Reporting on experiments with research integration in teaching

Name
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Course Name
Project Based Course, https://kurser.ku.dk/course/hnak0100fu/2021-2022 Food and Ritual in Murayghat
Study Board
ToRS studieboard
Level and class size
MA: 2nd semester (and tilvalg): 5 students
Description of the experiment
The course started with a meeting to discuss the possible lines of research and questions about the students' interest (already in December 21). The actual course (in February 22) started with introductory lectures by several specialists about the 4 possible lines of research (lipid analysis of pottery remains, thin-sections of pottery, 3-D models of architecture or basalt objects, basalt tools analysis), followed with practical exercises carried out by the students, which continued through the semester. Group discussions and one-to-one tutoring run parallel with the experiments, all moderated by me. The students' research required regular input by me to facilitate them with information about the archaeological context of their material. These meetings always allowed a discussion of the individual progress and possible problems.
Outcome for the students
The students produced 2 posters, one homepage, 1 film and one 3D model available at sketchfab (https://sketchfab.com/3d-models/murayghat-western-gate-e44d52cafab1449eaeb45345b88f631d). The film and homepage will be integrated into the Murayghat homepage, but we still have some technical problems there (see below). The students could combine 2 lines of research and they were free in their choice. This choice was difficult and not in all cases made based on scientific considerations. The students were all very enthusiastic about the possibility to work with actual material (basalt and ceramics) and create their own research. They showed remarkable enthusiasm and worked hard, which led to quite impressive results and a steep learning curve. There was some criticism that they had to start with 2 lines (later they could concentrate on one object). I had explained that the nature of experiments includes the possibility that they do not work, but that was obviously difficult to grasp. The limited experience of students with actual analysis of material led in the beginning to a slightly naive expectation that all would work.
Outcome for the research
It turned out that the lipid analysis (carried out by GLOBE) showed only results for one of the examples, which limited the possibilities for interpretation. Particularly the thin-section research is a real asset for the future work with the pottery, as it allows a much better typology of the material than simple macroscopic description. It brought genuinely new knowledge. The lipid analysis brought only limited success, but nevertheless supported an already existing theory that a particular vessel was used for food preparation (but that will need further study). The analysis of the basalt tools brought evidence of their use (for food and ochre, which came as a big surprise) and indicated some purposeful breakage. The 3-D models are helpful for explaining excavation results to the public.

Ritual and Food in Murayghat was the title, and the experiments showed that both the pottery and basalt tools were used in food production, and also most likely in ritual activities.

Interaction between teaching, research and exams

Teaching and research went very well together, after the start with introductory lectures, both lectures, tutorials and research went hand-in-hand. The exam included a project, on which the students worked through the whole semester (1 film, 1 homepage, 1 3-D model, 2 posters (one about the lipid analysis, 1 with basalt 3-D) and a short paper, which gave the background to their research.
This worked quite well, but some of the lectures were extremely difficult (GLOBE). In order to understand them, the students needed a lot of knowledge in chemistry and biology, which they did not have. They found these lectures all very difficult and it was not helped that I could not be present for the first two meetings there (I was ill).
The other lectures by colleagues from IGN and ToRS were more successful.

Adapting of the experiment

I added the thin-sectioning part of the course quite late, when it became clear that the lipid analysis carried the danger of being unsuccessful. This part turned out to be possibly the most successful experiment.
When repeating this course (or using it for a BA course) this part would be added from the beginning.

Strengths and weaknesses

The strength and weaknesses are both the students. This was a good group, who put a lot of effort in the experiments. The one student, who only did what was necessary, also ended with the least interesting project.
Having these results is only a first step, in order to publish or otherwise facilitate the results might need more work, which needs to be done outside the actual course.

Experienced challenges

As already mentioned, one line of research proved to be very difficult. Otherwise the biggest challenge was of technical nature. In order to produce the film, the homepage and the 3-D models freely available apps/programs had to be used (some programs would have been available for me, but not for the students like Adobe). This led to a number of problems (the film has now the watermark of the program etc.). I had not thought about these technical details beforehand and would have to find a better solution next time.
The students worked enthusiastically, but it would have been better to discuss the bases for academic experiments and research in more detail. The process to come from experiments to results needed to be better prepared and discussed – some interpretations were too far reaching, others could have been getting in more depth.

The most important experience

The enthusiasm with which the student threw themselves into the work and took up to learn about really difficult topics and processes, when left the freedom to do so.

Will the experiment be conducted again?

I would like to do a small version (few classes) in a BA course and would repeat the same experiment in the same MA-course.