As Adam Cardilini’s 2nd-year bachelor’s course in science and technology brings together around 250 students, a diverse international cohort of students, large-scale students often find it challenging to get their work reviewed by their instructor, especially as they enter into a new phase of their learning journey. Dr. Cardilini ultimately aimed to provide detailed, real-time, and actionable feedback on each student’s written work.

Feedback was provided to students in the form of: 
- A summative written report and portfolio assignment, with some students submitting infographics in their choice of medium and approach in completing their portfolio assignments, with some students submitting infographics in their choice of medium and approach in completing their portfolio assignments. 
- Grading and assignment-marking criteria which the instructor determined.
- The tool parsed each uploaded document and highlighted areas of potential conflict with the established criteria, giving an explanation of the criteria chosen.
- For students who had checked their work with the tool, analytics were generated that the tool was available to check a limited number of elements in their writing.
- Students were reported to be happy with the AI-generated feedback ‘with a grain of salt’. Where the generated comments were not accurate, they still found value in the generation and implementation of this feedback.

CONSTRUCTIVE ALIGNMENT

Learning objectives

- Using feedback, students understand what makes a fair and construct critical arguments relating to scientific knowledge and societal issues.

Global learning outcomes (GLOs) related to the development of students’ communication and critical thinking skills.

Learning activities

In the class students practiced their writing, critical thinking and collaboration skills in a variety of written assignments, deepening their understanding of the relationship between science and society. Example coursework included the following. 

- Automated Feedback tool to give students the chance to receive personalized feedback on their writing. 

Throughout the course, as an essential part of the development of students’ communication and critical thinking skills, learning activities were used to support the students in their learning journey.

- Automated Feedback allowed students to receive comprehensive, personalized feedback on their writing skills without having to contact the instructor. This allowed students to be informed of their writing progress in real-time without having to wait for instructor feedback.

Assessment of learning outcomes

The written report marked 35% of the overall grade, with the portfolio also being marked as a large part of the assignment. The final grade was traced from this assignment marking process.

NOTABLE OUTCOMES

- Automated feedback students received was comprehensive, personalized feedback on their writing skills without having to contact the instructor. 
- Students were informed of their writing progress in real-time without having to wait for instructor feedback.

The instructor marked the student’s work at the beginning of the course, rating students that the tool was not a solution to a fair and construct critical arguments relating to scientific knowledge and societal issues. Students were encouraged to critically reflect on their writing.”

The role of the instructor

- A teacher was responsible for instructing the student at the beginning of the course, rating students that the tool was not a solution to a fair and construct critical arguments relating to scientific knowledge and societal issues. Students were encouraged to critically reflect on their writing.”

Additional value of technology

The instructor noted that their use had increased the ability to check writing for students who were not able to communicate their developed understanding of the course material. This allowed students to be informed of their writing progress in real-time without having to wait for instructor feedback.

Instructor workload

- Learning activities in terms of Bloom’s Taxonomy were at the the levels of: 
- Evaluation: grade the assignment.

In total, there were two assignments for which students could make use of the tool, and it was used to make improvements. This is already in place in other courses delivered by the instructor.

The instructor noted that their use had increased the student’s understanding of the relationship between science and society brought together about 250 students, a diverse international cohort of students.