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 (semestery 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](https://www.nasm.gov) 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...

- respects my identity (gender, sexuality, ethnicity, etc.): 15 strongly disagree, 60 somewhat disagree, 119 neither nor disagree, 841 somewhat agree, 841 strongly agree.
- gives me credit for my contributions: 22 strongly disagree, 38 somewhat disagree, 62 neither nor disagree, 741 somewhat agree, 741 strongly agree.
- respects my academic commitments outside of research (quals, classes...): 23 strongly disagree, 38 somewhat disagree, 45 neither nor disagree, 722 somewhat agree, 722 strongly agree.
- interacts with me in a respectful manner: 30 strongly disagree, 31 somewhat disagree, 122 neither nor disagree, 846 somewhat agree, 846 strongly agree.
- values my research contributions: 26 strongly disagree, 49 somewhat disagree, 68 neither nor disagree, 660 somewhat agree, 660 strongly agree.
- cares about me achieving my personal goals (graduating, research, etc...): 38 strongly disagree, 49 somewhat disagree, 67 neither nor disagree, 669 somewhat agree, 669 strongly agree.
- promotes a good work-life balance: 48 strongly disagree, 90 somewhat disagree, 112 neither nor disagree, 513 somewhat agree, 513 strongly agree.
- clearly communicates their expectations of me as their advisee: 94 strongly disagree, 148 somewhat disagree, 140 neither nor disagree, 293 somewhat agree, 293 strongly agree.

1.2 Advisor Interactions

I feel comfortable...

- raising issues of safety with my advisor: 43 strongly disagree, 38 somewhat disagree, 124 neither nor disagree, 232 somewhat agree, 605 strongly agree.
- expressing my professional opinion around my advisor: 46 strongly disagree, 53 somewhat disagree, 54 neither nor disagree, 296 somewhat agree, 604 strongly agree.
- approaching my advisor when I need help: 58 strongly disagree, 87 somewhat disagree, 91 neither nor disagree, 329 somewhat agree, 488 strongly agree.
- meeting with my advisor without tangible progress (experimental or theoretical results, paper): 97 strongly disagree, 161 somewhat disagree, 143 neither nor disagree, 284 somewhat agree, 369 strongly agree.

Online Results: gsc.mit.edu/advising-survey/results
2. Research Guidance

### 2.1 Research Guidance

<table>
<thead>
<tr>
<th>Item</th>
<th>Strongly disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotes ethical research practices</td>
<td>151</td>
<td>65</td>
<td>173</td>
<td>739</td>
<td></td>
</tr>
<tr>
<td>Demonstrates interest in my research projects</td>
<td>34</td>
<td>60</td>
<td>243</td>
<td>618</td>
<td></td>
</tr>
<tr>
<td>Assists in finalizing/publishing completed projects</td>
<td>37</td>
<td>88</td>
<td>159</td>
<td>221</td>
<td>514</td>
</tr>
<tr>
<td>Is open to letting students switch projects</td>
<td>26</td>
<td>82</td>
<td>213</td>
<td>289</td>
<td>396</td>
</tr>
<tr>
<td>Encourages me to attend conferences/workshops</td>
<td>41</td>
<td>87</td>
<td>157</td>
<td>254</td>
<td>478</td>
</tr>
<tr>
<td>Responds to emails/messages/chats in a timely manner</td>
<td>39</td>
<td>87</td>
<td>66</td>
<td>215</td>
<td>611</td>
</tr>
</tbody>
</table>

### 2.2 Research Guidance Satisfaction

<table>
<thead>
<tr>
<th>Item</th>
<th>Extremely dissatisfied</th>
<th>Somewhat dissatisfied</th>
<th>Neither satisfied nor dissatisfied</th>
<th>Somewhat satisfied</th>
<th>Extremely satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>The availability of my advisor</td>
<td>62</td>
<td>100</td>
<td>91</td>
<td>260</td>
<td>501</td>
</tr>
<tr>
<td>The frequency of one-on-one meetings with my advisor</td>
<td>65</td>
<td>111</td>
<td>112</td>
<td>232</td>
<td>496</td>
</tr>
<tr>
<td>The quality of my advisor’s research guidance</td>
<td>86</td>
<td>108</td>
<td>81</td>
<td>328</td>
<td>412</td>
</tr>
</tbody>
</table>

Online Results: gsc.mit.edu/advising-survey/results
3. Group/Lab Management

### 3.1 Research Group Climate
I feel...

- **disrespected in my lab.**
  - Strongly disagree: 614
  - Somewhat disagree: 123
  - Neither agree nor disagree: 58
  - Somewhat agree: 27
  - Strongly agree: 22

- **comfortable expressing my opinion in lab/group spaces.**
  - Strongly disagree: 24
  - Somewhat disagree: 61
  - Neither agree nor disagree: 72
  - Somewhat agree: 379

- **excluded by colleagues in my research group/labs.**
  - Strongly disagree: 502
  - Somewhat disagree: 191
  - Neither agree nor disagree: 76
  - Somewhat agree: 52
  - Strongly agree: 22

- **I receive a larger share of lab administrative duties than other lab members.**
  - Strongly disagree: 386
  - Somewhat disagree: 165
  - Neither agree nor disagree: 127
  - Somewhat agree: 115
  - Strongly agree: 47

### 3.2 Research Group Supervision
My advisor effectively...

- **cultivates an inclusive & accepting environment.**
  - Strongly disagree: 31
  - Somewhat disagree: 37
  - Neither agree nor disagree: 95
  - Somewhat agree: 248
  - Strongly agree: 430

- **cultivates a collaborative environment.**
  - Strongly disagree: 42
  - Somewhat disagree: 62
  - Neither agree nor disagree: 86
  - Somewhat agree: 253
  - Strongly agree: 402

- **runs meetings.**
  - Strongly disagree: 49
  - Somewhat disagree: 85
  - Neither agree nor disagree: 98
  - Somewhat agree: 297
  - Strongly agree: 313

- **handles conflicts within my research group.**
  - Strongly disagree: 71
  - Somewhat disagree: 101
  - Neither agree nor disagree: 259
  - Somewhat agree: 219
  - Strongly agree: 180

- **manages tasks and people.**
  - Strongly disagree: 74
  - Somewhat disagree: 118
  - Neither agree nor disagree: 112
  - Somewhat agree: 288
  - Strongly agree: 249
4. Funding

4.1 Funding Source Understanding
I understand...

- The source of my current research funding: 44 strongly disagree, 93 somewhat disagree, 43 neither agree nor disagree, 320 somewhat agree, 454 strongly agree.

- What is expected of me to maintain my funding (for example, research progress, publications, technical reports): 48 strongly disagree, 118 somewhat disagree, 116 neither agree nor disagree, 342 somewhat agree, 322 strongly agree.

4.2 Funding Security
I know my funding is secured...

- For the next semester: 2117 strongly disagree, 19 somewhat disagree, 72 neither agree nor disagree, 752 strongly agree.

- For the next year: 49 strongly disagree, 39 somewhat disagree, 80 neither agree nor disagree, 537 strongly agree.

- For the completion of my degree: 73 strongly disagree, 69 somewhat disagree, 100 neither agree nor disagree, 434 strongly agree.
5. Teaching Assistance (TA-ing)

5.1 I have been a TA for a course at MIT

- Yes: 512 (51.6%)
- No: 480 (48.4%)

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

- Yes: 219 (43.0%)
- No: 290 (57.0%)

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

- Yes: 331 (65.3%)
- No: 176 (34.7%)

5.4 TAs and Advisors

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

- I have felt pressured by my advisor to TA for a class that they were teaching: 570 (44%)
- I have received additional teaching work because my advisor was teaching a course: 650 (48%)
- My advisor did/does not consider my time TA-ing when making expectations for my research progress: 163 (40%)

Online Results: gsc.mit.edu/advising-survey/results
6. Career Development

6.1 Future Employment & Advisors

- My advisor encourages me to partake in non-research activities that further develop my career (internships, networking events, extracurriculars).
- I am afraid that my advisor could actively hurt my future employment prospects.

6.2 Comfort Expressing Interest in Career Paths

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

- Academia
- Industry
- Non-Profit / Government
- Other

6.3 Satisfaction of Advisor’s Career Advice

- Extremely dissatisfied
- Somewhat dissatisfied
- Neither satisfied nor dissatisfied
- Somewhat satisfied
- Extremely satisfied

Online Results: gsc.mit.edu/advising-survey/results
7. Graduating

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

7.2 Advisors and Graduating

- My advisor is working to enable me to graduate in a timely manner.
  - Strongly disagree: 49
  - Somewhat disagree: 80
  - Neither agree nor disagree: 157
  - Somewhat agree: 291
  - Strongly agree: 376

- I am satisfied with the frequency with which my advisor and I discuss my graduation progress.
  - Strongly disagree: 56
  - Somewhat disagree: 178
  - Neither agree nor disagree: 213
  - Somewhat agree: 255
  - Strongly agree: 251

- I understand my advisor's research expectations for an acceptable thesis/dissertation.
  - Strongly disagree: 72
  - Somewhat disagree: 207
  - Neither agree nor disagree: 173
  - Somewhat agree: 299
  - Strongly agree: 204

- My advisor is pressuring me to graduate quickly due to funding.
  - Strongly disagree: 611
  - Somewhat disagree: 162
  - Neither agree nor disagree: 111
  - Somewhat agree: 31
  - Strongly agree: 33

Online Results:  gsc.mit.edu/advising-survey/results
8. Advisor Satisfaction and Switching Advisors

8.1 Advisor Satisfaction

- If I started over, I would choose my advisor:
  - Strongly disagree: 91
  - Somewhat disagree: 78
  - Neither agree or disagree: 101
  - Somewhat agree: 219
  - Strongly agree: 467

- I feel stuck with my advisor:
  - Strongly disagree: 443
  - Somewhat disagree: 162
  - Neither agree or disagree: 128
  - Somewhat agree: 135
  - Strongly agree: 79

- I would like to switch my advisor:
  - Strongly disagree: 555
  - Somewhat disagree: 192
  - Neither agree or disagree: 115
  - Somewhat agree: 51
  - Strongly agree: 41

8.2 Obstacles to Switching Advisors

- My degree will be longer:
  - Strongly disagree: 113
  - Somewhat disagree: 56
  - Neither agree or disagree: 92
  - Somewhat agree: 286
  - Strongly agree: 383

- Not finding a new advisor:
  - Strongly disagree: 157
  - Somewhat disagree: 96
  - Neither agree or disagree: 118
  - Somewhat agree: 289
  - Strongly agree: 269

- Losing my funding:
  - Strongly disagree: 305
  - Somewhat disagree: 118
  - Neither agree or disagree: 136
  - Somewhat agree: 172
  - Strongly agree: 200

- My department's rules:
  - Strongly disagree: 401
  - Somewhat disagree: 133
  - Neither agree or disagree: 257
  - Somewhat agree: 84
  - Strongly agree: 48

- Retaliation from my advisor (examples: quals, grade, career, graduation):
  - Strongly disagree: 419
  - Somewhat disagree: 160
  - Neither agree or disagree: 133
  - Somewhat agree: 105
  - Strongly agree: 112

- Losing my student status (visa):
  - Strongly disagree: 577
  - Somewhat disagree: 55
  - Neither agree or disagree: 154
  - Somewhat agree: 53
  - Strongly agree: 79

Online Results: gsc.mit.edu/advising-survey/results
9. Support & Reporting

9.1 Reporting Advisor Behavior

- I have confidence that my department would take corrective action if I reported issues about my advisor.
  - Strongly disagree: 187
  - Somewhat disagree: 189
  - Neither agree nor disagree: 165
  - Somewhat agree: 244
  - Strongly agree: 149

- I fear I will suffer retaliation if I report an issue about my advisor’s behavior.
  - Strongly disagree: 171
  - Somewhat disagree: 207
  - Neither agree nor disagree: 240
  - Somewhat agree: 203
  - Strongly agree: 109

9.2 Department Resources

- My department provides adequate resources to help successfully match students with advisors.
  - Strongly disagree: 166
  - Somewhat disagree: 218
  - Neither agree nor disagree: 162
  - Somewhat agree: 266
  - Strongly agree: 125

- My department provides a safe & accessible mechanism for students to give feedback about their advisors for improper behavior.
  - Strongly disagree: 260
  - Somewhat disagree: 195
  - Neither agree nor disagree: 208
  - Somewhat agree: 171
  - Strongly agree: 102

- My department openly communicates about pathways for switching advisors.
  - Strongly disagree: 264
  - Somewhat disagree: 250
  - Neither agree nor disagree: 174
  - Somewhat agree: 150
  - Strongly agree: 95

9.3 Comfort Talking to Department Personnel

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

- Strongly disagree: 38
  - Somewhat disagree: 36
  - Neither agree nor disagree: 51
  - Somewhat agree: 233
  - Strongly agree: 583

- faculty/staff in my department: 269
  - Somewhat disagree: 206
  - Neither agree nor disagree: 133
  - Somewhat agree: 221
  - Strongly agree: 170

- person in my department leadership: 216
  - Somewhat disagree: 171
  - Neither agree nor disagree: 153
  - Somewhat agree: 229
  - Strongly agree: 170

Online Results:  gsc.mit.edu/advising-survey/results
A. Appendix: Demographics

Response Rates

MIT-wide data taken from 2020-2021 enrollment data.
[Source: https://registrar.mit.edu/statistics-reports/enrollment-statistics-year]

Online Results: gsc.mit.edu/advising-survey/results
A2. Response Breakdown by Degree

- PhD: 83.7%
- MasterEng: 15.7%
- Other: 0.6%

A3. Response Breakdown by School

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

<table>
<thead>
<tr>
<th>School</th>
<th>Survey</th>
<th>MIT %</th>
</tr>
</thead>
<tbody>
<tr>
<td>School of Architecture and Planning</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>School of Engineering</td>
<td>49%</td>
<td>54%</td>
</tr>
<tr>
<td>School of Humanities, Arts, and Social Sciences</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>School of Science</td>
<td>29%</td>
<td>29%</td>
</tr>
<tr>
<td>Schumacher College of Computing</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Sloan School of Management</td>
<td>3%</td>
<td>4%</td>
</tr>
</tbody>
</table>

*Note: “Other” category includes interdisciplinary programs

URMs (PhDs-Only)

<table>
<thead>
<tr>
<th>Group</th>
<th>% Survey Respondents</th>
<th>% MIT Enrolled Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>48%</td>
<td>36%</td>
</tr>
<tr>
<td>Asian</td>
<td>29%</td>
<td>13%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>8%</td>
<td>5%</td>
</tr>
</tbody>
</table>

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

Online Results: gsc.mit.edu/advising-survey/results