**Accessibility and usability of Jupyter Notebooks on M269**

**Sharon**

M269 now has all teaching, learning and assessment, including practical work, interleaved in Jupyter notebooks. Our project examined the usability and accessibility of this approach, and we recruited six students and six tutors to share their evolving experiences with us from October to March. We wanted to understand how the notebooks enabled the students learning and for tutors to support them and give feedback on their assignments.

We asked participants to write diary entries at three points in time, answering questions such as how the notebooks supported students in finding information, or tutors to answer their questions and run tutorials. We explored their experiences of installing the software and running it and how well it worked having theory and practical work interspersed in the same Jupyter notebooks rather than being completely separate.

Students liked being able to add their own notes to the notebooks and run code so easily in them. They would have preferred having theory and code side by side rather than one under the other. Some students would have preferred printed materials too. Tutors added that not having to run Python code as separate programs was an advantage and being able to modify and extend code during tutorials was useful, but found assignments took much longer to mark. Both groups found the number of tabs opened at once problematic; it was difficult to remember which tab to search for information on. Using HTML or PDF versions helped with searching across different notebooks, however.

The main accessibility issue was the default font and background colour of black on white and a tutor had shared the CSS code necessary to switch this according to user preferences. Our recommendations include that summaries of the various units are needed to be gathered into one place for revision purposes as well as an index being provided, and students need more advice and guidance on finding materials.

There's a lot of technical expertise amongst tutors as regards using the notebooks to best advantage in different ways and the module could be improved on by harnessing this. Module team help is also needed to reduce marking time.