**USE CASE**

## Improving peer feedback and discussion quality by grading the best contribution of each student

**Context**

This bachelor course from a Food Technology programme introduces bachelor students to the principles of food quality management over four weeks. Each week, groups of four students study this topic from a different angle, resulting in a report prepared by the whole group. Researchers at Wageningen University and the team at FeedbackFruits opted to enable a beta function of Peer Review: Participation Grading. This involves grading only the ‘best contribution’ that students themselves provide for the peer review assignment. A research project exploring the feature was carried out across several other courses. The use of the Peer Review tool and the implementation of the newly designed approach, Best Contribution Grading (BCG) had four aims: to increase the quality of peer reviews; to increase student participation, to offer a safe learning environment; and to deliver a scalable teaching method.

**Constructive alignment**

**Learning objectives**

- Students develop problem-solving skills by means of analysing the work of others.
- Students are able to diagnose problems, identifying areas for improvement and suggesting solutions in the area of food quality management.

**Learning activities**

Students produce and upload a report as a group, and individually give feedback to the work of another group using Peer Review. After giving feedback, students are asked to select those contributions (feedback comments) that they themselves judge as their best piece of work for the instructor to grade. As students select their best contributions themselves, this guarantees that their errors or mistakes do not influence their course grades as long as they do not select those as their best contribution.

Learning activities based on the Bloom taxonomy are mainly at the level of:

- **Analysing** students’ own comments and contributions given inside Peer Review to select their best ones.
- **Analysing and evaluating** the reports of others and giving feedback

**Assessment of learning outcomes**

- BCG was used to assess students’ learning. Students’ contributions come in the form of qualitative review comments. The students make numerous comments on each other’s work and choose themselves which comments they’ve made which they think best represents their work and abilities. These chosen comments are relayed to the instructor whereupon they are assessed for adherence to the grading rubric.
Notable outcomes

- Using Peer Review provided students with a safe learning environment in which they felt free to give feedback and contribute to online discussions without each comment being judged or graded by allowing students to select the comments they themselves wanted to be assessed.
- An overall positive effect on student satisfaction was reported after using the BCG system.
- The quality of students’ contributions was higher and students were able to take charge of their own assessment.
- The instructor found that the tool offered support for all the desired outcomes of using Peer Review with the BCG system.

The role of the instructor

- The instructor first sets up instructions for the students inside the platform, which lets them know that their feedback is graded based on what they themselves select as their best feedback provided to peers.
- Over the course, the instructor can see which work has been handed in and which students have submitted their best contribution feedback for review.
- After everyone has submitted their best contribution for grading, the instructor can give a grade from 1 to 10.
- The instructor can take the context, such as the original product and reviews, and replies from others into account when grading students’ comments. Instructors can determine the number of contributions students need to identify as being their best ones.
- After grading all comments from students, they can be sent to students after which those students are no longer able to change their selected comments. It is still possible to change the grade of a student afterwards, in which case it will be automatically sent out to that student.

Added value of technology

- Using the tool in this way creates a safe learning environment for students, where they can learn by making mistakes and errors as well as asking questions without feeling every action is being graded.
- The BCG feature was co-created with the WUR to enrich the possibilities within Peer Review. FeedbackFruits optimised both the selection of the best contribution(s) and the grading process.

Possible variation

- The instructor can opt to require a different number of contributions per student and explain what is expected in the instructions field. Choosing whether to set a deadline and whether late hand-ins are allowed can encourage students to hand in their work on time while also accepting late work, with a chosen penalty.

Quote from the instructor

“Students felt they had improved their understanding of the topic by giving feedback using BCG.”