

Supplemental Table – Demographic information for Participants in Surveys and Interviews

		Percentage of sample participating in Interviews	Percentage of sample invited for interviews	Percentage of Participants who completed Spring and Fall 2020 surveys	Percentage of population in NGFS 2016 study (Egger et al., 2019)
Institution type	Community College/Junior College	36.4	36.4	36.4	36.4
	Liberal Arts	26.3	26.3	26.3	26.3
	Masters	26.0	26.0	26.0	26.0
	Doctoral	12.8	12.8	12.8	12.8
Position	Adjunct/NTT	18.2	18.2	18.2	18.2
	Assistant	10.5	10.5	10.5	10.5
	Associate	22.0	22.0	22.0	22.0
	Professor	9.4	9.4	9.4	9.4
Discipline	Geology	18.2	18.2	18.2	18.2
	Geoscience Education	18.4	18.4	18.4	18.4
	Meteorology	10.0	10.0	10.0	10.0
	Other	17.4	17.4	17.4	17.4
	Oceanography	27.3	27.3	27.3	27.3
Gender	Male	54.5	54.5	54.5	
	Female	42.1	42.1	42.1	
Dependents	Has dependent under 15 years old	44.0	44.0	44.0	
	Does not have dependent under 15 years old	45.5	45.5	45.5	
Race	White	57.9	57.9	57.9	
	Non-white (including multi-racial)	55.0	55.0	55.0	
Online experience	More than one semester	36.4	36.4	36.4	

Spring 2020 Survey

Demographic Information

Discipline Taught
Institution Type
Position
Years of Teaching Experience
Semesters of Online Experience

Daily Questions

Using a Likert-scale (1 No disruption, 2 Slight disruption, 3 Moderate disruption, 4 Significant disruption, 5 Severe disruption) respondents were asked to complete the following questions daily:

Please rate the level of disruption you are experiencing today with regard to your:
teaching responsibilities
research responsibilities
ability to communicate with your professional community
work-life balance

In open-responses format faculty were asked to respond to the following two prompts:

What is the most important thing you are going to do (or have already done) today?
What is your most important insight from yesterday?

Fall 2020 Survey

Additional Demographics

Gender
Race
Dependents under 15?

Teaching Disruption - Please rate the level of disruption you are experiencing this term with regard to your teaching responsibility

1 No disruption
2 Slight disruption,
3 Moderate disruption
4 Significant disruption
5 Severe disruption

Teaching Modality:

I am teaching a class fully online that I usually teach in person or hybrid
I am teaching a hybrid class that I usually teach in person
I am teaching a course fully online that I typically teach online
I am teaching a course in a hybrid format that I typically teach in a hybrid format
I am teaching an in-person course that I typically teach in-person

Number of course for which delivery format changed:

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Two or more
Single Course
None

When did the change to delivery format take place?

More than 2 months before start of course
Less than 2 months before start of course
After start of course

For courses that changed, to what extent was the faculty member involved?

Not at all
Somewhat
Very Involved

For courses that changed delivery format, who else was involved in teaching the same course?
(choose all that apply)

No one else was involved in teaching the same course
One or more full-time faculty taught the same course during the same term
One or more adjunct faculty taught the same course during the same term
Graduate teaching assistant(s) taught the lab section(s)
I had a graduate and or undergraduate teaching assistant(s) in class with me
I co-taught this course with another faculty member
None of the above

Survey respondents were asked to indicate what changes they have made in their teaching since Fall 2019 by rating their level of agreement with each of 16 items on a scale ranging from 1 (“strongly disagree”) to 5 (“strongly agree”).

I am managing my time differently.
I am incorporating new online tools into my teaching.
I am adapting active learning teaching strategies to an online format in new ways.
I am incorporating new strategies to accommodate different learning needs.
I am facilitating office hour discussions in new ways.
I am including more low stakes assessments.
I am integrating new strategies that promote a more inclusive learning environment.
I am facilitating student to student engagement in new ways.
I am attending to students’ sense of belonging using new practices.
I am preparing more lecture materials.
I am asking students to use an online data set in a way that is new to my instruction.
I am reducing the amount of content covered.
I am including more formative assessments.
I am incorporating assessments that help me better gauge inequities.
I am using assignments that take less time to evaluate.
I am including more high stakes assessments.

Survey respondents were asked to rate the perceived value of each of 11 resources for preparing for teaching in Fall 2020 using a scale that included 1 (“not at all valuable”), 2 (“slightly

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valuable”), 3 (“moderately valuable”) and 4 (“very valuable”). Respondents were also given an opportunity to indicate that a particular resource was “not applicable” to their situation.

Online resources

Discussions with other faculty members in my department

Discussions with other colleagues on campus

Discussions with colleagues at other institutions

NAGT webinars

My own research

Learning and Teaching Center

Professional meetings or workshops

NAGT and IAGD Teaching with Online Field Experiences resources

Earth Educators’ Rendezvous

The survey also included two open-ended questions:

What did you learn in spring 2020 that you will carry forward/are carrying forward into your current teaching practice?

How have you prepared for your fall teaching in ways that have differed from your usual preparation?

Interview Protocol

Winter 2021 interviews were conducted in a semi-structured format, such that they appeared more conversation like than probative. The following questions were used to guide the conversation but may not have been asked verbatim of all participants.

1. Faculty were shown a collection of graphs of disruption to teaching from the spring data collection.
 - a. Which graph do you feel best resembles how you recall your disruption to teaching in the spring of 2020?
 - b. What made you select that graph?
 - c. Do you feel that your teaching was more disrupted in the spring or fall of 2020?
 - d. When shown the graph that is their spring 2020 teacher disruption – can you identify what caused some of the peaks and/or pits in the disruptions?
2. Gathering information from the fall survey, probe respondents to expand on novel ideas.
3. How have recent changes in instruction changed the way you think about geoscience teaching and learning?
 - a. How have they changed how you plan courses?
 - b. How have they changed how you interact with mentees?
 - c. How have they changed how you evaluate learning?
4. Using the survey responses from fall, ask about how their colleagues helped them overcome challenges mentioned.
 - a. Can you think of other ways colleagues have influenced your practice recently?

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5. Your (fall) survey mentioned using X resource – how did you learn about this resource?
 - a. Were there resources you wish you had available to you?
6. How was your time distributed among your professional and personal responsibilities?
 - a. What influenced how much time was devoted to your (teaching, research, service, mentoring, family, personal health, etc.)
7. When you think about your teaching, in what ways do you think about the needs and challenges your students face -
 - a. In the classroom?
 - b. Out of the classroom?
8. Thinking about spring and fall 2020, are student performing higher or lower than in previous semesters?
 - a. Do you have any thoughts on why that may be?
9. How would you describe the culture of your classroom?