

## **GEOSCIENCE CURRENTS**

## COVID-19 Impacts to Academic Research, February – August 2020

During Spring 2020, over 80% of geoscience academic departments deferred faculty and student research, while approximately 40% cancelled planned research activities. Active research was more frequently cancelled for undergraduate students (46% of departments) than for graduate students or faculty members. In addition, the mode of research for students was changed to virtual or computational for over 60% of departments.







Credit: AGI; data from AGI's Geoscience COVID-19 Survey

Over the summer, research modes included more lab-based activities and fieldwork as access to facilities and sites became more available, while at the same time there was a decline in computational-based research. By August, 80% of departments reported lab-based activities being used for undergraduate research and 96% of departments reported the same for graduate research. In addition, by August 2020, over two-thirds of departments reported students including fieldwork activities in their research.

Which modes are currently being used for undergraduate research?



Which modes are currently being used for graduate research?



Which modes are currently being used for faculty and staff research?



Credit: AGI; data from AGI's Geoscience COVID-19 Survey

Students, faculty and post-doctoral fellows reported differing magnitudes of impacts during Spring 2020. A higher percentage of faculty reported deferring their research and project activities to a later time than post-doctoral fellows or students (65%, 39%, and 38% respectively), while post-doctoral fellows more frequently reported changing their research mode to utilize virtual or computational activities or to focus on writing and literature review activities than other cohorts. Furthermore, where cancellation of planned research and projects was similar among cohorts, cancellation of active research was least common among students.



Credit: AGI; data from AGI's Geoscience COVID-19 Survey

Throughout the summer, work and research for all cohorts primarily revolved around literature review and writing activities, online research, and computational research – the latter more common among post-doctoral fellows and students than among faculty. Although a higher percentage of faculty and post-doctoral fellows reported doing field and lab activities through the summer than did students, this only accounted for less than a third of postdoctoral fellows and faculty.



Credit: AGI; data from AGI's Geoscience COVID-19 Survey

## Restrictions to work and research activities

In June we asked about COVID-19 related restrictions that impacted work and research activities and we expanded the questions in July and August. Survey responses were pooled by institution to understand changes in restrictions over time at the institutional level. A small percentage of respondents indicated no COVID-19 related restrictions impacting their work and research activities. We will continue to track this trend to see if this is related to those working at home and not needing facility access or in-person meetings or is a reflection of an overall lessening of restrictions on research and work activities.

As facilities and campuses began to re-open, increased health and safety protocols were instituted. By August 2020, 95% of institutions were requiring the use of face masks inside buildings and social distancing, whereas just over onethird of institutions were implementing temperature checks and COVID-19 testing protocols. Only a small percentage of institutions were reported to utilize health assessments, either daily or prior to arriving on campus.



Credit: AGI; data from AGI's Geoscience COVID-19 Survey

With the increase in lab and fieldwork activities over the summer, restrictions on access (i.e., limited hours, alternate schedules, etc.) and restrictions on the number of personnel allowed in labs or on field sites also increased. Throughout the summer, field activities were more commonly deferred than lab activities, and this may be partly due to restrictions related to travel and vehicle use.





Credit: AGI; data from AGI's Geoscience COVID-19 Survey

Online and phone meetings continued to be commonplace with 75% of faculty and post-doctoral fellows working from home at the end of August and just over one-fifth working in the office. While most institutions still did not allow travel in August, there was a slight increase in the percentage of institutions that did allow limited travel under certain conditions and often with prior approval. In addition, outside visitors and guests were not allowed by 45% of institutions by August, and self-isolation, although not required by many institutions, was more commonly required upon arrival than before departure.



Credit: AGI; data from AGI's Geoscience COVID-19 Survey

We will continue to provide current snapshots on the impacts of COVID-19 on the geoscience enterprise throughout the year. For more information, and to participate in the study, please visit: www.americangeosciences.org/workforce/ covid19.

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