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Study Reveals Transformative Impacts of the COVID-19 Pandemic on Geoscience

ALEXANDRIA, Va. — The American Geoscience Institute (AGI) recently concluded a multi-year research project funded by the National Science Foundation (Award #2029570) that examined the short- and long-term effects of the pandemic on the geoscience workforce and academic programs, providing vital insights for the discipline's future.

The study, which commenced in May 2020, mapped the journey from pre-pandemic to post-pandemic environments for geoscience employers, non-academic geoscientists, academic faculty, geoscience college and university students, and recent geoscience graduates from 2014 through 2022. The study collected primary data through a multi-cohort longitudinal survey that was augmented by oral history interviews and a webinar series focused on gathering information on how study participants managed pandemic-related challenges. This deep dive uncovered lasting changes, explored the evolution of research conduct, pinpointed knowledge gaps affecting geoscience graduates, and identified strategies used to mitigate challenges.

Highlights of the findings:

- Despite immense challenges, resilience prevailed within the geoscience profession with successful adaptation strategies driven by proactive problem-solving approaches.
- Supportive actions, such as adjusting project deadlines, assistance with the set-up of remote workspaces, and changes to promotion and tenure guidelines and degree program requirements were key for easing stress and challenges for employees, faculty, and students.
- The importance of a distraction-free remote workspace equipped with the right resources became paramount for remote working and learning.
- Virtual platforms revolutionized curricular activities, broadened professional networks, and improved accessibility.
- The pandemic provided many with an opportunity to learn new skills, especially related to computational research, programming, database management, and other related technical skills.
- Academic departments have integrated virtual technologies into curriculum, with some now also offering flexibility in students' final research presentations and degree requirements.
- Employers have transitioned to more adaptive working environments, allowing for flexibility in working hours and locations. A rising trend shows employers increasingly hiring at the doctoral level, as well as emphasizing proficiency in virtual communication and collaboration for new hires.
- Despite the challenges, the pandemic has unlocked numerous opportunities for the geoscience community, paving the way for research advancements, global collaborations, and innovative teaching methodologies.

AGI's research offers a comprehensive look into the changes brought about by the pandemic, highlighting the geoscience community's resilience, adaptability, and innovative approaches for navigating pandemic challenges. The findings highlight the discipline's adaptability and point towards a future where flexibility, virtual collaboration, and continuous learning are paramount.

The report is available on the study's website at <https://covid19.americangeosciences.org>.

About AGI

The American Geosciences Institute (AGI), a federation of scientific and professional associations representing over a quarter-million geoscientists, is a nonprofit 501(c)(3) organization dedicated to serving the geoscience community and addressing the needs of society. AGI headquarters are in Alexandria, Virginia.

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