

Teaching during COVID-19: (international) lessons learnt in computing.

ZARB, M.

2022

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ENHANCING FOR IMPACT

RGU'S ANNUAL LEARNING AND TEACHING CONFERENCE

Teaching During COVID-19: (International) Lessons Learnt in Computing

Mark Zarb

School of Computing

RELATED WORK

2020

- COVID-19 disrupts everything.

2021

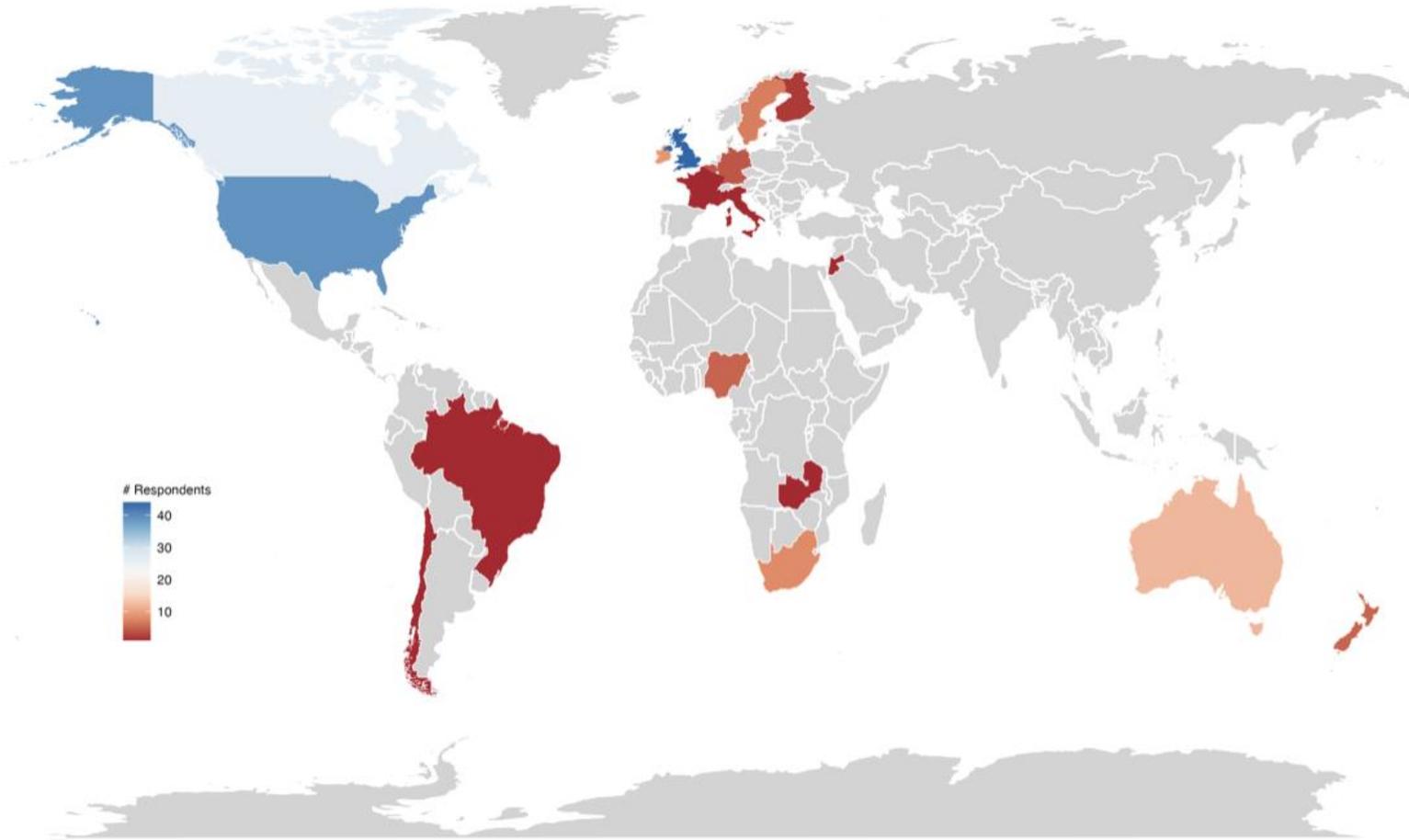
- Zarb, M., Siegel, A., Glassey, R. and Hughes, J., 2021. **Becoming a CS1 Student in the Time of COVID**. In *Proceedings of the 52nd ACM Technical Symposium on Computer Science Education* (pp. 1362-1362).
- Siegel, A., Zarb, M. and Balsler, T., 2021. **Learning from COVID**. In *Proceedings of the 52nd ACM Technical Symposium on Computer Science Education* (pp. 1356-1356).
- Siegel, A.A., Zarb, M., Alshaigy, B., Blanchard, J., Crick, T., Glassey, R., Hott, J.R., Latulipe, C., Riedesel, C., Senapathi, M. and Williams, D., 2021. **Teaching through a Global Pandemic: Educational Landscapes Before, During and After COVID-19**. In *Proceedings of the 2021 Working Group Reports on Innovation and Technology in Computer Science Education* (pp. 1-25).

2022 (so far)

- Siegel, A.A. and Zarb, M., 2022. **Capturing Lessons Learned from Pandemic Adaptations in CS Teaching: Exploring how COVID-19 has Affected the Future of Teaching and Learning in Computer Science**. In *Proceedings of the 53rd ACM Technical Symposium on Computer Science Education V. 2* (pp. 1193-1193).
- Siegel, A.A., Zarb, M., Anderson, E., Crane, B., Gao, A., Latulipe, C., Lovellette, E., Meharg, D., McNeill, F., 2022. **The Impact of COVID on the Student Learning Experience**. In *Proceedings of the 27th ACM Conference on Innovation and Technology in Computer Science Education*

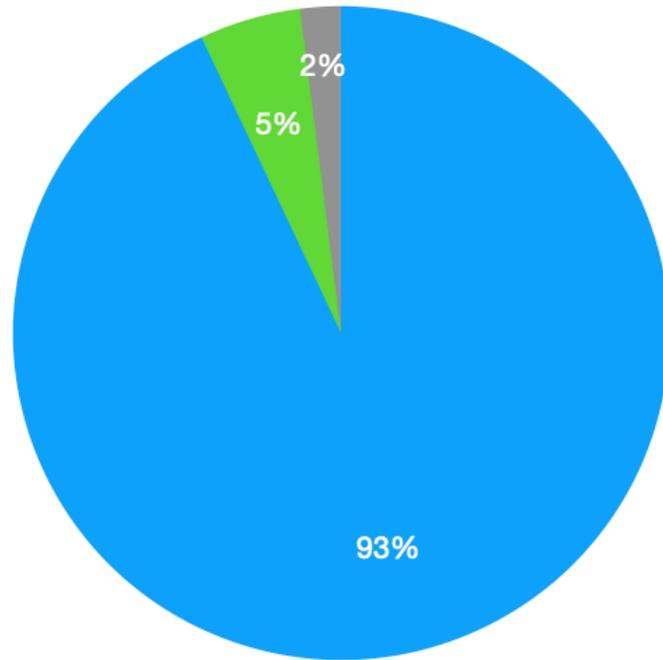
STAFF STUDY

- We wanted to understand the impact of COVID-19 on teaching staff.
- We started by surveying computing educators in 2021.



Location of survey respondents (n~200)

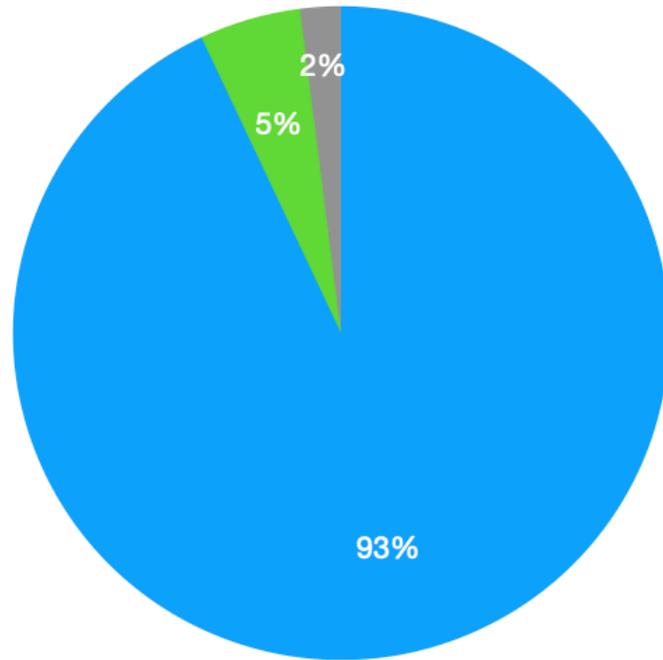
Before the Pandemic



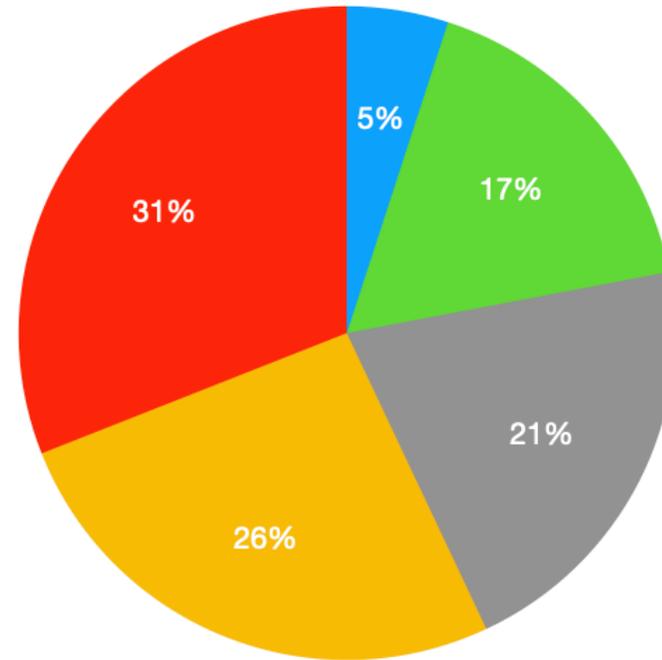
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Online Teaching Before and During COVID-19

Before the Pandemic

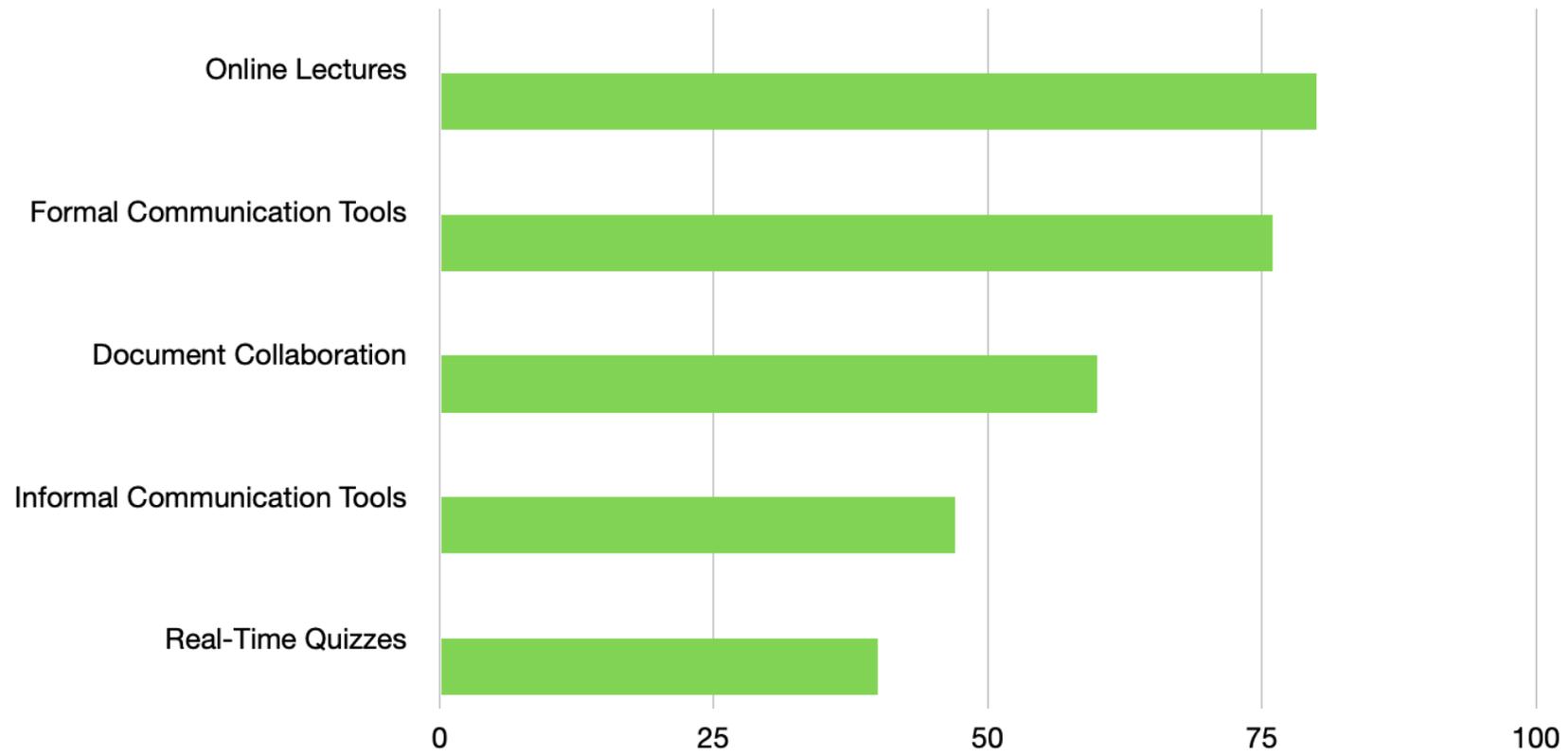


During the Pandemic

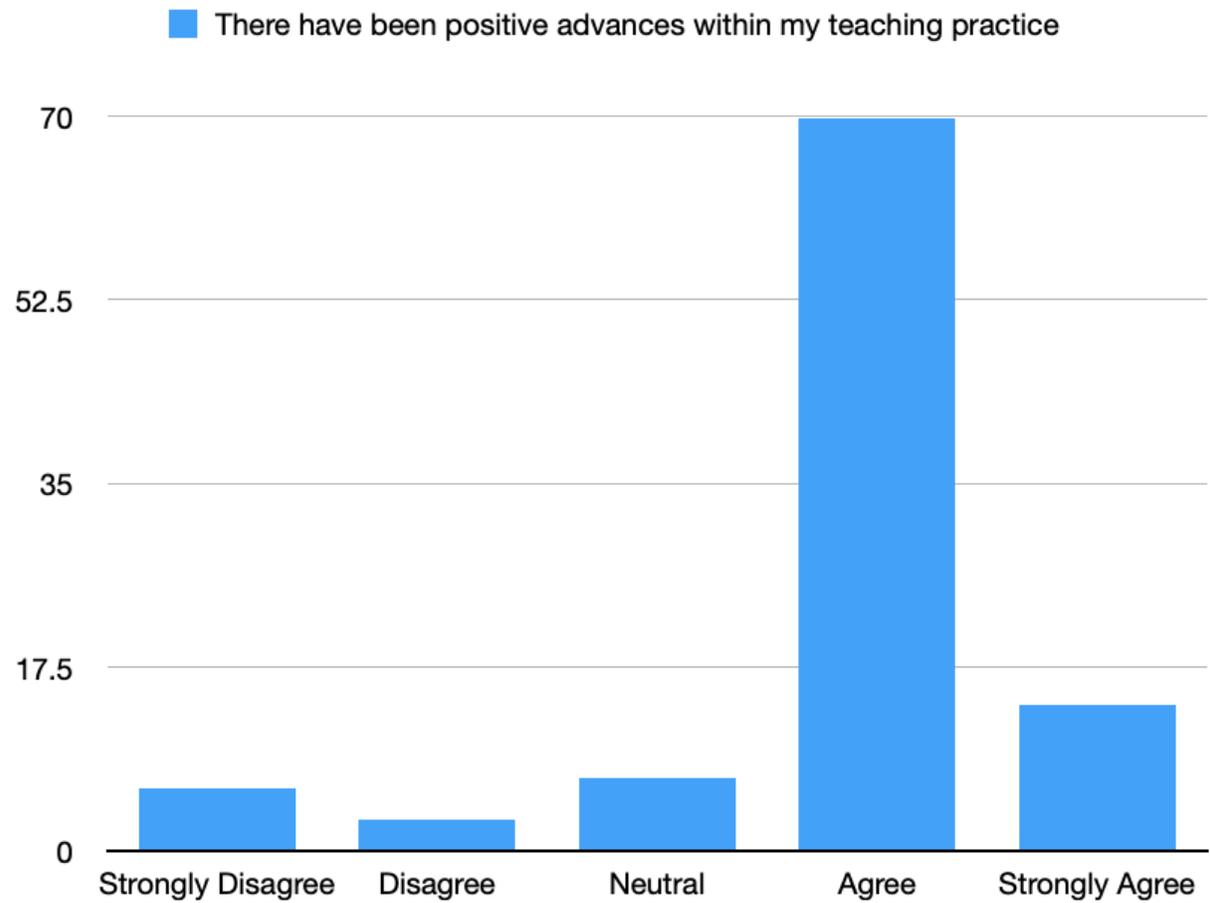


● Very Little Use ● Little Use ● Moderate Use ● High Use ● Very High Use

Online Teaching Before and During COVID-19

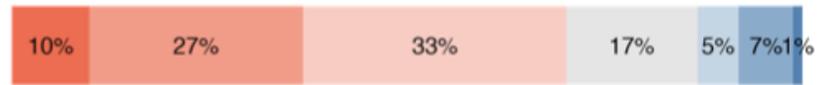


“First” Use of Technology during the Pandemic

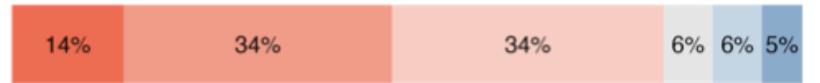


Responses regarding Pedagogical Practice

How did you perceive your colleagues' wellbeing during the pandemic?



How did you perceive the students' wellbeing during the pandemic?



Very negative Slightly negative Slightly positive Very positive
Negative Neutral Positive

Responses regarding Mental Health

DRAWING CONCLUSIONS

(1)

Advancements have been made in:

- How we teach
- What we teach
- Why we teach

But there has been a severe impact in mental health

RECOMMENDATIONS

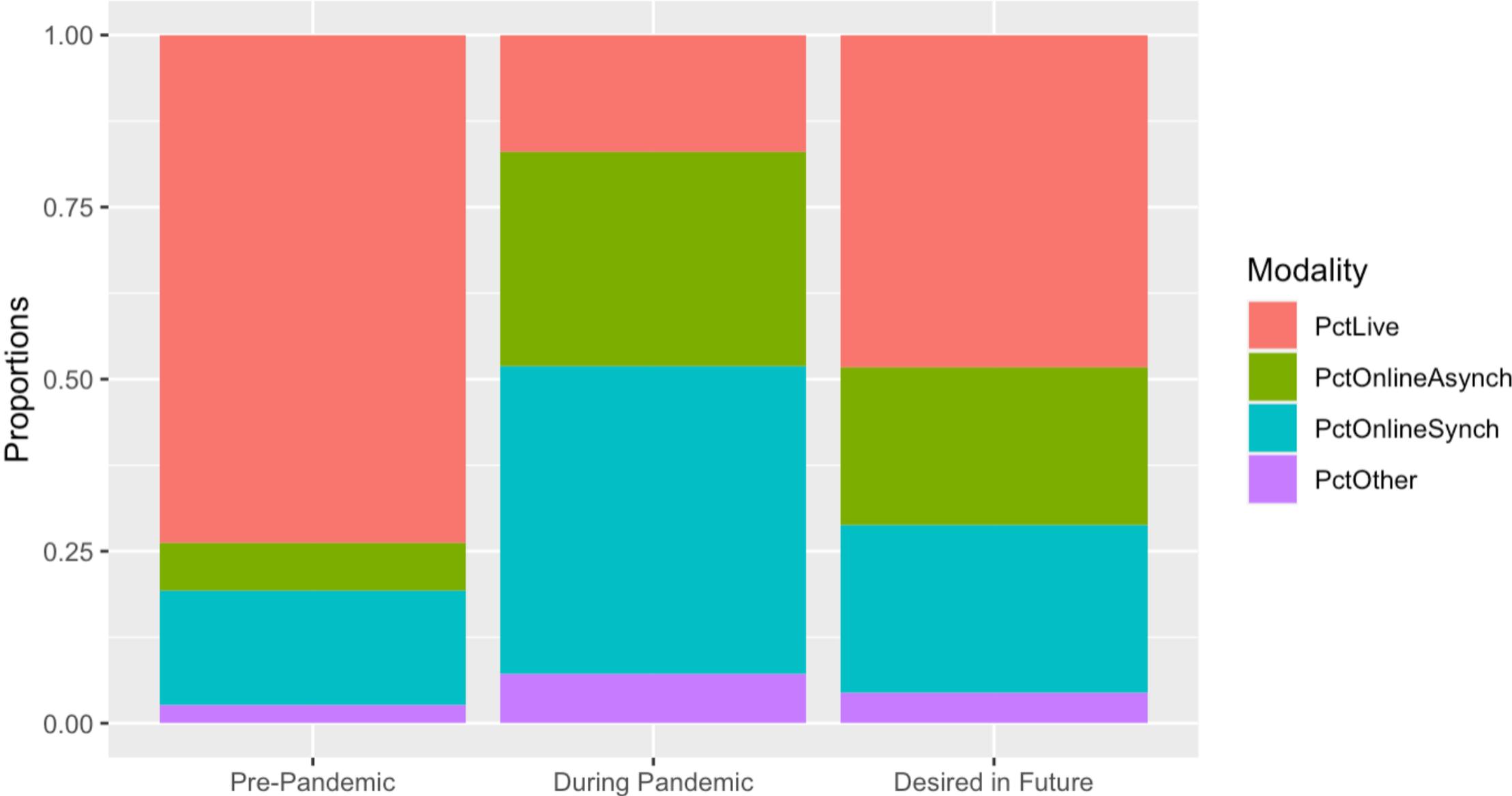
Following a period of data analysis, the following recommendations were made:

1. Nurture Education and Pedagogical research across staff
2. Leverage the use of technology in teaching (and digital learning tools)
3. Support staff and student wellbeing

STUDENT STUDY

- We have a good understanding of the staff perspective.
- But we are missing the other side of the story.
 - Incoming students have missed a formative part of their education
 - Existing students have had continuous disruptions to their experience
 - We do not yet understand the impact this might have
- We surveyed 300 Computing students across the UK, USA, Canada and Japan in mid-2022.

Reported Course Delivery Modality: Pre-Pandemic, Pandemic, & Desired in Future



DRAWING CONCLUSIONS

(2)

- Students value lecture capture.
- *Virtual* office hours should be offered alongside on campus ones.
- Care should be taken when selected communication tools in a particular course/module, rather than just “forums” or “email” as students see this as part of their digital identity.
- Interactive teaching and experiential learning boosts student engagement.

THE IMPACT OF COVID-19

- The pandemic has catapulted us into the future of teaching and learning.
 - These changes were always going to happen.
 - This is exciting!
- We cannot look backwards / Go back to *the way things were*
- We also cannot progress blindly: we need to make decisions based on evidence

GET IN TOUCH!

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