

LCT plans and inspirations: a reflective portfolio for Mechanical Engineers

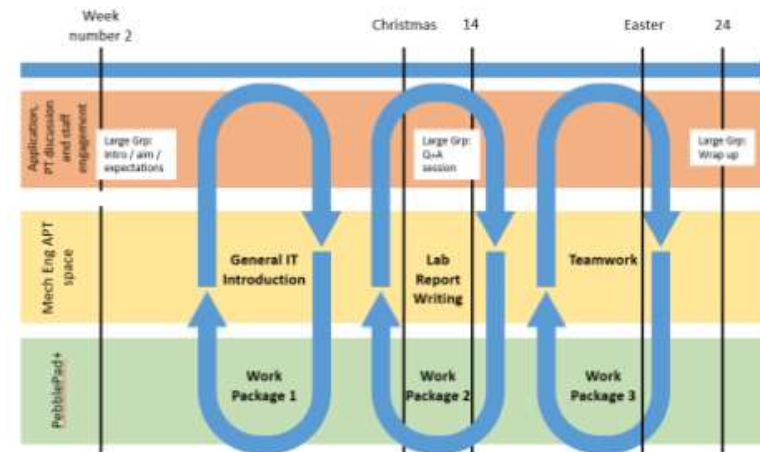
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Welcome to your Mechanical Engineering Year One Reflective Practice Workbook

This is your Reflective Practice Workbook for Year 1. There are three Work Packages in the workbook: General IT Introduction, Lab report writing, and Team Working and Peer Group Assessment. These correspond to competencies important in Engineering education and your future professional career. You can see the overview of the whole process in Figure 1. Please note that at the moment, you can only see Work Package 1: Reflection on general IT skills in your Workbook; the other two work packages will be made available later in the semester.



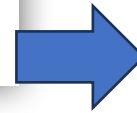
Activity 1a. Your experience. Preparing to reflect.

Think of a **challenge** you faced during the IT training you have completed so far*. This may relate to your previous knowledge and experience, your skills, learning style, ease of access, support available, etc. Name the challenge in the box below.

*if you completed more than three sections of the training, please consider all of them.

Given that the general IT induction was not generally challenging, I will consider an example drawn from the contents of the engineering course.

Induction into MECH1010's use of MATLAB as a tool for data processing, particularly the use of FOR and WHILE loops with regards to indexing matrices and vectors.



I faced some difficulty in week 3 of the MECH1010 "Computers in Engineering Analysis" module, particularly with respect to the use of FOR and WHILE loops to index matrices and vectors. I faced initial problems due to my underpreparedness in not watching the preparatory material before the lab, which was exacerbated further in the lab as I could not follow the content with prior understanding as the instructor intended. I understood from conversations with other members of the cohort that we were all having difficulty with the content. While it was initially daunting to feel completely lost on a topic (likely exacerbated by the fairly opaque nature of MATLAB as a medium), my focus was immediately on remediating the issue and moving forward with my own understanding outside the structure of the course. I reflected on the fact that it had been a long time (probably since the start of mathematics a-level) since I had been at such a loss of how to solve a problem. I reflected on how this was in fact a very simple issue which I was sure I would reflect on in future as a trivial matter, and put a bit of time into ensuring I would timetable a slot when to watch the asynchronous material in future weeks. Further, I spent a short amount of time overcoming the issue. I reflected further on the fact that I have a tendency to overthink problems as they come and I should be alright if I am aware of that.

Provide an example or a piece of evidence to support your answer to the previous question

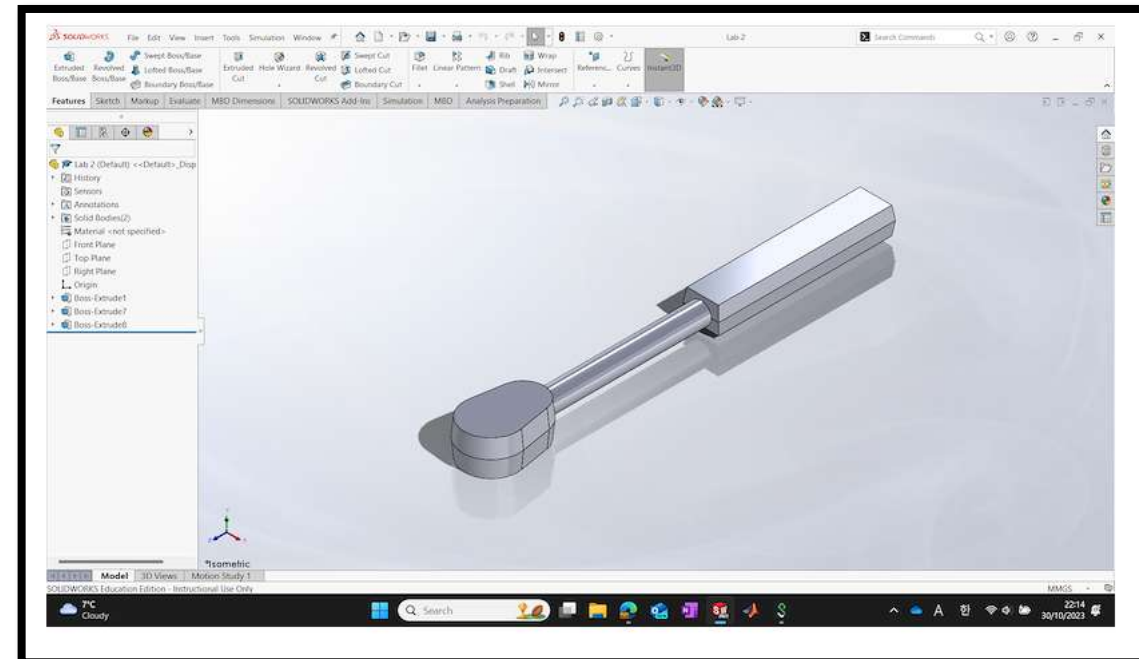
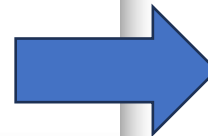
A good example or a piece of evidence will be **specific** and **showcase** your learning. This might include (but is not limited to): an account of a specific improvement in a particular competency, a certificate, a screenshot of a new system or a piece of software you have started using. If you wish to upload an image:

- remember to upload it to your asset store first. (After you are prompted to "select asset", simply drag and drop a chosen file from your device. [Here is a detailed guide to help you do this.](#))

- write a couple of sentences explaining what the image is showcasing

[Pebblepad 1.png](#)

Image showcases something I created using the solidworks 3d cad software.



Inspiration: Designing a rubric for reflection in nursing: a Legitimation Code Theory and systemic functional linguistics-informed framework (Monbec et al., 2021)

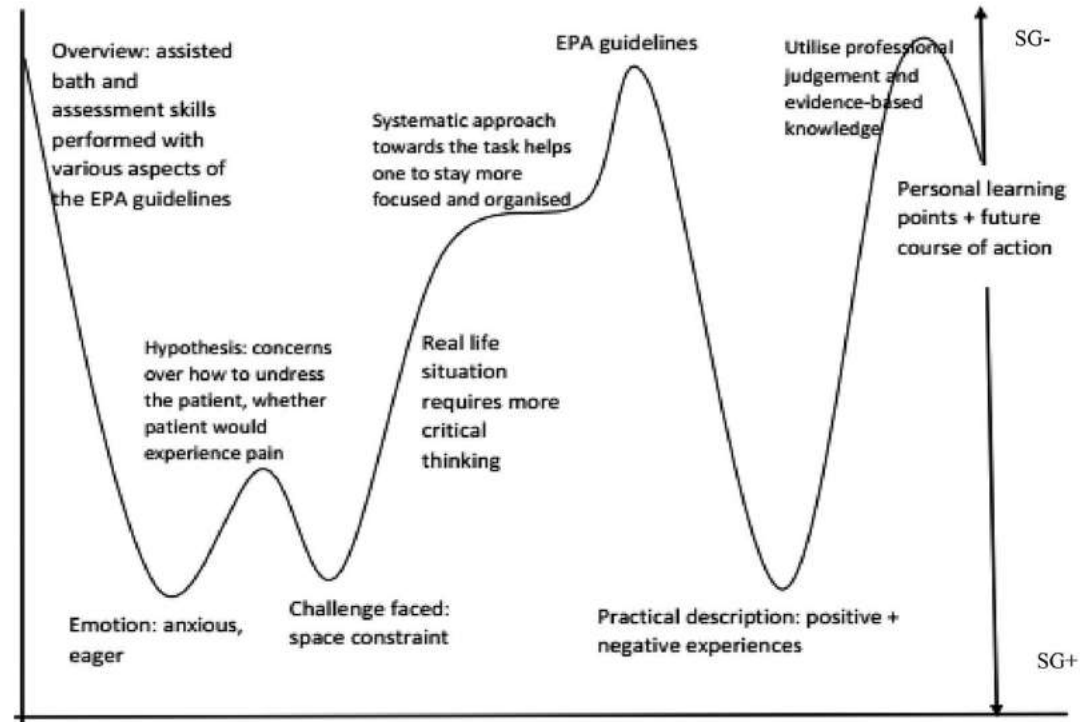


Figure 2. Illustrative semantic gravity profile of a high scoring critical reflection.