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## Supplemental Materials

for

# Remote Learning Barriers and Opportunities for Graduate Student and Postdoctoral Learners in Career and Professional Skill Development: A Case Study

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## Block 1

Thank you for taking 5 minutes to complete this survey. The survey will ask questions about your participation and engagement in remote career and professional development activities from March – August 2020. It will also ask for your preference about the format of future professional development events.

Participation is completely voluntary and response to any survey questions indicates your consent. Data collection is anonymous, however; once the survey is initiated (answering a question), your data cannot be removed. There are no negative consequences to participation, whatever you decide. If you have any questions or concerns, please contact Shoba Subramanian at *<email and phone number provided here>*. More details on the research and consent here *<link to consent here>*.

**Since the COVID-19 Work-From-Home and Research Ramp-Down response in March, have you engaged in career and professional development activities (workshops, webinars, etc.) with...**

	Yes	No	Not Sure
the Office of Graduate and Postdoctoral Studies (OGPS)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Yes	No	Not Sure
other University of Michigan offices (University Career Center, Rackham, etc)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
outside the university (NIH, Coursera, etc)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Has your **frequency** of participation in professional development activities during Work-From-Home **increased** in comparison to before Work-From-Home?

Yes	No	Not Sure
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Based on the professional development events you attended during Work-From-Home, please share how much each factor influenced your decision to participate.**

	Not a factor in attending	Somewhat of a factor in attending	Strong factor in attending	N/A
Flexible schedule during Work-From-Home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Virtual format (e.g. Zoom)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encouragement from my PI to attend events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased awareness of professional development events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pressure to go on the job market soon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not a factor in attending	Somewhat of a factor in attending	Strong factor in attending	N/A
Interest in new science communication offerings (manuscript writing, peer review, adobe illustrator etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**What barriers have you faced before and during Work-From-Home that have impacted your ability to participate in professional development activities?**

	BEFORE Work- From-Home	DURING Work- From-Home	Neither
Conflict with date/time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unaware of offerings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conflict with research responsibilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of PI support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transportation/Location	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Caring for dependants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of stable internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling overwhelmed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Personal conflict	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**In what ways do you prefer to engage in a virtual event? Select all that apply.**

- Listen only
- Listen and video on
- Respond to Polls
- Breakout rooms (small group discussion/activity)

- Watch session recording afterward
- Other

**In what ways do you prefer to engage with a presenter during a virtual session?  
Select all that apply.**

- Submit questions before the event
- Ask questions or comments via the chat
- Unmute and ask questions verbally
- Respond to polls
- Follow-up with presenter (e.g. via email)

**As we look to future semesters when in-person career & professional events are a safe option, which would you prefer?**

- I would prefer to engage in remote events most of the time.
- I would prefer to engage in in-person events most of the time.

**Select 3 reasons you would prefer mostly remote career & professional development activities in the future.**

- I don't lose time on cross-campus transportation
- I learn equally as good or better in remote situations
- I have caregiving duties and remote learning helps me juggle duties
- I feel more comfortable with virtual engagement (e.g. posting questions in chat vs asking questions in person)
- Remote learning permits inclusive teaching such as closed captioning, which I find helpful
- I am able to watch recorded sessions afterward
- Remote options help me to prioritize career & development activities, despite other barriers
- Other

Select 3 reasons you would prefer in person career & professional development activities in the future.

- I learn better when my instructor is physically in the same space (e.g. enables asking questions; organic engagement)
- I prefer when my environment resembles a physical classroom (including presence of my peers)
- I prefer the social interaction of in-person events
- I find it hard to stay focused during remote activities
- An in-person event encourages me to leave the lab/work for a short time
- I prioritize in-person career & professional development activities more than remote options
- Other

In response to the pandemic, OGPS launched a new science communication series. To support our future planning, please identify which topics you'd be interested in the future for an advanced and/or a repeat session.

- Creating Figures in Illustrator (Dr. Barolo)
- Writing Review Articles (Dr. Hagan)
- Manuscript Writing (Dr. Puthenveedu)
- Manuscript Peer Review (Dr. O'Riordan)
- Giving Scientific Presentations (Dr. Schnell)

Are you affiliated with the Medical School? (e.g. PI is part of the Medical School; you are in a PIBS dept or OGPS program)

Yes

No

I am a ...

- MS Student
- PhD Student
- Postdoctoral Fellow
- Other

**What year of your training are you in?**

**How would you describe your gender?**

- Male
- Female
- Prefer to self describe as \_\_\_\_\_ (non-binary, gender-fluid, agender,  please specify)
- Prefer not to say

**Do you identify with a group under-represented in STEM? (e.g., Black, Latinx, Native American)**

- Yes
- No
- Prefer not to say

**Are you a domestic or international trainee?**

- Domestic
- International
- Prefer not to say

**Please share any additional comments or suggestions. This survey is anonymous.**

Thank you for participating. Be well!

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**Supplemental Data 2A: CPD ad-hoc programs before and during WFH**

<b>Date</b>	<b>Topic</b>	<b>RSVPs</b>	<b>Attended</b>	<b>% RSVPs Attended</b>
1/24/19	Informational Interviews, Elevator	33	17	52%
2/8/19	Transferable Skills	24	15	63%
2/21/19	Time Mangement	53	29	55%
3/1/19	CVs, Resumes, and LinkedIn	61	39	64%
3/7/19	Leadership	53	22	42%
3/22/19	Cover Letters	61	26	43%
4/11/19	Interviewing Skills	54	27	50%
4/25/19	Poster Presentations	46	22	48%
8/2/19	To Postdoc or Not	24	9	38%
8/8/19	Postdoc Panel	22	15	68%
9/13/19	Networking	36	15	42%
9/27/19	CVs and Biosketch	46	24	52%
10/3/19	Resumes	46	18	39%
10/11/19	Cover Letters	75	33	44%
10/25/19	Research, Teaching, and Diversity Statements for Faculty Applications	86	25	29%
10/31/19	Career Exploration (career agnostic) and Individual Development Plans	28	17	61%
11/7/19	Networking	29	9	31%
11/15/19	Informational Interviews and Elevator	33	14	42%
1/17/20	CVs and Resumes	41	21	51%
1/23/20	Career Exploration - Academic	32	23	72%
1/30/20	Career Exploration - Academic	20	11	55%
2/14/20	Cover Letters	20	15	75%
3/19/20	Interview Skills	75	20	27%
3/27/20	Career Exploration (Career Agnostic)	19	11	58%
4/24/20	Career Exploration - Technology	41	29	71%
4/30/20	Career Exploration - Technology	53	37	70%
5/13/20	Career Exploration (Career Agnostic)	44	22	50%
5/21/20	Networking	66	24	36%
5/28/20	Networking	73	16	22%
6/11/20	Transferable Skills	82	39	48%
6/23/20	CVs and Resumes	112	31	28%
6/30/20	Interviewing Skills	89	41	46%
7/9/20	Interviewing Skills	66	10	15%
7/16/20	Teaching & Diversity Statements for Faculty Applications	121	59	49%
7/24/20	Research Statement for Faculty Applications	167	47	28%
7/31/20	Cover Letters	128	38	30%
8/6/20	Delivering a Job Talk	94	28	30%

**Supplemental Data 2B: Science Communication workshops during WFH**

<b>Date</b>	<b>Topic</b>	<b>RSVPs</b>	<b>Attended</b>	<b>% RSVPs Attended</b>
4/21/20	Making Figures in Adobe Illustrator - Basics	312	171	55%
4/27/20	Writing a Review Article	400	304	76%
5/8/20	Making Figures in Adobe Illustrator - Intermediate	278	157	56%
5/19/20	Writing a Scientific Manuscript – Part 1	345	195	57%
5/21/20	Writing a Scientific Manuscript – Part 2	350	148	42%
5/27/20	Understanding the Peer Review Process	142	75	53%
6/9/20	Delivering Scientific Presentations	146	91	62%