

MIT Graduate Research Advising Survey 2021

MIT Report

Executive Summary

Survey Description

The GSC's Subcommittee on Advising conducted a survey of current MIT graduate students about their experience with advising. The survey was open for one month (Jan 12 - Feb 15) and eligible students were invited to take this voluntary survey, where eligible students were defined as MIT graduate students that had conducted research with an advisor over the past academic year (Jan 1, 2020 - Dec 31, 2020). The Subcommittee on Advising prepared the survey, analyzed responses, and prepared the following report. Department-specific results will be distributed to department leadership by the end of Spring 2021.

Main Results:

20% of enrolled PhD students and 5% of Master's students responded to the survey (779 and 146 responses respectively). The majority of graduate students who responded to our survey have a positive relationship with their advisor, consisting of mutual respect, high quality research guidance, and support with career development and graduating. While the majority of students have positive relationships with their advisors, we would like to highlight **four** concerning observations in the data:

1. A significant number of respondents **do not feel valued or respected by their advisor**. 6% (61) of respondents said that their advisor does not interact with them in a respectful manner. 9% (99) are not comfortable expressing their professional opinion in front of their advisor while 14% (145) of respondents do not feel comfortable approaching their advisor for help. Given that this relationship is critical to the graduate student experience and the overall impact of MIT's research, it is incredibly concerning that so many respondents have a very negative advising relationship.
2. Whereas the majority of students have positive one-on-one relationships with their advisor, **40% of respondents were dissatisfied with their department's support** in finding an advisor, reporting advisor behaviors, and communicating how to leave an advisor. This includes 33% (312) of respondents who fear retaliation for reporting their advisor to their department and 15% (142) of respondents who fear their advisor can *actively* hurt their future employment. Equally concerning, only about 45% (378) of students have confidence that their department would take corrective action on reported issues about advisor behavior, and only about 29% (273) of students think their department provides a safe and accessible mechanism for feedback about advisors for improper behavior.

3. There is a clear **lack of communication of expectations** between advisors and students. 23% (242) of respondents feel there is a lack of communication around advisor expectations, 18% (166) do not know what is expected for maintaining their funding, and 29% (279) do not understand expectations for an acceptable thesis/dissertation.
4. 19% (191) of respondents are **dissatisfied with their advisor's research guidance**, with 18% (169) of respondents stating that if they started over, they would *not* choose their current advisor. Also, 23% (192) of respondents in a research group are dissatisfied with their advisor's effectiveness at managing tasks and people.

Recommendations:

Students would benefit from increased advisor communication about expectations for research, graduating, and funding. Departments can provide frameworks for discussing these expectations (semesterly check-ins, written expectations at the beginning of a research appointment, or [individual development plans](#)) and advisors can proactively take steps to discuss expectations with each of their students throughout their degree. In addition, faculty advisors should consider how to improve the overall quality of research guidance. This may include sharing “best practices” across MIT, providing training to faculty, allocating more mentoring time to each student, and departmental evaluation of advising for promotion/tenure. We are encouraged by the recent formation of an Ad Hoc Committee for a Strategic Plan on Graduate Mentoring Advising and urge departments and faculty to consider targeted improvements to advising practices.

In addition, department leadership and faculty should work to provide improved mechanisms for finding and switching advisors, such as a clear and visible matching procedure for advising, publicizing available research appointments, funding a year of advisor/lab rotations, implementing Advising Philosophy Statements, and/or ensuring that both students and advisor have input on their advisor match. Fears around increased degree length, loss of funding, and finding an advisor were the main obstacles to switching advisors. Departments can communicate mechanisms and common trajectories for students who choose to switch advisors mid-degree, including procedures for receiving departmental transition funding, rules for using research with a previous advisor in a dissertation, and easing the advisor selection process.

Department leadership should also work to build confidence in their student body that the department will protect students from retaliation and take reporting seriously. This can be achieved through a clear and well known knowledge base that explicitly gives examples on what would happen in cases of retaliation, and through taking any student report seriously (and communicating this to students), independent of the power dynamics of the reported situation. To reduce fears of retaliation, departments can also help proactively reduce some of the perceived power imbalance by ensuring that more than one advisor/faculty member is able to write recommendation letters and approve a thesis (see MIT's [NASEM report](#) for in-depth discussion on power imbalance).

Also, we note that this fear of reporting persists even with MIT's current anonymous reporting resource (EthicsPoint). We urge MIT to work with departments and students to investigate ways

to improve reporting mechanisms so that reporting becomes accessible to students. Some initial recommendations include: providing concrete examples of the reporting process and eventual outcome when the accusation is confirmed (including potential consequences for faculty); providing closure to cases, even anonymous ones, through anonymous tracking numbers inside a protected website; providing training to faculty and students on having respectful and empathetic conversations when issues arise. Given that the majority of respondents do not believe their department would take corrective action against a faculty member, it is important to communicate to students that departments *will* take action and delineate the possible actions (educational intervention, reduction in privileges/resources, etc.).

We hope that by taking a deeper look at current advising practices and department support systems, MIT can create a supportive environment for **all** graduate students at MIT, so that everyone can have a successful and healthy research experience.

Section Summaries

Advisor Behavior:

A common trend we see in the data is that for most students (~90%) their one-on-one relationships with their advisor are respectful and caring, with students feeling comfortable expressing their opinions and approaching their advisor. A minority but still sizable number of students (8%, 83) disagree or are ambivalent about whether their relationships are respectful.

The most common (negative) experience of graduate students was lack of communication about advisor expectations (23%, 242), feeling uncomfortable meeting advisors without tangible progress (25%, 258), and even approaching an advisor for help (14%, 145) or expressing their professional opinion (9%, 99).

Research Guidance:

Specifically with regard to research guidance, while the majority of respondents are satisfied with their quality of advising, a large portion of students feel somewhat or extremely dissatisfied with their advisor's research guidance (19%, 194) and frequency of one-on-one meetings with their advisor (17%, 176). For example, 22% (222) of respondents meet with their advisor one-on-one 1-2 times per semester or less while only 6% (59) of respondents choose that frequency for their ideal meeting frequency. In addition, 17% (of students would choose a different advisor if they started over.

For most students, their advisor manages a research group consisting of multiple graduate students. While the majority of respondents feel their advisor effectively manages their group, a large minority of respondents slightly or strongly disagreed with statements such as "my advisor effectively manages tasks and people" (23%, 192), "my advisor effectively runs meetings" (16%), and "my advisor effectively manages tasks" (23%, 134). In addition, a smaller number of respondents felt their advisor cultivates disrespectful and exclusionary labs, agreeing with feeling disrespected in their lab (6%, 50), feeling excluded by colleagues in their research group (9%, 74) and disagreeing with statements such as feeling comfortable expressing opinions in

labs (10%, 85) and their advisor cultivating an including & accepting environment (8%, 68). Finally, only 48% (399) of survey participants agree or strongly agree with the fact that their advisors manage lab related conflicts efficiently.

Funding & Career Guidance

Only 70% (664) of respondents with funding understand what is expected of them to maintain funding and 10% (88) students do not know whether their funding is secured for the next year.

Given that future employment is a large stressor for graduate students, we were concerned seeing that only 49% (481) of students are encouraged by their advisor to partake in non-research related career development and 15% of students interested in non-academic careers (industry, non-profit/government, and other) are uncomfortable even expressing interest in those careers to their advisor.

Graduating:

One of the most pervasive sentiments around advising is a dissatisfaction around communicating expectations for graduating. 29% (279) of respondents disagreed (strongly or somewhat) with the statement “I understand my advisor’s research expectations for an acceptable thesis/dissertation” and 24% (234) of respondents are dissatisfied with the frequency with which they discuss graduation progress with their advisor. More actively discussing and engaging the topic of graduating is especially important given that 20% (200) of respondents said their personal expected graduation timeline was longer or shorter than their advisor’s timeline with 5% (48) of respondents saying it was much longer/shorter .

Switching Advisors & Support

23% (214) of students feel stuck with their advisor which is especially concerning given that 10% (92) of students would like to switch advisors. In considering reasons students feel stuck, we asked students for the largest obstacles to switching advisors. The top three obstacles include: degree would be longer (72%, 669), not finding an advisor (60%, 558), and loss of funding (40%, 372).

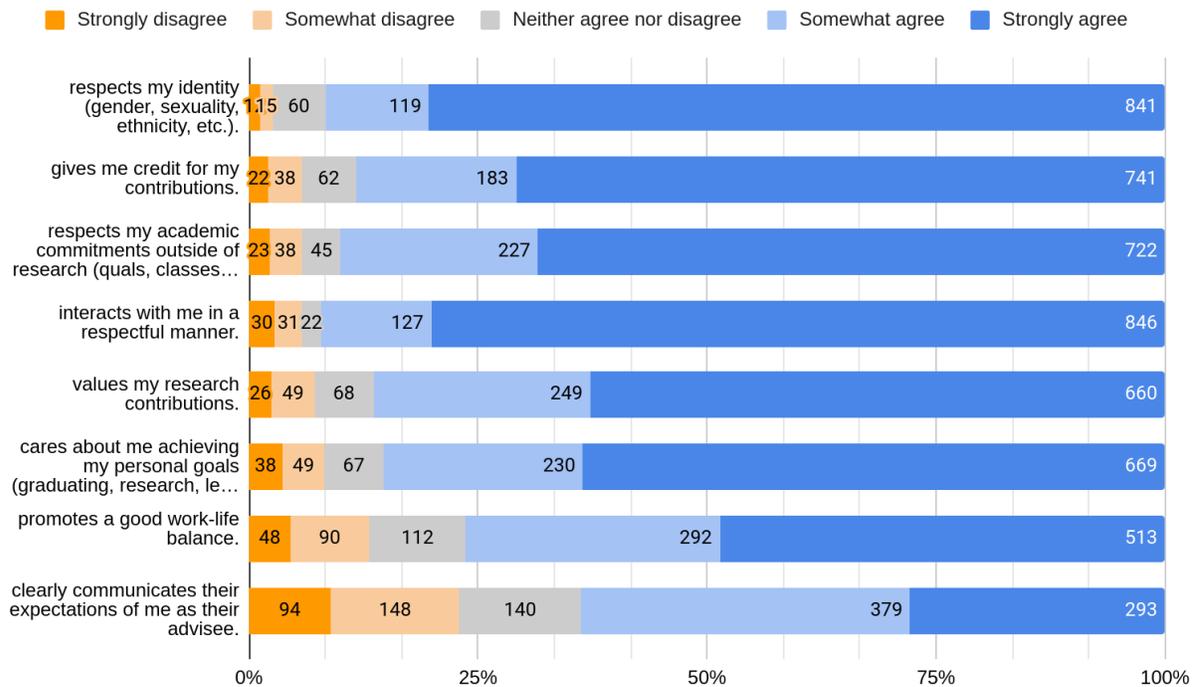
We also asked students about their satisfaction with various support mechanisms with their department, which received the largest dissatisfaction compared to other sections of the survey. Most concerning was that only 42% (393) of respondents are confident that their department would take corrective action for advisor issues and as many as 34% (312) fear retaliation for reporting advisor behavior. In addition, 15% (142) of students are afraid their current advisor could *actively* hurt their future employment, which we suspect contributes to fear of retaliation.

Finally, there were many students dissatisfied with their department's support when it comes to matching students with advisors, providing feedback about advisors for improper behavior, and communicating pathways for switching advisors. This is especially concerning given that a sizable portion of the population do not have a faculty member or person in a leadership position with whom they are comfortable talking to about advisor issues.

1. Advisor Behavior

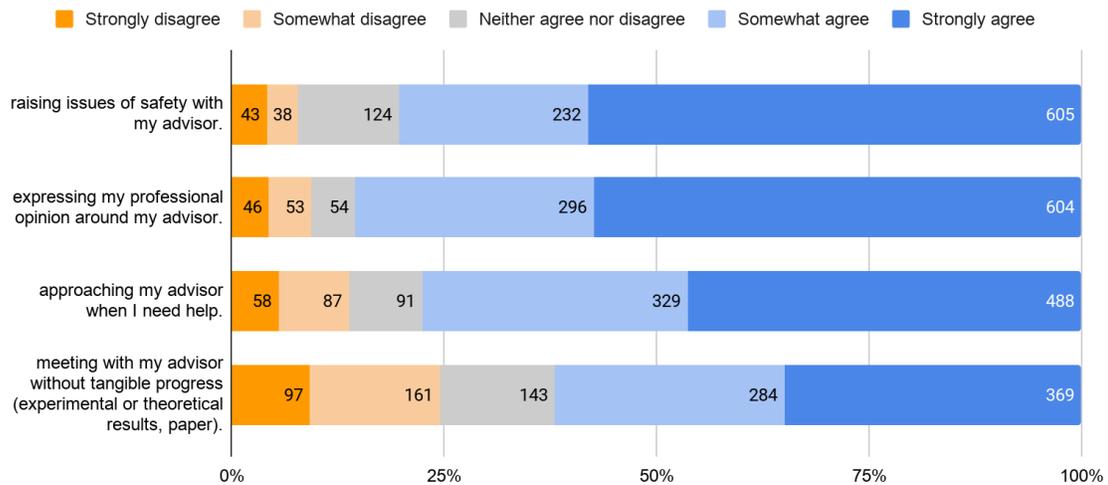
1.1 Advisor Behavior

My advisor...



1.2 Advisor Interactions

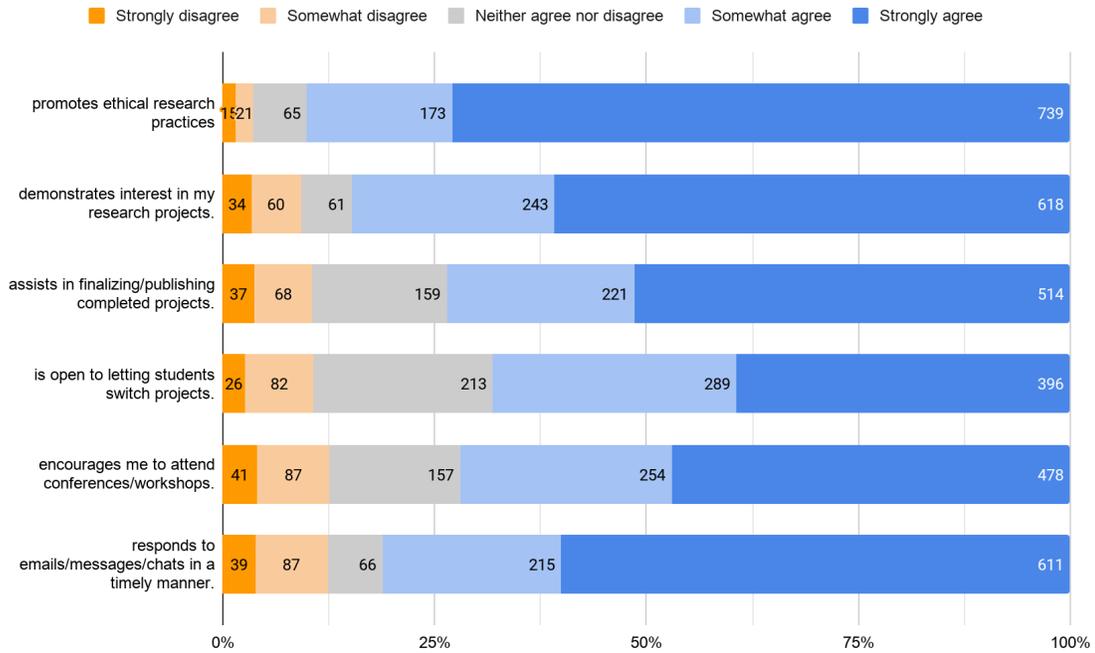
I feel comfortable...



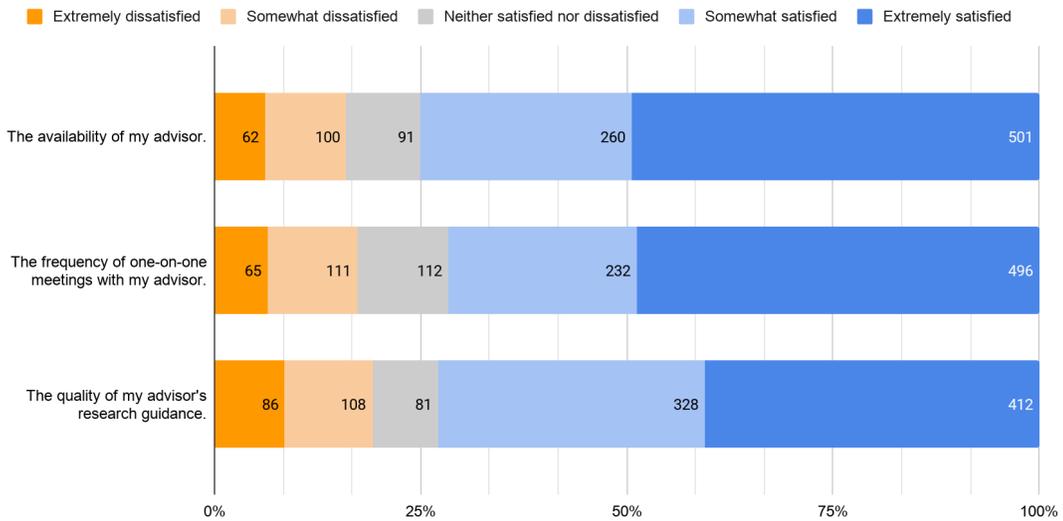
2. Research Guidance

2.1 Research Guidance

My advisor...

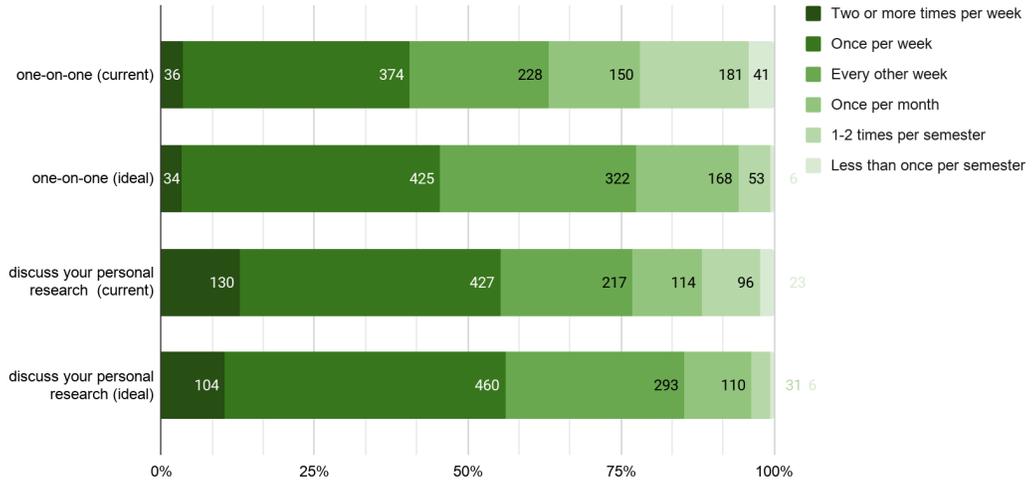


2.2 Research Guidance Satisfaction



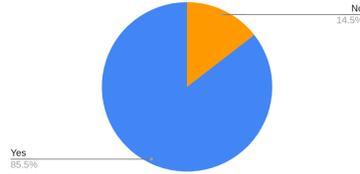
2.3 Meeting Frequency

How often do you meet with your advisor...



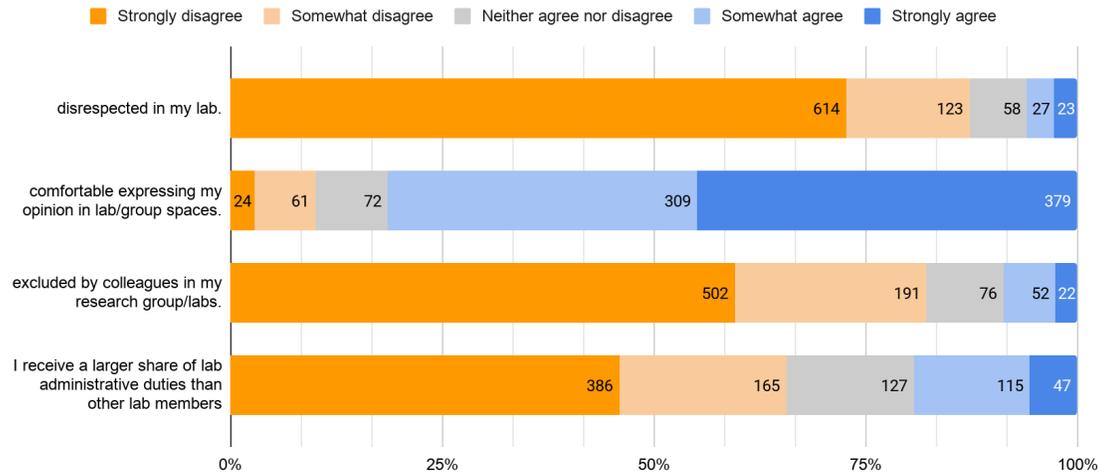
3. Group/Lab Management

3.0 I am a member of a research group or lab that my advisor manages.



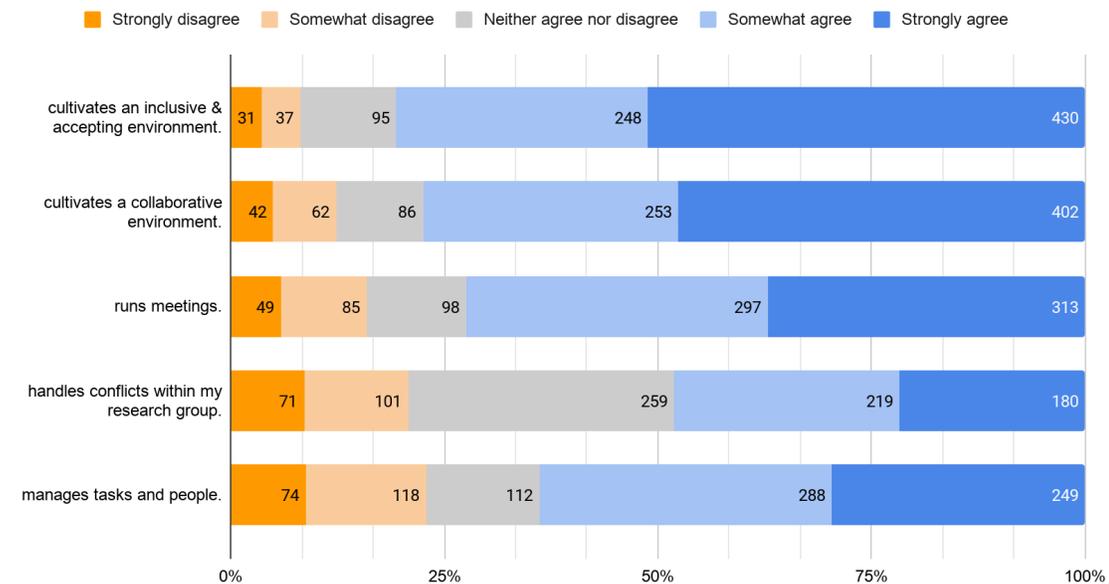
3.1 Research Group Climate

I feel...



3.2 Research Group Supervision

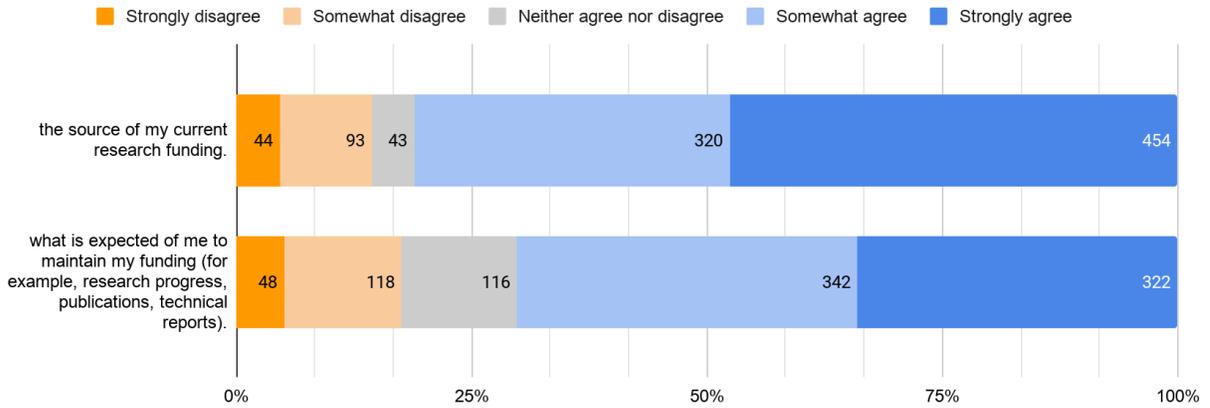
My advisor effectively...



4. Funding

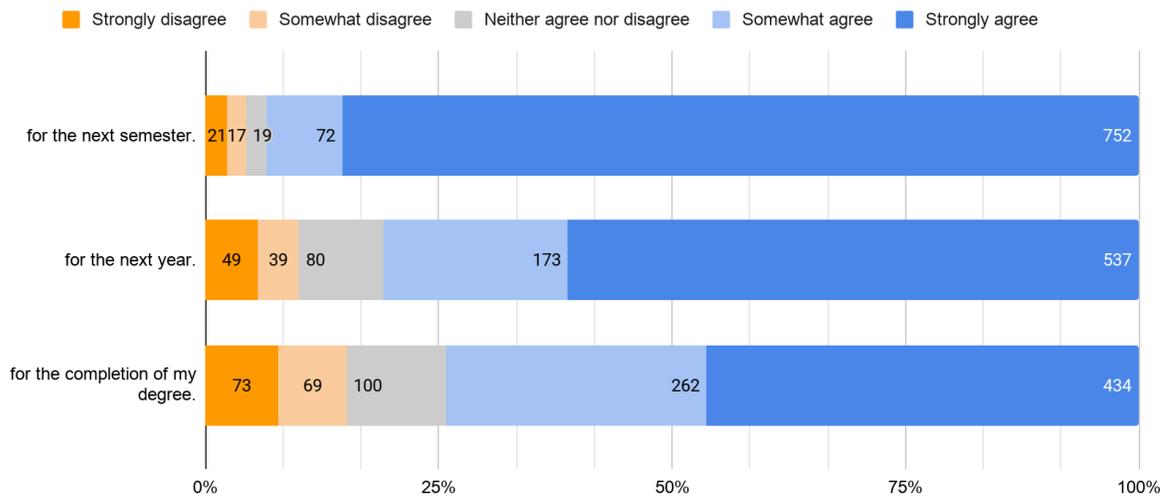
4.1 Funding Source Understanding

I understand...



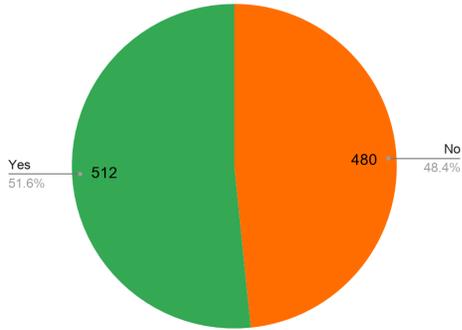
4.2 Funding Security

I know my funding is secured...

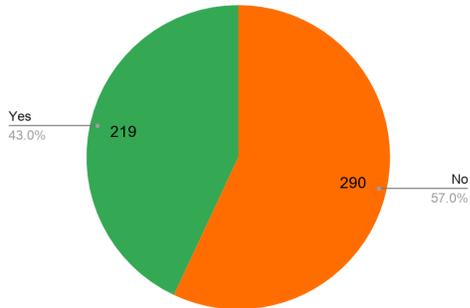


5. Teaching Assistance (TA-ing)

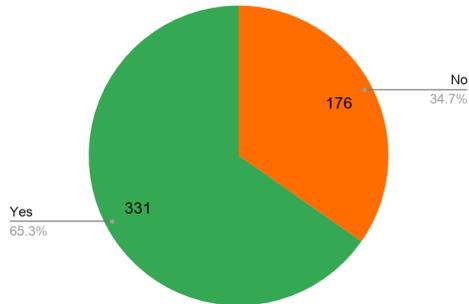
5.1 I have been a TA for a course at MIT



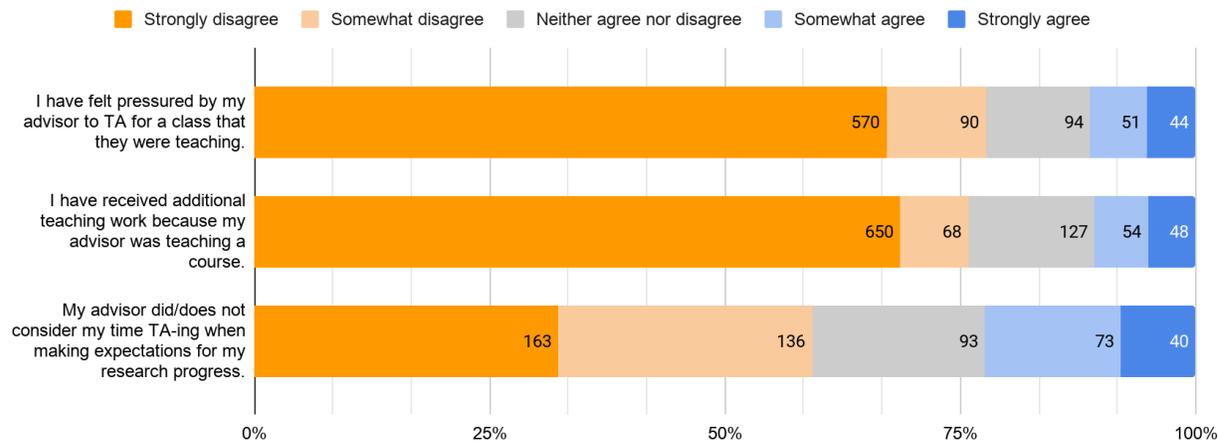
5.2 I have been a TA for a course that my advisor was teaching



5.3 My TA-ship provided financial support for my graduate studies that semester

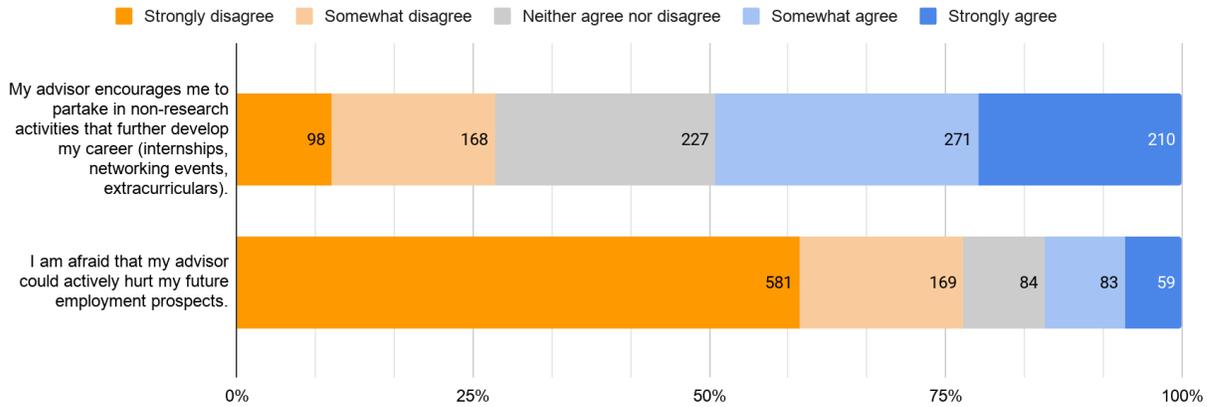


5.4 TAs and Advisors



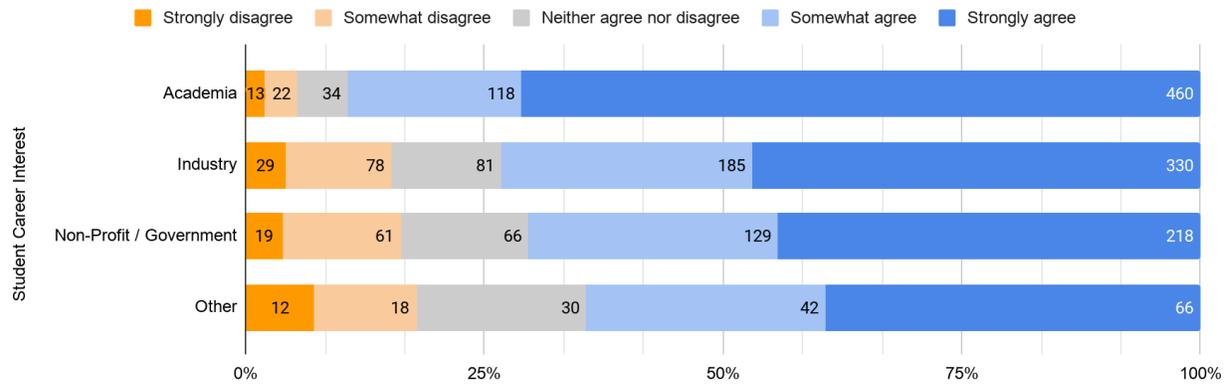
6. Career Development

6.1 Future Employment & Advisors

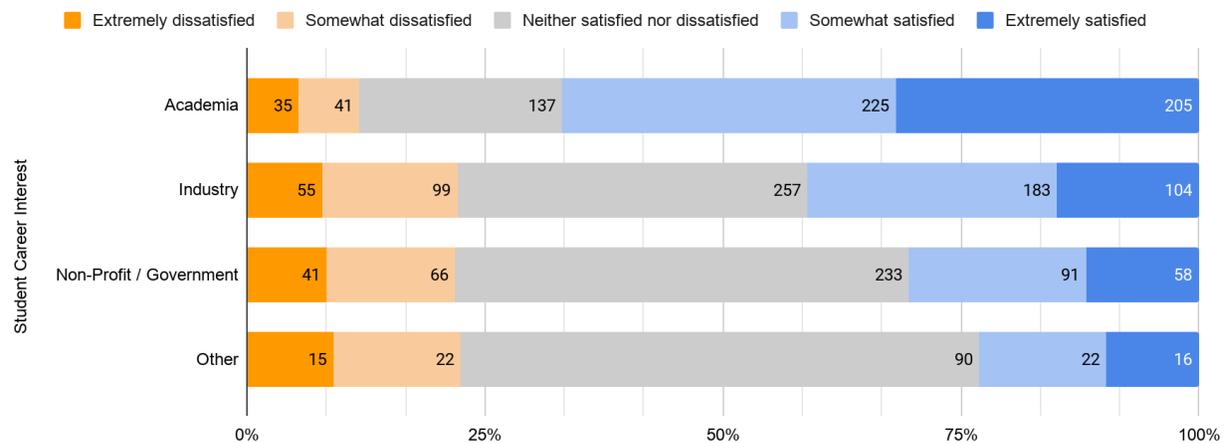


6.2 Comfort Expressing Interest in Career Paths

I feel comfortable expressing to your advisor your interest in pursuing the following career paths

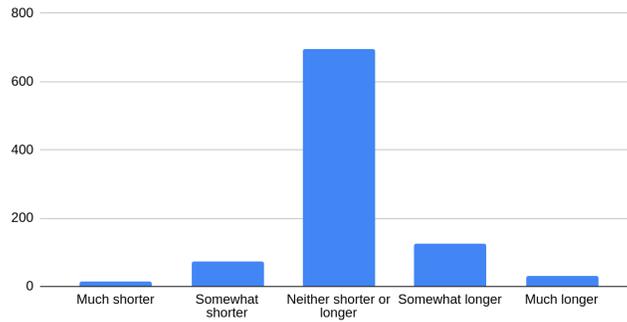


6.3 Satisfaction of Advisor's Career Advice

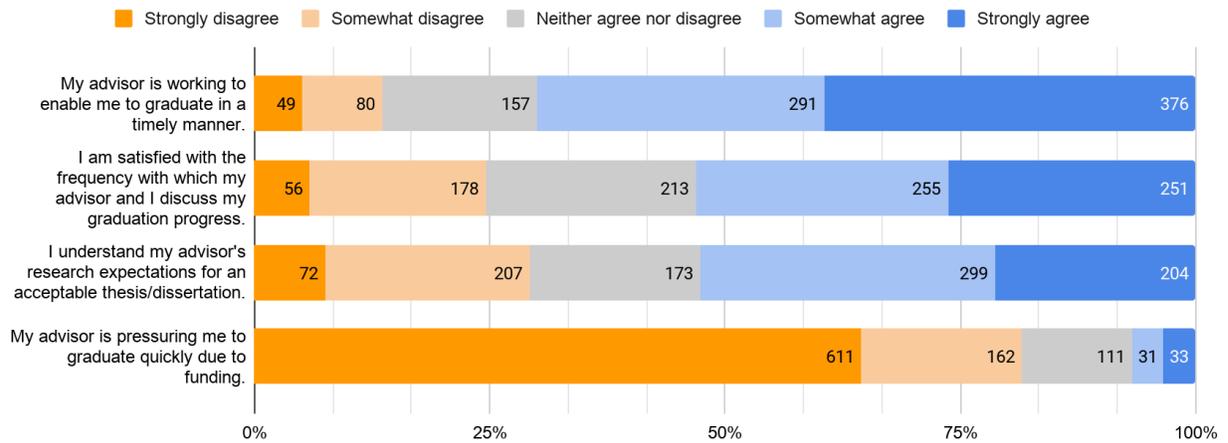


7. Graduating

My advisor's expected graduation timeline is _____ than my personal goal graduation timeline.

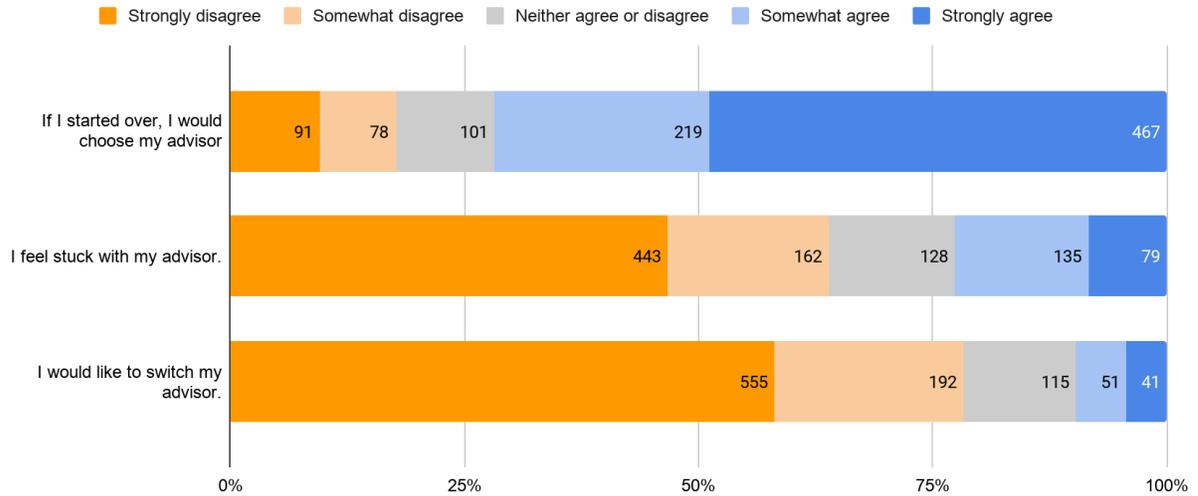


7.2 Advisors and Graduating

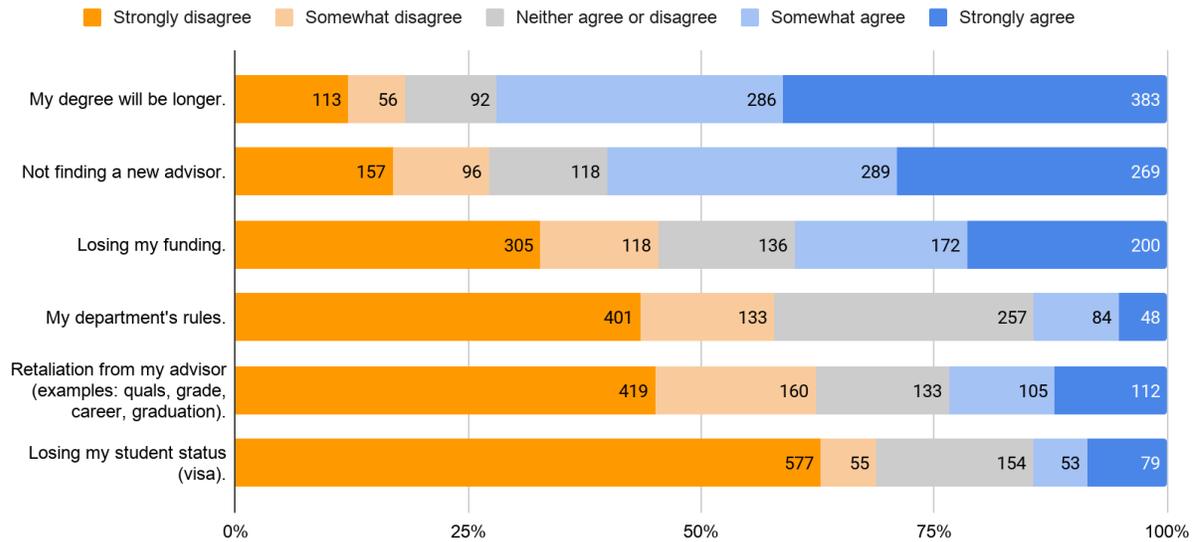


8. Advisor Satisfaction and Switching Advisors

8.1 Advisor Satisfaction

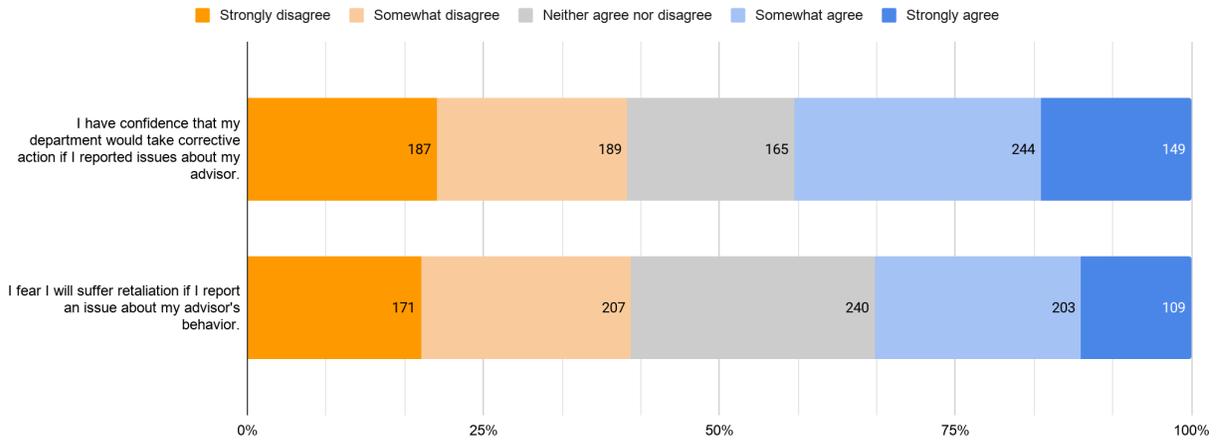


8.2 Obstacles to Switching Advisors

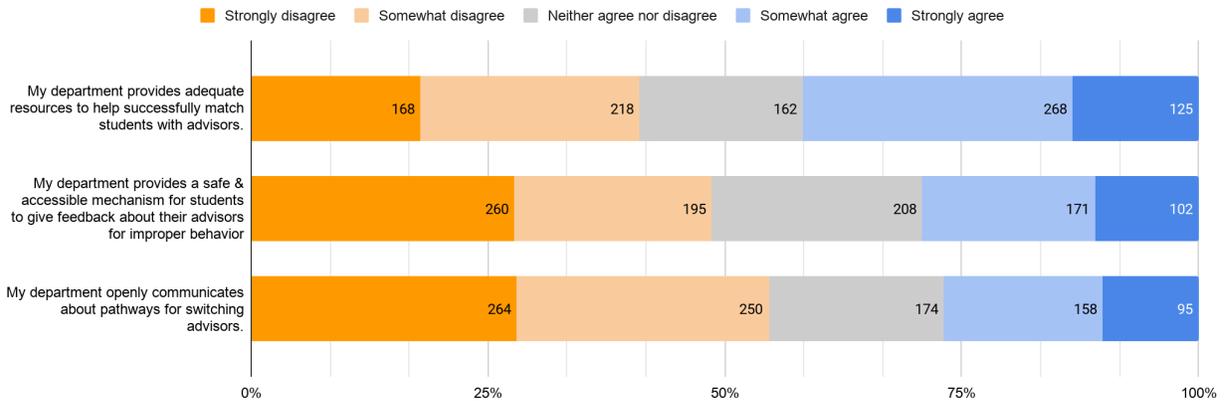


9. Support & Reporting

9.1 Reporting Advisor Behavior

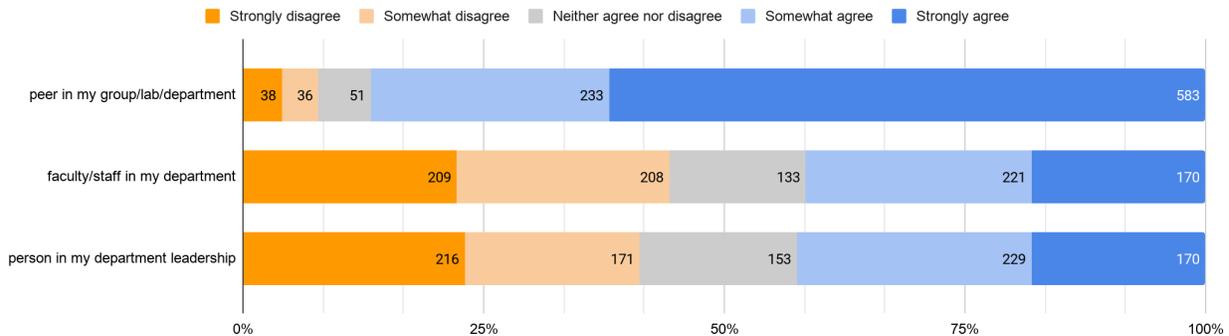


9.2 Department Resources



9.3 Comfort Talking to Department Personnel

I know a _____ who I feel comfortable talking to about advisor issues



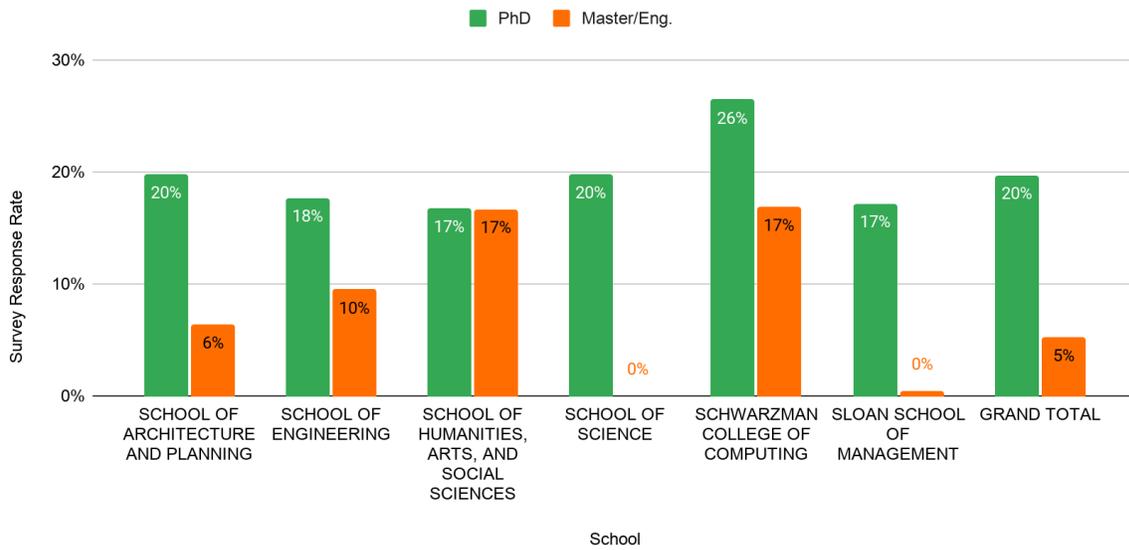
A. Appendix: Demographics

Response Rates

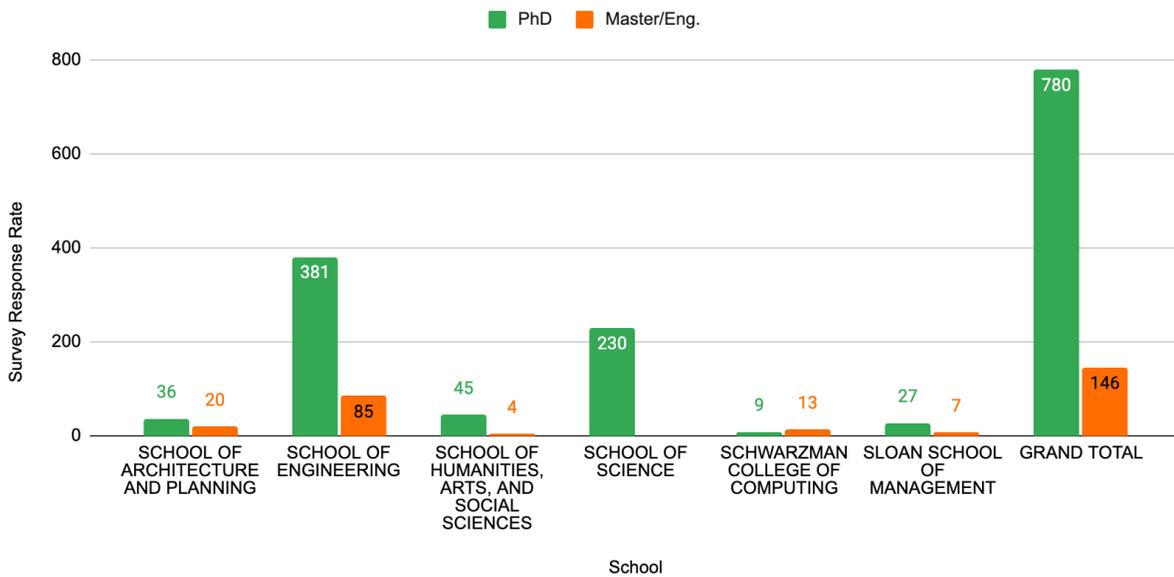
MIT-wide data taken from 2020-2021 enrollment data.

[Source: <https://registrar.mit.edu/statistics-reports/enrollment-statistics-year>]

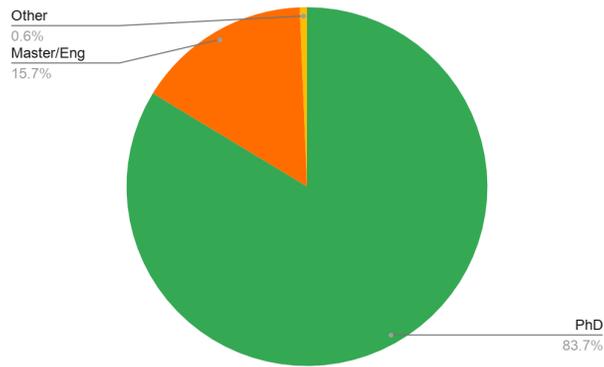
A1. Response Rate by Program Type & School



A1. Response Rate by Program Type & School

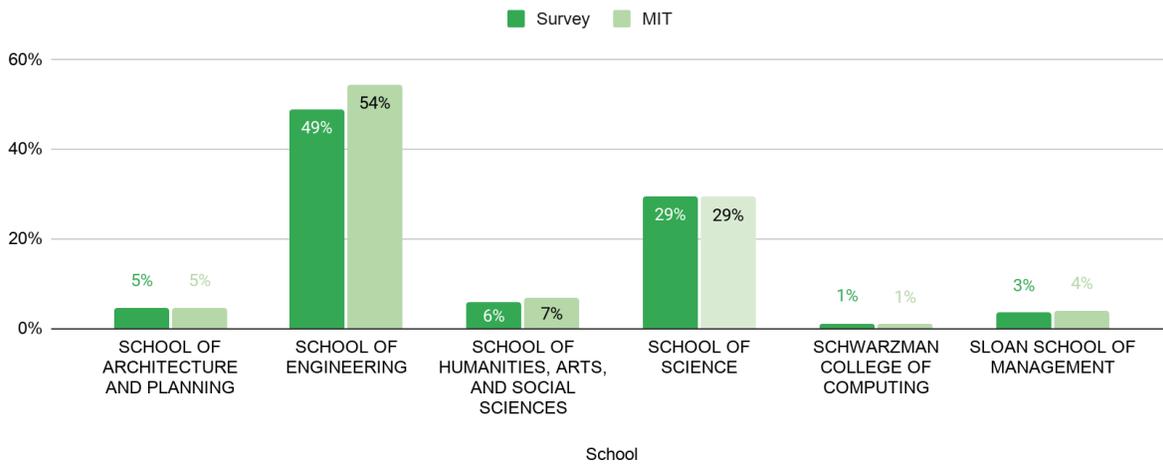


A2. Response Breakdown by Degree



A3. Response Breakdown by School

PhD Only, Compared to MIT-wide Enrollment AY20-21



*Note: "Other" category includes interdisciplinary programs

URMs (PhDs-Only)

A4. Response Breakdown by URM		
Group	% Survey Respondents	% MIT Enrolled Students
Female	48%	36%
Asian	29%	13%
Black or African American	2%	2%
Hispanic or Latino	8%	5%

Note: Percentage calculated from all responses (including non-responses). Students that selected multiple ethnicities counted in each ethnicity.