At The University of Edinburgh, following the constraints brought on by Covid-19, we needed to prioritise the health of our students and staff while ensuring that our high standard of teaching was maintained. To deliver on these goals, we adopted the approach of “hybrid teaching”.

Hybrid teaching is designed to provide flexibility to ensure that everyone can participate safely in our teaching and learning, both on-campus, when allowed, and online. To prepare for this the School of Mathematics looked to involve past and present students.

The School created 48 summer internships, open to recent undergraduates and PhD students, to benefit from the student perspective. All work was carried out remotely, with the collective goal of ensuring a successful transition into hybrid teaching.
What have you enjoyed most about working on the ASID project?

Given the unforeseen circumstances surrounding the conception of the role, this project presented a new and exciting opportunity for undergraduate and PhD students to implement the skills they had learned throughout their time at university. The nature of the work varied hugely: with such a multitude of different tasks to complete, often team members were able to choose the ones that interested them most.

I've learned a bunch of new skills which I really think will be useful for my future career. I do have an interest in staying in academia, and actually I am quite passionate about teaching so I think I could apply some of the knowledge I have picked up in this placement.

I've been able to work with technologies I used during my studies but got to see and explore them in a totally new way, I've now actually developed a love for the R programming language!

Overall, this was a great experience. I particularly enjoyed getting to know a lot of staff members and students through many formal and informal meetings. Learning new tools was very interesting as well. It made all of these months of lockdown go by very quickly!

To be able to contribute to the changed learning environment and challenging new student experience. This is something I expect to be rare in an entry level role. It was also rewarding and heartening to be able to develop effective working relationships entirely online and gain experience in a variety of virtual technologies.

The wide variety of different tasks I was able to do. It was interesting to see behind the curtains and give feedback to staff as well as being immediately involved in that feedback being implemented as well.

The academic community is friendly and mindful, and that is something I appreciate. The work itself was also satisfying, as I gathered useful knowledge about communicating in a large team and teaching in general.

I enjoyed the independence we were given; I was able to work on the projects that I was most interested in and this made me a lot more productive and the work more enjoyable. I also enjoyed the fact that I worked on some tasks for courses which I hadn’t taken, so I was able to gain new knowledge and pick up new skills.

Working with other people and meeting other students that I hadn’t come across during my time at Edinburgh!

Organising the social events was the most fun as we worked together as a team to produce and implement ideas. It has been an enjoyable experience all round, seeing how work can snowball and be picked up from several different angles.
What key skills do you feel you have been able to gain or display?

The ASID team was made up of 32 undergraduate and 16 PhD students. Many of these students had little or no prior experience of working in a professional environment, so there was lots of opportunity to develop new skills. Feedback relating to skill acquisition can be categorised by the following: software-specific, personal development and professional experience.

I spent most time working on STACK and it made me stretch my way of thinking about programming and constructing maths objects, due to the limitations of the system.

I learned new software skills: the ability to create STACK questions; HTML 4; Maxima; and reaffirm my \LaTeX\ ability.

I feel like the work on the ASID project has given me a lot of confidence, especially in initiating meetings with people I have never met online. It was something I struggled with at the beginning but feel a lot better about now.

I felt I was able to display my creativity and organisation as I was put on many tasks that required these two things.

Definitely communication, teamwork and the ability to delegate tasks, which are particularly important in a virtual work environment where we can’t speak to each other face to face. Following from this, the ability to form professional relationships.

Professional experience

From the outset, the role involved a significant amount of responsibility and professionalism. The team had authority in creating materials to ensure that high standard of teaching at The University of Edinburgh could be maintained during online delivery. All work was carried out remotely, which required adjusting to a completely new professional environment, working solely on a virtual platform alongside many experienced academics.

I used RStudio for the first time and learned how to make interactive workshops. All of this work was done collaboratively using GitHub, a platform used to work on coding projects in a group. I had little experience with it before this job but now I feel very comfortable with it; I am very grateful for this since it is definitely a platform I will be using in my master's program and in future jobs.

I think I've improved my reflection skills as a lot of tasks required feedback about what you have just done and what could be improved.

I had a chance to apply my mathematical knowledge to the course creation process: for some of my tasks, I was a content creator rather than just implementing pre-existing materials.

Leadership and communication skills, working in an institutional setting and interacting with a variety of professionals, valuable experience using virtual collaboration tools.

Software-specific

Many tasks relied on software-specific skills. Initially, the programming abilities of the team varied largely, ranging all the way from novice to expert. Regardless of this, everyone was encouraged to work on an assortment of tasks, and were given support for tasks that required learning unfamiliar or brand new skills.

Time management and the ability to meet deadlines when carrying out multiple tasks concurrently was demonstrated frequently.

Personal development

With a multitude of tasks to complete, team members were constantly juggling multiple competing commitments. Team members had to carefully manage their workload, and demonstrate excellent organisation and time-management skills.
I found that sometimes the task descriptions were vague and it was hard to know whether or not I would be able to complete the task. This was nice sometimes because it gave us a lot of freedom to do what we thought was best, but in other cases we did need a bit more guidance.

The social events were quite daunting for me and I was only able to attend a few. I think it was because I just did not know many people so was not completely comfortable bantering over Zoom.

There were points when there seemed to be too little work to do, this passed quickly though and it was great when new tasks came through.

The volume of work did vary greatly depending on the task I was working on. Some were great and filled up the majority of my day whereas others would require a lot of waiting for responses from lecturers and I had to try and find other smaller tasks.

Some tasks can become quite dull, i.e. LaTeX typesetting, tasks that don’t involve much thinking.

Of course, the remoteness of the work, not seeing my colleagues in person. And in some aspects the monotony of the work.

By the nature of the project it felt like you were either incredibly busy or had absolutely nothing to do and even with open tickets in the spreadsheet, that didn’t mean that you’d immediately get work as it involved getting in contact with people and relying on them to get back to you.

Sometimes editing HTML to look pretty was very frustrating.

I was slightly put off by my first glimpse into some of the bureaucracy that is necessary for working with a such a large institution e.g. waiting for responses from lecturers and coordinating tasks. Although on the whole it was well managed.

Tech difficulties (mostly my Wi-Fi...) were the worst.

What have you least enjoyed or has been least satisfying?

The unprecedented nature of the project meant that it would be difficult to gauge what exactly would need to be done to successfully transition from in-person to hybrid teaching. This meant that the team to be highly adaptable, which can be a challenging requirement.

Having one main task for the first three weeks that isolated me from others a little (creating my first STACK quiz). Although I enjoyed working problems out on my own, it was rather isolating. Fortunately, as I was involved in social event planning and virtual workshops, I did manage to see other people!
What could have been done differently for you to gain more from this experience?

We are extremely proud of everything the ASID Course Creation Support team achieved in such a short space of time. However, it is important to reflect on the aspects that could be improved. Feedback relating to this can be categorised by the following: organisation, collaboration, competence.

**Organisation**

- More clarity about exactly what I was going to do over the 6 weeks would have been useful. Although this might not have been possible.
- I think it would have been beneficial to say that a single assistant can only be part of at most 2 different task teams and that a task team should be at most 3 people. With the large number of assistants, this would have created the ability to work concurrently on basically all of the tasks, while the team management overhead would be kept to a minimum. Also a team lead election should have been done at the start of every task.
- Possibly a document or set of instructions at the start of the project so that everyone was clear on how tasks were to be allocated.
- More consistent STACK training so I could’ve felt like I had the ability to take on more tasks of this nature.
- I feel that if the time on the project could be extended, then you’d get more results out of the team you put together.

**Collaboration**

- Near the end, I was working on most of my tasks with the same group of people. I was a lot more comfortable talking to them and asking questions. We became very productive. I think I could’ve benefited from being in a group from the beginning.
- More effort to get to know people at the beginning of (smaller) Zoom meetings.
- It would be nice to be more aware of what other people were up to within the project.

**Competence**

- Having a list of people who are involved with some of the main projects or who can provide support regarding specific questions (STACK, subtitling, IT team, MTO,...) might have been useful.
- Make more effort to get to know people at the beginning of (smaller) Zoom meetings.
- Better segmentation of tasks and students so that workers could learn or hone a skill and then apply it in detail. This would have saved management wasted hours on over training staff in areas they weren’t going to use at length.
- Perhaps more training at the beginning of the project so that we could learn new skills before it seemed too late.
- Rather than a Weds group meeting (that no one has their video on for or feels comfortable to talk at) could have smaller weekly meetings with groups of 5-10.
- It would be nice to be more aware of what other people were up to within the project.
- I would have loved to learn even more new software skills.