**Online course tutorials - platform selection**

We want to create online tutorials. This chapter contains an overview of the options and their pros and cons.

**Top platforms**

Datacamp-lite, Datacamp or LearnR. See the Excel file for more options.

**Datacamp(-lite)**

Datacamp(-lite) is relatively easy to implement, runs on the Datacamp servers and has an excellent code-checking and scoring system. The tradeoff is that we’re limited to Datacamp’s resources and environment(s).

What kind of code will the students need to execute? Do they need to create plots, and filter tables? Then this platform is sufficient. Do they need to run DESeq2, or GimmeMotifs? Then we need a second environment outside datacamp (This takes time, but is also very heavy).

The Lite environment lacks several bioinformatic R libraries (which *might* be installed on request). Regular Datacamp seems to have more libraries, but requires enrollment on Datacamp (both the students and the course). This takes some time (according to some comments), and I have no idea if the deal can be renewed every year/every course/if there are other courses that did the same.

**LearnR**

LearnRlooks a lot like Datacamp for the user, but is run in a shiny app on an R server/local R(studio). The R server must be set up somewhere (likely MBScourse). Setting up the R server takes time and resources, but does allow us the freedom in terms of coding environment. Code checking and grading libraries exist, but must also be implemented. No idea how much (more) work this entails.

**Course environment**

Datacamp-lite and LearnR can be injected in HTML. I think we can use this to create something that reads like a document. Additionally, if we can run everything within Brightspace it should be doable link activity to student ID. Datacamp has their own tracking system.

LearnR can used to create a downloadable course. Students could run Rstudio locally and upload assignments. No resource cost for us, easier to implement, but less smooth. Also means students need a decent computer.

A hybrid system, where assignments are run on Datacamp/LearnR, and some heavy commands are run on MBScourse (using the terminal) would be easiest to implement.

**Injecting jupyter notebook in HTML**

<https://elc.github.io/posts/embed-interactive-notebooks/>

<https://stackoverflow.com/questions/45384616/how-to-embed-an-interactive-jupyter-notebook-into-html>

**Conclusion**With Learnr we are independent of outside companies, while having full control over the course materials and exercises. This will be out tutorial platform.