiry*, edited by C.C. Conrad and R.C. Serlin. Sage Publications.

7. Appendices

Appendix A: Sample

In Table 1 (on Page 5), we detail our sample. Our group chose an undergraduate student from each class year along with an additional student from the senior class. We included two seniors because our conceptual model relies on upperclassmen having a distinct perception of remote class efficacy based on their expectations of Dartmouth classes. In addition, we sampled students with at least one term of on-campus living experience--either in dorms or in an off-campus house--because we felt that it was important to sample various experiences that may help define what it means to be "remote." We also ensured we sampled students of various academic pursuits because their range of classroom experiences may affect their expectations of Dartmouth classes, as some classes are centered on discussion while others include labs, etc.

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Table 1. Interviewee Sample.

Interviewee Pseudonym	Class Year	Terms On-/Off-Campus*	Characteristics
Ana	2024 (Freshman)	Spring (Not yet matriculated), Fall (On-Campus), Winter (Remote)	Undecided major
Lily	2023 (Sophomore)	Spring (Off), Fall (Local Off-Campus), Winter (Local Off-Campus)	Psychology Major, Athlete
Fran	2022 (Junior)	Spring (Remote), Fall (Local Off-Campus), Winter (Local Off-Campus)	Government major, Athlete
Suzy	2021 (Senior)	Spring (Remote), Fall (Local Off-Campus), Winter (On-Campus)	Biomedical Engineering major, Global Health minor
Tim	2021 (Senior)	Spring (International), Fall (Local Off-Campus), Winter (Local Off-Campus)	Biology major, Environmental Studies minor, former athlete

*Since the onset of remote-learning: Spring 2020

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Appendix B: Interview Guide

Gaining Consent

For this study, we are interested in learning about class year and remote classroom learning experiences.

You are the expert, I am the learner. I have a list of questions to ask you, but if you find yourself wanting to share something that I haven't asked but you feel is important to understanding your experiences please do so. If you have questions as we go, need clarification, or want to take a minute to think, just let me know. Ultimately we hope to learn about the factors that contribute to effective remote classes from a student's perspective. If at any point you are uncomfortable answering a question I have asked you, want to remove a response from the record, or want to stop the interview altogether, please let me know.

Your privacy is important to me, so let's make up a name for you _____, we will use this name in our research instead of your real name. If you don't mind, I am going to record this conversation so that I can listen to you rather than take notes. Is that okay? If there are any questions that you feel uncomfortable answering, it is fine to skip them. Or if you would feel comfortable answering a question but would like it to be off the record, we can turn off the tape recorder for a moment and turn it back on when you are ready. Do you have any questions for me? Are you ready to get started?

Warm-up questions

- To start, could you tell me about your experience at Dartmouth thus far?
 - What is your class year?

Establishing Expectations (General)

- Before you came to Dartmouth, what did you think your classes would be like?
 - *Probe: class size, faculty engagement, rigor*
- In what ways have in-person classes at Dartmouth met your expectations? [not to First-Year]
- Having now taken classes at Dartmouth, what are your expectations of a typical Dartmouth course? [this is an important question, be sure to probe fully, do not ask First-Year Student]
 - *Probe: thoughts on grading, faculty-student interactions, class discussions, group work*

Establishing Expectations (For remote learning)

- What did you expect [being x year] to be like?
 - *Note: this is post-COVID starting*
 - *Probe: schedule, staying motivated*

Thank you for participation so far we are going to shift gears a little bit to talk more about your remote experiences specifically

- What terms have you taken classes remotely at Dartmouth?
 - Where did you take your remote classes from?

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- Tell me about what your expectations are for a good remote class at Dartmouth.
 - *Probe: faculty-student interactions, synchronicity class discussions, group work, thoughts on grading*

Remote Learning Experience

- Could you walk me through a typical day in remote learning?
- How are remote classes similar or different from what you thought they would be?
 - How did you adapt from in-person to remote classes?
 - *Probe: What changes did you make?*
 - *Probe: What was the smoothest aspect of the transition?*
 - *Probe: Has remote learning affected your ability to speak up in class?*

Expectations vs. Reality of Remote Learning Experience [remember to follow up on any threads that may have been mentioned when establishing expectations]

- How are remote classes different from your expectations for a typical Dartmouth class?[how things would have been if we were not remote]
 - What about your academic expectations?
 - *Probe: faculty-student interactions, class discussions, group work, thoughts on grading*
 - Did specific things surprise you? Disappoint you?
- In what ways have remote classes met your expectations?
- Tell me about a class that met your expectations.
 - How large was this class?
 - Why did you take this class? For a major, minor, layup, interest, distrib?
 - What was the format of this class?
- Tell me about a course that breached your expectations.
 - Why did you take this class? For a major, minor, layup, interest, distrib?
 - What was the format of this class?
 - Do you think there is anything that could have been done to make it better?

Perceived Efficacy and Narratives [if they struggle you can refer back to previous examples given]

- Tell me about a course during remote learning that you thought was really good or effective.
 - *Probe: How/Why was it effective?*
 - *Probe: What was the format of this class?*
 - Did this class meet your expectations?
 - Why did you take this class? For a major, minor, interest, distrib?
- Tell me about a class during remote learning that you found ineffective.
 - *Probe: How/Why was it ineffective?*
 - *Probe: What was the format of this class?*
 - Did this class meet your expectations? Or how did it fail to?
 - Why did you take this class? For a major, minor, interest, distrib?
- Thinking about what you just shared, what do you think makes a remote course most effective?
 - What do you think makes a remote course most ineffective?

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- Do you think you are getting the most out of your academic experience in the classroom at Dartmouth?
 - How do you contribute to making your remote classroom experience effective?
 - *Probe: Are there certain things that you do to ensure a positive experience?*
 - *Probe: Do you prefer synchronous or asynchronous classwork?*

IV + DV: Broad Strokes

- Do you think your position as [x class year] impacts your experience with remote classes?
- Do you think different class years are having more effective remote learning experiences?
 - Do you think some classes are taught better remotely than others?
 - What class year do you think has it the ‘best’ or the ‘worst’ right now?
 - *Probe: Why do you think that?*
- Is there anything else you’d like me to know?

Closing

Thank you so much for being so open and honest about your experiences. We are almost finished, but I have a few closing reflective questions about your experience in this interview.

- Is there anything that you thought I would ask that I didn’t?
 - *If yes: Encourage them to answer their own question.*
- Did you find any of my questions hard to answer?
 - If so, which ones, and why?
- Is there anything you thought of during the interview that we didn’t have the chance to fully discuss yet? Anything that you’d like to add to help me better understand your experiences?
- Do you have any questions or concerns about the study? Is there anything else that you would like to discuss or ask questions about before we wrap up?

Thank you again for participating! Please feel free to reach out with any questions in the future!

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Appendix C: Coding Scheme

For our deductive codebook, we have organized our codes as they relate to our independent and dependent variables, and theoretical mechanism. We have created specific subcodes within these codes to get at nuances and potential predicted relationships between our variables.

- I. Class Year
 - A. **Class-Year-Freshman:** Respondent identifies as a first-year student
 - B. **Class-Year-Sophomore:** Respondent identifies as a second-year student
 - C. **Class-Year-Junior:** Respondent identifies as a third-year student
 - D. **Class-Year-Senior:** Respondent identifies as a fourth-year student
- II. Expectations General
 - A. **Expectations-General**
 1. **Expectations-General-Communication:** Respondent expects adequate communication in a Dartmouth classes in general/in-person
 - a) **Expectations-General-Communication-Professor:** Respondent expects adequate communication between him/herself and professor for Dartmouth classes in general/in-person
 - b) **Expectations-General-Communication-Classmates:** Respondent expects adequate communication between him/herself and classmates for Dartmouth classes in general/in-person
 2. **Expectations-General-Engagement:** Respondent expects a level of engagement with their course/classmates, whether it be participation in class, group work, etc. for Dartmouth classes in general/in-person
 - a) **Expectations-General-Engagement-Course-Material:** Respondent expects to actively engages in course material because of interest in course relevance/delivery
 - b) **Expectations-General-Engagement-Interest:** Respondent actively engages in course material because of interest in course
 - c) **Expectations-General-Engagement-Self:** Respondent holds themselves accountable and actively engages in course material/class
 3. **Expectations-General-Flexibility:** Respondent expects a certain level of flexibility in classes (i.e., extensions, picking research topics, overall agency in a course) based on previous experience in Dartmouth classes
 4. **Expectations-General-Support:** Respondent expects access to external support for their academic experience to be most successful (i.e., advising, material resources, office hours) in Dartmouth classes in general/in-person
 - B. **No-Expectations-General**
 1. **Expectations-General-No-Communication:** Respondent does not expect adequate communication between him/herself and professor for Dartmouth classes in general/in-person
 - a) **Expectations-General-No-Communication-Professor:** Respondent does not expect adequate communication between him/herself and professor for Dartmouth classes in general/in-person

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3. **Expectations-Remote-Flexibility:** Respondent expects a certain level of flexibility in remote classes (i.e., extensions, picking research topics, overall agency in a course)
4. **Expectations-Remote-Support:** Respondent expects access to external support for their academic experience to be most successful (i.e., advising, material resources, office hours) in remote classes
5. **Expectations-Circumstances:** Respondent readily acknowledges that remote classes will not meet their full expectations of an in-person class

B. No-Expectations-Remote

1. **Expectations-Remote-No-Communication:** Respondent does not expect adequate communication for remote classes
 - a. **Expectations-Remote-No-Communication-Professor:**
Respondent expects adequate communication between him/herself and professor for Dartmouth classes in remote class
 - b. **Expectations-Remote-No-Communication-Classmates:**
Respondent expects adequate communication between him/herself and classmates for Dartmouth classes in remote class
2. **Expectations-Remote-No-Engagement:** Respondent does not expect a level of engagement with their course/classmates, whether it be participation in class, group work, etc. for remote classes
 - a. **Expectations-Remote-No-Engagement-Course-Material:**
Respondent actively engages in course material because of interest in course relevance/delivery
 - b. **Expectations-Remote-No-Engagement-Interest:** Respondent actively engages in course material because of interest in course
 - c. **Expectations-Remote-No-Engagement-Self:** Respondent holds themselves accountable and actively engages in course material/class
3. **Expectations-Remote-No-Flexibility:** Respondent does not expect a certain level of flexibility in remote classes (i.e., extensions, picking research topics, overall agency in a course)
4. **Expectations-Remote-No-Support:** Respondent does not expect access to external support for their academic experience to be most successful (i.e., advising, material resources, office hours) in remote classes
5. **Expectations-No-Circumstances:** Respondent does not readily acknowledge that remote classes will not meet their full expectations of an in-person class

C. **Expectations-Remote-Uncertain:** Respondent does not have expectations about remote classes or acknowledges they are uncertain about what to expect

IV. Experiences

A. Positive-Experience

1. **Experience-Remote-Communication:** There has been adequate communication for remote classes
 - a) **Experience-Remote-Communication-Professor:** Respondent experiences adequate communication between him/herself and professor for Dartmouth classes in remote classes

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successful (i.e., advising, material resources, office hours) in remote classes

- 5. Experience-No-Circumstances:** Respondent acknowledges and feels that the experience of remote classes will not meet that of a in-person class

V. Expectation vs. Experiences

A. Expectations-Met

- 1. Expectations-Met-Communication:** Respondent's expectations of adequate communication for Dartmouth classes were met by their remote learning experience
 - a) Expectations-Met-Communication-Professor:** Respondent's expectations of adequate communication between himself/herself and professor for Dartmouth classes were met by their remote learning experience
 - b) Expectations-Met-Communication-Classmates:** Respondent's expectations of adequate communication between himself/herself and classmates for Dartmouth classes were met by their remote learning experience
- 2. Expectations-Met-Engagement:** Respondent's expectations of a level of engagement with their course/classmates, whether it be participation in class, group work, etc. were met by their remote learning experience
 - a) Expectations-Met-Engagement-Course-Material:** Respondent actively engages in course material because of interest in course relevance/delivery
 - b) Expectations-Met-Engagement-Interest:** Respondent actively engages in course material because of interest in course
 - c) Expectations-Met-Engagement-Self:** Respondent holds themselves accountable and actively engages in course material/class
- 3. Expectations-Met-Flexibility:** Respondent's expectations of a certain level of flexibility in classes (i.e., extensions, picking research topics, overall agency in a course) were met by their remote learning experience
- 4. Expectations-Met-Support:** Respondent's expectations of having access to external support for their academic experience to be most successful (i.e., advising, material resources, office hours) were met by their remote learning experience

B. Expectations-Not-Met

- 1. Expectations-Not-Met-Communication:** Respondent's expectation of adequate communication for Dartmouth classes was not met by their remote learning experience
 - a) Expectations-Not-Met-Communication-Professor:** Respondent's expectations of adequate communication between himself/herself and professor for Dartmouth classes were not met by their remote learning experience
 - b) Expectations-Not-Met-Communication-Classmates:** Respondent's expectations of adequate communication between himself/herself and classmates for Dartmouth classes were not met by their remote learning experience

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2. **Expectations-Not-Met-Engagement:** Respondent's expectation of a level of engagement with their course/classmates, whether it be participation in class, group work, etc. was not met by their remote learning experience
 - a) **Expectations-Not-Met-Engagement-Course-Material:** Respondent actively engages in course material because of interest in course relevance/delivery
 - b) **Expectations-Not-Met-Engagement-Interest:** Respondent actively engages in course material because of interest in course
 - c) **Expectations-Not-Met-Engagement-Self:** Respondent holds themselves accountable and actively engages in course material/class
3. **Expectations-Not-Met-Flexibility:** Respondent's expectations of a certain level of flexibility in classes (i.e., extensions, picking research topics, overall agency in a course) were not met by their remote learning experience
4. **Expectations-Not-Met-Support:** Respondent's expectations of having access to external support for their academic experience to be most successful (i.e., advising, material resources, office hours) were not met by their remote learning experience

VI. Perceived Efficacy

A. Positive-Efficacy

1. **Effective-Remote-General:** Respondent considers remote learning effective in general, without noting a specific aspect
2. **Effective-Remote-Communication:** There has been adequate communication for remote classes and is therefore effective
 - a) **Effective-Remote-Communication-Professor:** There has been adequate communication between himself/herself and professor for remote classes and is therefore effective
 - b) **Effective-Remote-Communication-Classmates:** There has been adequate communication between himself/herself and classmates for remote classes and is therefore effective
3. **Effective-Remote-Engagement:** There has been a level of engagement with their course/classmates, whether it be participation in class, group work, etc. for remote classes and is therefore effective
 - a) **Effective-Remote-Engagement-Course-Material:** Respondent actively engages in course material because of interest in course relevance/delivery
 - b) **Effective-Remote-Engagement-Interest:** Respondent actively engages in course material because of interest in course
 - c) **Effective-Remote-Engagement-Self:** Respondent holds themselves accountable and actively engages in course material/class
4. **Effective-Remote-Flexibility:** There has been a certain level of flexibility in remote classes (i.e., extensions, picking research topics, overall agency in a course) and is therefore effective
5. **Effective-Remote-Support:** There has been access to external support for their academic experience to be most successful (i.e., advising, material resources, office hours) in remote classes is therefore effective

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6. **Effective-Remote-Structure:** Respondent acknowledges and feels that classes are effective because of the class structure (i.e. breakout rooms, synchronicity, lectures/recorded or not)
7. **Effective-Circumstances:** Respondent acknowledges and feels that the experience of remote classes will meet that of an in-person class and finds them effective

B. Negative-Efficacy

1. **Ineffective-Remote-General:** Respondent considers remote learning ineffective in general, without noting a specific aspect
2. **Ineffective-Remote-No-Communication:** There has not been adequate communication for remote classes and is therefore ineffective
 - a) **Ineffective-Remote-Communication-Professor:** There has not been adequate communication between himself/herself and professor for remote classes and is therefore ineffective
 - b) **Ineffective-Remote-Communication-Classmates:** There has not been adequate communication between himself/herself and classmates for remote classes and is therefore ineffective
3. **Ineffective-Remote-No-Engagement:** There has not been a level of engagement with their course/classmates, whether it be participation in class, group work, etc. for remote classes is therefore ineffective
 - a) **Ineffective-Remote-No-Engagement-Course-Material:** Respondent actively disengages in course material because of interest in course relevance/delivery
 - b) **Ineffective-Remote-No-Engagement-Interest:** Respondent actively engages in course material because of interest in course
 - c) **Ineffective-Remote-No-Engagement-Self:** Respondent holds themselves accountable and actively engages in course material/class
4. **Ineffective-Remote-No-Flexibility:** There has not been a certain level of flexibility in remote classes (i.e., extensions, picking research topics, overall agency in a course) is therefore ineffective
5. **Ineffective-Remote-No-Support:** There has not been access to external support for their academic experience to be most successful (i.e., advising, material resources, office hours) in remote classes and is therefore ineffective
6. **Ineffective-Remote-No-Structure:** Respondent acknowledges and feels that classes are ineffective because of the class structure (i.e. breakout rooms, synchronicity, lectures/recorded or not)
7. **Ineffective-No-Circumstances:** Respondent acknowledges and feels that the experience of remote classes will not meet that of a in-person class and thus finds them ineffective

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Appendix D: Relationships between Class Year and Expectations across Underclassmen and Upperclassmen.

In Table 2, we detail the relationships found between our independent variable of the respondent's class year and their expectations of remote classes.

Table 2. Relationships between Class Year and Expectations across Underclassmen and Upperclassmen.

Variable	Underclassmen	Upperclassmen
Circumstances	Acknowledged <i>ambivalently</i> remote learning may not meet expectations of in-person courses	Acknowledged <i>certainly</i> remote learning would not meet expectations of in-person courses
Perception of Classes (Establishing Expectations)	Inability to form clear class expectations (remote + in-person) based on prior experience	Has very clear class expectations based on prior experience
Expectations Met	Expectations of remote learning are met because expectations are formed on the fly as a result of experience	Expectations of remote learning are met because they understand the reality of remote circumstances
Perceived Efficacy	No major difference	No major difference

Appendix E: Factors of remote learning that affect perceived efficacy.

In Tables 3 and 4 (on Pages 17 and 18), we detail five specific factors that contribute to perceived class efficacy that emerged throughout our interviews. These tables illustrate the specific findings that led us to identify themes of engagement and resources as central to student perceived efficacy. For sake of clarity, we have organized these factors under two umbrella themes--engagement and resources--both below and in our report. For each factor, we include a definition and a direct quote from an underclassmen and upperclassmen interviewee to illustrate how students themselves see these factors in practice. Although we organize quotes by under- and upperclassmen, it is important to note that these patterns emerged across all class years.

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Table 3. Engagement factors of remote learning that affect perceived efficacy.

Factor	Description	Quote
Course Engagement	Students found classes more effective when they were engaged and felt a relationship with course content, professors, and classmates. Some features specifically named to help prompt engagement included: guest speakers, office hours, breakout rooms, and class discussion.	“The ear's class I took in the fall, just because of the interaction that you would get daily and also because attendance was taken every time you went into your small group, so it was like, you couldn't just watch the lectures, you had to show up to class , which I kind of wish that more professors would do 'cause then I wouldn't be stuck in this cram to watch so many lectures.” - Lily ‘23
		“One of my classes does like cold-calling , which helps keep me engaged 'cause I'm crying all the time, freaking out that I'm going to be... called on. So it makes me pay attention” - Suzy ‘21
Self-Engagement and Accountability	Students found it difficult to hold themselves accountable to have an effective remote class experience. Students have had to find new ways to keep themselves engaged and ignore distractions.	“ My motivation is definitely lacking . I think the biggest thing for me is the fact that every lecture is recorded for me. So, I'll take a nap and I'll wake up for class, but then it gets to time for class and I'm like, " Well, I can just watch the lecture later. " - Lily ‘23
		“ I put my phone away from me because I would always catch myself on my phone not paying attention . So now, what I do is I put it across the room. So that's some, a way, a way I adapted I guess ” - Suzy ‘21
Communication and Relationships with Professor and Students	Students found communication with their professor or other students to be important to class efficacy. Communication can take many forms, whether it be professor participation in synchronous class, or breakout room discussions.	“What I liked about it was we had groups for the whole term and every class you went into breakout rooms with your groups . . . and sometimes he would send us to new breakout room sometimes even before class started to kind of simulate having a conversation before class would start like [an] in person type of thing.” - Lily ‘23
		“ We would have questions to guide us . So it was all purely discussion , which I really, really loved in comparison to the three other classes that were pretty much all lecture based .” - Fran ‘22
		I think most ineffective Zoom courses that I've had have just been the professor kind of logging on going straight into a PowerPoint and then talking and kind of reading off the PowerPoint slides for however long the class is and that being the main form of transmitting any information from them to me . - Tim ‘21

Understanding Class Year and Perceived Efficacy of Remote Classes at Dartmouth

Table 4. Support factors of remote learning that affect perceived efficacy.

Factor	Description	Quote
Support from External Sources	Students found support necessary for class efficacy. Whether utilized or not, students felt that knowing support resources were available was important for class efficacy. Specific examples of support included: office hours, TAs, and the Zoom chat function.	“I think it's also important to offer [a lot of] options for office hours ... in terms of when you can meet with professors” - Ana '24
		“I think the biggest thing is making sure you have that support network when a class is challenging or you're unsure about something because it's not as easy as just being able to study with friends or we'll go to your professor's office.” - Tim '21
Flexibility in Recognizing Circumstances	Students found flexibility to be central to an effective class. Because the remote learning experience is new for everyone, students found that flexibility made this transition easier because accidents or mistakes do come up. Specific examples of flexibility included: pre-recorded lectures, allowed absences, extensions and extended office hours.	“Yeah professors seemed to be pretty accommodating. As long as you'd communicate with them. And I think I expected them to be a lot stricter...but it seems like they're pretty good so far.” - Ana '24 “I thought the professor was gonna be a lot more understanding, but she didn't give an extension... I'm still kind of upset” -Ana '24
		“We weren't expected [but] it was encouraged [to go to class], but all classes were recorded. So if, for example, I couldn't make a class, then that wasn't a massive issue and I could just watch the recording.” - Tim '21