

## Supplementary Data

### Complete List of Survey Questions

#### *MSTP seminar and program feedback*

We are conducting this survey to collect experiences and opinions from MSTP students with the goal of fostering participation of all students in MSTP group settings. We are additionally seeking feedback on experiences in our weekly seminar.

Responses are anonymous and will be assessed in aggregate form. The purpose of this survey is to make our program better in every way we can. We greatly appreciate your time and thoughtful responses.

There are a total of five sections in this survey. It should only take around 15 minutes to complete.

1. Section 1
  - a. I would rate the overall quality of our weekly MSTP seminar as [choose one answer]
    - i. Poor
    - ii. Fair
    - iii. Good
    - iv. Very good
    - v. Excellent
    - vi. Other: [free text option]
  - b. Do you find the 'image-challenge' at the beginning of each of our weekly seminars to be a useful exercise? [choose one answer]
    - i. Yes, please continue!
    - ii. I could take it or leave it.
    - iii. No, I do not really find it useful.
    - iv. Other: [free text option]
  - c. Do you have any ideas/suggestions on how our weekly seminar can be improved?
    - i. [Long answer text option]
2. Section 2
  - a. How often do you ask questions at our weekly MSTP seminar? [choose one answer]
    - i. Never
    - ii. Rarely (~once per semester)
    - iii. Infrequently (~2-3 times per semester)
    - iv. Sometimes (~4-7 times per semester)
    - v. Frequently (most seminars)
    - vi. Always (every seminar)
  - b. What are some reasons you DO ask questions in seminar? [choose all that apply]
    - i. I am interested in the topic
    - ii. Asking questions keeps me engaged
    - iii. I am trying to help the speaker develop his/her research
    - iv. I want to get practice participating in scientific discussions
    - v. I feel this is an expectation of students at seminar
    - vi. I disagree with the speaker's statements and want to challenge them
    - vii. Other: [free text option]
  - c. What are some reasons you DO NOT ask questions in seminar? [choose all that apply]
    - i. I feel as though I do not know the topic well enough
    - ii. I feel seminar discussions have too much jargon
    - iii. I feel the speaker is not explaining things well
    - iv. I feel my questions are stupid questions
    - v. I do not want to be embarrassed
    - vi. I do not have questions I want to ask
    - vii. I zone out a bit in seminar (we are not judging) or I am too tired or I am working on other things
    - viii. Other: [free text option]
  - d. Please elaborate on your experiences regarding participating in seminar, if you wish.
    - i. [Long answer text option]
3. Section 3
  - a. In your experience during the medical school portion of your training, how supported do you feel? [choose one answer]
    - i. 1: Not at all supported
    - ii. 2
    - iii. 3
    - iv. 4
    - v. 5: Very well supported
  - b. In your experience during the medical school portion of your training, have you personally experienced discrimination based on your [choose all that apply]
    - i. Gender
    - ii. Race or ethnicity
    - iii. Sexual orientation
    - iv. Other: [free text option]
  - c. Please elaborate on these experiences, if you wish.
    - i. [Long answer text option]
  - d. In your experience during the PhD portion of your training, how supported do you feel? [choose one answer]
    - i. 1: Not at all supported
    - ii. 2
    - iii. 3
    - iv. 4
    - v. 5: Very well supported
  - e. In your experience during the PhD portion of your training, have you personally experienced discrimination based on your [choose all that apply]
    - i. Gender
    - ii. Race or ethnicity
    - iii. Sexual orientation
    - iv. Other: [free text option]
  - f. Please elaborate on these experiences, if you wish.
    - i. [Long answer text option]
  - g. When you are experiencing challenges or hardship, who do you turn to for help and support? [choose all that apply]
    - i. Peers or colleagues
    - ii. Mentors
    - iii. Student groups or extracurricular groups
    - iv. The MSTP
    - v. Professional support (e.g. counseling)
    - vi. Other: [free text option]

4. Section 4
  - a. How do you think gender impacts perceptions of competence in science and medicine? Feel free to elaborate or share a personal anecdote.
    - i. [Long answer text option]
  - b. To what degree do you believe gender impact perceptions of competence in science and medicine? [choose one answer]
    - i. 1: Not at all
    - ii. 2
    - iii. 3
    - iv. 4
    - v. 5: It is the most important factor of perceived competence
  - c. Do you have any ideas for changes we can make within our program to better recruit/retain/support students of color and women?
    - i. [Long answer text option]
5. Section 5
  - a. Do you identify as [choose one answer]
    - i. Male
    - ii. Female
    - iii. Gender nonconforming
    - iv. Other: [free text option]
  - b. Would you define your race or ethnicity as [choose one answer]
    - i. American Indian or Alaska Native
    - ii. Asian
    - iii. Hispanic, Latinx, or Spanish origin
    - iv. Black or African American
    - v. Native Hawaiian or other Pacific Islander
    - vi. White or Caucasian
    - vii. Other: [free text option]
  - c. Is it okay to paraphrase your responses for a group MSTP discussion? As a reminder, all responses are being collected anonymously. [choose one answer]
    - i. Yes
    - ii. No

SUPPLEMENTARY TABLE S1. SUMMARY STATISTICS OF QUESTION-ASKING AT WEEKLY SEMINAR FROM THE 2017–2018 AND 2018–2019 ACADEMIC YEARS

	<i>Mean number of attendees (SD)</i>	<i>Mean number of attendees who asked ≥1 question(s) (SD)</i>	<i>Percent attendees who asked ≥1 question</i>
Summary of seminar attendance and question asking by student participants at the UW MSTP seminar during 15 seminar talks held over the academic year 2017–2018.			
Male	18.20 (2.98)	5.93 (3.13)	32.6
Female	11.93 (3.10)	2.20 (1.82)	18.4
Total	30.13 (5.85)	8.13 (4.45)	26.99
Summary of seminar attendance and question asking by student participants at the UW MSTP seminar during 17 seminar talks held over the academic year 2018–2019.			
Male	23.41 (2.92)	4.94 (2.33)	21.11
Female	13.41 (2.83)	2.41 (1.58)	17.98
Total	36.82 (5.34)	7.35 (3.53)	19.97

SD, standard deviation.

SUPPLEMENTARY TABLE S2. SUMMARY STATISTICS OF THE NUMBERS OF INDIVIDUALS INVOLVED IN EACH PART OF THIS STUDY

<i>Study or metric</i>	<i>Total persons</i>	<i>Women</i>	<i>Men</i>	<i>Did not endorse a gender (surveys only)</i>	<i>Statistical analysis (where applicable)</i>
Students in the UW MSTP, 1997–2019	215	89	126		
Students who matriculated to UW MSTP, 1997–2019	191	81	110		
Students who graduated from UW MSTP, 1997–2019	132	53	79		
Publications analysis (students who graduated 1997–2019)	132	53	79		Quasi-poisson generalized linear model
FWCI analysis (students who graduated 1997–2019)	132	53	79		Unpaired <i>t</i> -test
Student symposium speakers, 1997–2018	76	34	42		Exact binomial test
Faculty symposium speakers, 1997–2018	30	6	24		Exact binomial test
Keynote symposium speakers, 1997–2018	19	4	15		Exact binomial test
Students enrolled in UW MSTP, 2017–2018	71	31	40		
Students enrolled in UW MSTP, 2018–2019	71	30	41		
Average student seminar attendance, 2017–2018 (authors K.M.B. and A.S.H. not counted)	30	12	18		Logistic regression (question-asking analysis)
Average student seminar attendance, 2018–2019 (authors K.M.B. and A.S.H. not counted)	36	13	23		Logistic regression (question-asking analysis)
Responded to program survey, April 2018 <sup>a</sup>	24	11	12	1	
Responded to program survey, April 2019 <sup>a</sup>	40	16	22	2	

<sup>a</sup>Note that the total number of students eligible to take the survey each year was 69 students: the total number of students in the program (71) less the two MSTP student authors (K.M.B. and A.S.H.).  
FWCI, Field-Weight Citation Impact.

SUPPLEMENTARY TABLE S3. SUMMARY STATISTICS OF SURVEY RESPONSES COLLECTED IN THE 2017–2018 AND 2018–2019 ACADEMIC YEARS

<i>What are some reasons you DO ask questions in seminar?</i>	<i>Percentage of women who checked this answer</i>		<i>Percentage of men who checked this answer</i>	
	<i>2018</i>	<i>2019</i>	<i>2018</i>	<i>2019</i>
Summary of survey answers from self-identified women and men regarding their reasons for asking questions in a weekly MSTP seminar.				
I am interested in the topic	0.82	0.81	1.00	0.95
Asking questions keeps me engaged	0.18	0.25	0.42	0.23
I am trying to help the speaker develop his/her research	0.09	0.13	0.33	0.27
I want to get practice participating in scientific discussions	0.09	0.25	0.33	0.50
I feel this is an expectation of students at seminar	0.00	0.06	0.17	0.18
I disagree with the speaker's statements and want to challenge them	0.00	0.00	0.25	0.05
Other: [free text option]	0.00	0.00	0.00	0.00
Summary of survey answers from self-identified women and men regarding their reasons for not asking questions in a weekly MSTP seminar.				
I feel as though I do not know the topic well enough	0.91	0.94	0.83	0.68
I feel seminar discussions have too much jargon	0.18	0.19	0.00	0.05
I feel the speaker is not explaining things well	0.27	0.13	0.08	0.09
I feel my questions are stupid questions	0.72	0.44	0.42	0.18
I do not want to be embarrassed	0.55	0.56	0.08	0.23
I do not have questions I want to ask	0.55	0.75	0.33	0.68
I zone out a bit in seminar (we are not judging) or I am too tired or I am working on other things	0.73	0.56	0.33	0.55
Other: [free text option]	0.55	0.06	0.17	0.18