
CASE STUDY 12

Group-work Presentations (Poster or Oral) to Enhance Variety and Choice of Assessment in a Programme

Discipline: Pharmacology
Student Numbers: 90



Dr Kathy O'Boyle

Goal/Objectives

The main drivers for designing my assessment in this way was to achieve better alignment between our programme outcomes and assessment methods (Biggs, 2004; UCD Teaching & Learning, 2018) and to also encourage students' choice in assessment methods. The objectives therefore were:

- 1 To use an alternative assessment approaches to encourage student attainment of desirable graduate attributes, namely communication skills, innovation and creativity, and team work.**

- 2 To broaden the types of assessments used within the school.** Most of our assessments are very traditional: summative essay questions, MCQs and laboratory reports.
- 3 To introduce students to a choice in their assessment methods.** Groups could choose to present either an oral or a poster presentation which would be assessed. This would allow students to play to their strengths, supporting an inclusive assessment approach (UDLL, 2016).

Description

An alternative assessment approach was required, in a Pharmacology undergraduate degree programme, to encourage student attainment of desirable graduate attributes, namely communication skills, innovation and creativity, and team work. Therefore, in my 3rd year module, 'Development and Advanced Pharmacology of the Nervous System' (n=90 students), the scientific literature review project and the assessment strategy were designed to promote team work. I was also keen to allow students some choice in the method of presentations on this group work, to allow them some ownership of the assessment process.

Supporting the choice of assessment methods

In 2010, as part of a UCD Inclusive Assessment project, I introduced a choice of two assessments in this module for the first time (see Boyle, 2011). As part of this process, considerable effort went into ensuring that the assessment method choices were equitable or fair, a key principle of Universal Design for Learning (UDL) (CAST, 2018). To do this, I completed an equity template which was developed as part of this earlier UCD Inclusive Assessment project (see Table 1, see also O'Neill 2011 for full template). In this template I highlighted how I had designed in equity, regardless of whether the group chose to do a poster or an oral presentation methods, for example, equity in student workload, similar marking procedures. Developing equity in the assessment methods involved identifying assessment criteria that would align with relevant learning outcomes of the module and could be applied equally to either a poster presentation or an oral presentation. The equity template was given to students to make sure they made an informed choice and they were instructed on the difference between the two choices (See Table 1).

Table 1. Completed Equity Template

| | | Assessment 1: Poster | Assessment 2: Oral Presentation |
|--------------------|---|---|---|
| | Details of assessment | Group poster: students also need to answer questions on the poster. | Oral presentation (based on groups' work) to include presentation aids (i.e.. powerpoint...) |
| Differences | | <ul style="list-style-type: none"> — More visual representation, less verbal — Informal discussion of topic — Give you skills to present a poster at a scientific meeting | <ul style="list-style-type: none"> — More weighting on verbal, less on visual — More formal — Give you skills to present a paper at a scientific meeting |
| Same | Learning Outcomes to be assessed | 'Demonstrate ability to work in groups and make a scientific presentation'. | 'Demonstrate ability to work in groups and make a scientific presentation'. |
| | Assessment Criteria used | Same as used in other method (see handout) | Same as used in other method (see handout) |
| | Marking Procedures | Minimum two staff markers | Minimum two staff markers |
| | Feedback Mechanisms (how made equitable) | Verbal, based on written, formative student (peer) feedback during the assessment presentation time. (see Peer Feedback Template) | Verbal, based on written, formative student (peer) feedback during the assessment presentation time. (see Peer Feedback Template) |
| | Student Workload expectations | Poster design Group meetings Researching content Administrative tasks | Oral presentation Group meetings Researching content Administrative tasks |

Oral presentation



Poster presentation

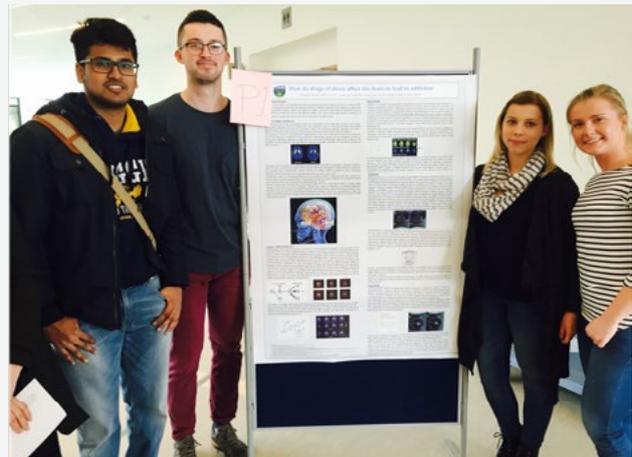


Figure 1. Differences between oral and poster presentations are explained

Designing the group work activities, assessment and feedback

One of the learning outcomes for this module is that students should 'demonstrate an ability to work in groups and make a scientific presentation'. To assess this learning outcome students were allocated to groups and given the task of working collaboratively to prepare and deliver a scientific presentation. The grading scheme and criteria for grading are indicated in Table 2. As evidence of an ability to work in groups,

- Groups submitted a reflection on their own performance as a group and agreed a peer review of presentations made by other groups.
- Students also submitted a personal individual reflection on the group process and their contribution to it.
- The group scientific presentations were assessed for advanced content/knowledge displayed and scientific presentation skills.

At an implementational level students are allocated into groups of 5. Each group is balanced for student subject major as well as for laboratory class assignment (to facilitate groups getting together for their project work). The module is co-delivered by 4 academic staff members who act as mentors to 4-5 different groups. Each mentor offers a choice of three project topics that fall within their area of expertise. Six group-

work sessions are embedded in the timetable. This circumvents a common problem that students often have in finding a time to meet that suits everyone.

The group sessions are held in active learning rooms (rooms with round tables which facilitate student discussion, group work and interaction) to facilitate and encourage interactions within groups. Two of these sessions are allocated to students getting to know each other, explaining the assessment choice (Figure 1) and coaching the students about working effectively in groups. Suitable reading material is supplied via the Virtual Learning Environment (VLE) Blackboard. Groups are encouraged to assign roles such as chair, scribe, designer to each other and to agree a set of ground rules. All students are expected to act as researchers. The remaining four group-work sessions are dedicated to a different aspect of the project: choosing a topic, preparing a poster/oral presentation, preparing a draft presentation, finalising the presentation. It was important to do this as students had a range of previous experience with making scientific presentations of various types, from none to some. Staff attend these sessions and meet with their groups to give feedback on how the project is progressing and guidance for the next stage of the project. Emphasis is placed on creating a positive, respectful atmosphere, where students feel free to suggest ideas and are open to accepting constructive feedback.

Table 2. Grading scheme and criteria for assessing scientific presentations and group work

| Development and Advanced Pharmacology of the Nervous System 2017-2018 | | |
|---|--|--|
| ASSESSMENT CRITERIA FOR PRESENTATIONS AND GROUP WORK | | |
| Module learning outcome to be assessed: 'Demonstrate an ability to work in groups and make a scientific presentation' | | |
| Alignment to learning outcome | Assessment criteria | Weighting towards project grade ¹ (%) |
| Make a scientific presentation | Scientific presentation skills Structure and organisation of poster/oral presentation Visual enhancement to assist in communication Verbal delivery: clarity and coherence | 20 |
| | Knowledge Evidence of appropriate depth and breadth of research onto topic Evidence of groups' comprehension of this topic. | 40 |
| Work in groups | Suggestions for improvement of group work and group peer feedback Group reflection on performance 'What ideas do you have for improving the ability of your group, next time round, to be a better team?' Ability of your group to give constructive (positive and ideas for improvement) feedback to other groups | 20 |
| | Ability to reflect on personal experience of project and group work What is your assessment of your learning? How well did your group perform and why? What was your particular contribution to the group? | 20 |

¹ Note the full project contributes to 20% of module grade

Outside of the scheduled sessions, groups are free to contact their academic mentor but are expected to work largely in a self-directed manner. Groups make their scientific presentations in week 10 of the semester.

As well as delivering their own presentations groups are also tasked with reviewing the presentations of 3 other groups (See Table 3). Students listen differently to presentations when they are required to provide a review of it. By making peer review part of the assessment students have an opportunity to develop skills such as providing constructive feedback and critical review (Multiple means of engagement, CAST, 2018). They are also more likely to learn about presentation skills from each other if they are actively engaged in listening compared to sitting passively in the audience. The final assessment component for the class is for each student to write an **individual** personal reflection on their experiences, such as how well their group worked, and why and what was their particular contribution to the group.

| PHAR30040 Development and advanced pharmacology of the nervous system | | | | |
|---|-----------|--|-------------------|-----------------------|
| Group work and peer feedback | | | | |
| Section 1: Suggestions for improving group work | | Section 2: Peer feedback | | |
| 'What ideas do you have for improving the ability of your group, next time round, to be a better team?' | | N.B. This information will be shared with the other groups but will not contribute to their grades. Group providing feedback: _____ | | |
| | Group No. | Oral or poster | Positive comments | Ideas for improvement |
| Group No: _____ Signature 1: _____ Signature 2: _____ Signature 3: _____ Signature 4: _____ Signature 5: _____ | | | | |

Table 3: Group work and peer feedback forms

Link to Universal Design (Inclusive Assessment) Approach

This assessment approach expands the **variety** of assessments that students are exposed to during the programme (UCD Teaching & Learning, 2018; National Forum, 2017., CAST, 2018). Putting a high quality oral or a poster presentation together requires excellent research and strong organisation, creativity, communication and technology skills. This enables students with different strengths to contribute in different ways and allows students to excel in a way that is not encouraged by more traditional assessment methods (CAST 2018). Student engagement with the project is consistently very high, as these assessment options were chosen because they represent ‘real life’ choices - the standard way for scientists to communicate their results at conferences is via poster or oral presentations.

The groups **choose** how they want their projects to be assessed which empowers them to become more ‘partners in assessment’ (National Forum, 2017) and enables them to select the assessment method that best suits their strengths (UDLL, 2016).

The approach taken to the group work is quite structured; for example, specific classes are dedicated to coaching the class around working in teams and this helps build a **community of learners**. It also encourages students to think more critically about what makes an effective group, and how they as individuals can contribute to the process. Groups have regular, informal meetings with an academic supervisor who gives advice about how to prepare a scientific presentation, provides feedback on progress and prompts consideration of what to do next. This ensures an element of **scaffolding** to the project and helps build skills that will be further developed in the final year of the programme. It is also a simple way of fostering a partnership between staff and students which is enjoyed and valued by all. The provision of **timely feedback** helps students identify where they have gone wrong and what they need to do to improve (Brown, 2005).

Results

Following its initial implementation in 2010:

‘The students were overwhelmingly positive about being given a choice in how they were assessed. They felt empowered by having a choice and did not find it stressful to have to choose. They agreed that it allowed them to play to their strengths and that the choice gave them ownership of their learning experience’ (Boyle, 2011, p 28)

When asked to list two positive things about group grades the most popular answers were:

- ‘it’s motivating – it encouraged me to do more for the group. I didn’t want to let them down’
- ‘it requires team building and encourages a collaborative approach’
- ‘It shows how well the group worked and how all the work came together’

I was surprised to learn just how motivated students were to work hard for the good of the team. The social context of the project is, therefore, a strong driver for student effort. They also take great pride in the final product.

However, despite this, following more survey data from over the last few years, many indicated, they were unhappy with the original exclusively group mark. Some of their concerns had been that:

- ‘your grade can be damaged by other people’s lack of work’
- ‘person who doesn’t work as hard still gets the good group grade’

Following this feedback, I introduced an individual assessment to moderate the group grade. Although only contributing 20% of the project grade (see Table 2), the individual grade can separate grades for group members by as much as 4 grade points. When students were asked their opinion on having an individual component to moderate the group grade, 93% of students who responded (28/30) agreed or strongly agreed that it was important.

Recommendations

In summary, the group work aspect of the project in this module has improved the alignment between the programme and the intended learning outcomes (Biggs, 2004). Using assessment as a driver, reflective practice and critical thinking (Colley et al, 2012) are promoted and students are encouraged to develop employability skills. Students also reported that their interpersonal and presentation skills improved as a result of the project and were very positive to the choice of assessment methods. If you are considering implementing either a choice of assessment or group work assessment in your module, I would suggest that you:

- Consider how you want to construct groups
- Schedule classes for team building and project overview
- Create a collaborative atmosphere in which students feel free to explore ideas without fear of ridicule or rejection
- Use clear assessment criteria for peer review
- Consider an individual and a group element to the reflective process.
- Use the established equity template and processes when introducing a choice of assessment (O'Neill, 2011)
- Obtain feedback from class regularly and modify as required

References and Resources

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