Case Study: Implementing Active Self-Feedback in Teaching

Martin Simmons, Engineering

Course information

In Autumn 2024 Martin Simmons, a Senior Lecturer in Engineering, taught two courses implementing active self-feedback. These courses were a first year course, CIVL12201 Tools for Civil Engineers 1, and a third year course, CIVL33001 Structures 3 (Civil). Around 80 students were enrolled in each course.

The implementation of active self-feedback was applied in seminars and focussed on formative activities for both courses. The activity for the first year course aimed to improve students' sketching skills, while the third years applied active self-feedback to their coursework writing.

The task

CIVL12201: Students were asked to compare two sketches of the same object to identify characteristics of good quality and areas to improve. The students then use this to generate self-feedback which could help them with upcoming coursework.

CIVL33001: Students were asked to attempt a previous coursework question within a given time. Each student then compares their own attempt with that of another student, using the self-feedback form as a guide.

For both courses, reflective questions were along the lines of:

- What are the good features about each attempt?
- How could each attempt be improved?
- Write some feedback to help you achieve a better mark in your coursework, based on the comparisons made.

Full worksheets for each course can be found below.

Comparators

- CIVL12201: Two sketches of the same object produced by the lecturer.
- CIVL33001: Another student's attempt at the question. A model answer was also available as back up.

Reflections by teaching staff

I found these activities to be really helpful as they allowed feedback to be given to large groups of students, in an efficient manner. Although it took me a bit of extra time to

create the activities and generate the resources required, there is no doubt that it would have been substantially more work to give each student feedback myself. I already incorporate interactive tasks into my teaching sessions and self-feedback adds another 'string to my bow'! Having said this, including self-feedback activities in teaching sessions means that I can spend less time on other content, which subsequently may need to be covered elsewhere (e.g. online). However, my overall experience was very positive, and I would definitely consider using self-feedback again in teaching.

Reflections by students

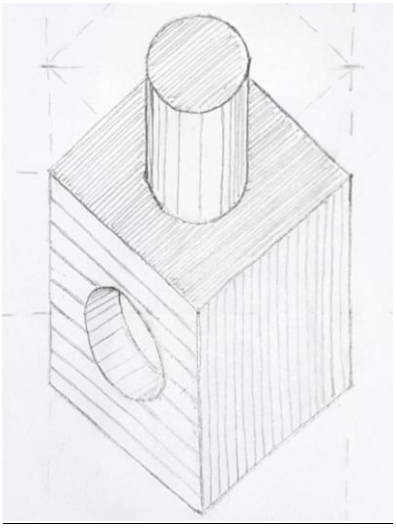
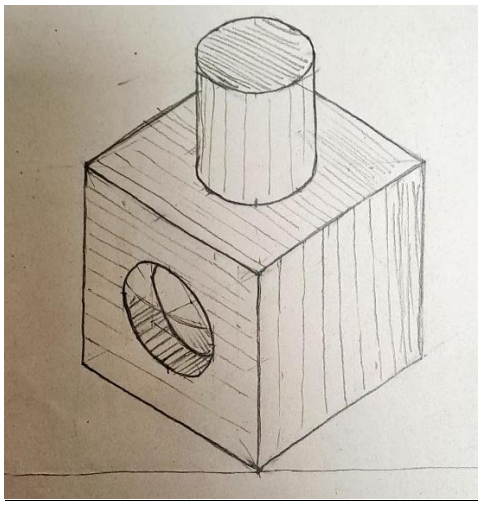
For both units, students were asked to complete an online form. Students were asked to rate the lecture (out of 5) and say whether or not they had a better understanding of what was required to achieve a high coursework mark. In addition to the online form, some feedback was gathered from informal conversations.

Overall, students made positive comments and seemed to like the activity. The following displays evaluation scores and some selected student comments for each course

Table 1: Evaluation scores and student feedback for the CIVL12201 and CIVL33001 units

CIVL12201	CIVL33001
Average rating: 4.47/5 • 86% (42/49) said the task was helpful to them. • 96% (47/49) said their understanding of what makes a good quality sketch had been improved.	Average rating: 4.71/5 • 100% (7/7) said the task was helpful to them. • 100% (7/7) said their understanding of what is required to achieve a high mark in the coursework had been improved.
"Engaging" *"Nice introduction"* *"I have never sketched or drawn before so struggled even with the basics which made the lecture quite difficult to follow"* *"Very hands-on compared to previous lectures. I enjoyed the time limits because they kept us on track and made sure I didn't get too perfectionist."* *"I feel like the lecture needs more time it feels a bit rushed"*	*"Good exercise being able to work on your own and then in groups"* *"These weeks were a very busy period so I hadn't revised as much as I wanted to. I think it was really good to have "tutorial" styled lectures"*

Appendix: Worksheet - CIVL12201

Sketch 1	Sketch 2
	

What are the similarities between the sketches?

What are the main differences?

Identify up to two features of each sketch that you would associate with good quality

Sketch 1	Sketch 2
1.	1.
2.	2.

Identify up to two ways in which the quality of each sketch could be improved

Sketch 1	Sketch 2
1.	1.
2.	2.

Which is the better sketch in your opinion? Give reasons

Based on your comparisons of the two sketches, write down the two main things that you could do to improve your own sketching

1.

2.

Appendix: Worksheet - CIVL33001

Identify up to three features of each attempt that you would associate with a high grade	
Your attempt 1. 2. 3.	Another person's attempt 1. 2. 3.
Identify up to three ways in which the standard of each attempt could be improved	
Your attempt 1. 2. 3.	Another person's attempt 1. 2. 3.
Use the rubric to grade each attempt at the question	
Your attempt grade:	Another person's attempt grade:
Consider the comparisons you made, grades awarded and marking rubric. In the box below, write some feedback for yourself that might help you to achieve a high grade in your coursework.	
e.g. 1: I need to revise undamped free vibration topics, such as how to calculate natural frequency *e.g. 2: I need to improve the presentation of my work and make sure that all steps in calculations are clearly explained*	