

How to Engage Students in Peer Feedback

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The teaching experiment was centred on peer feedback, or more precisely: How to make students engage more in the peer feedback assignment that is part of the course "Introduktion til Naturvidenskabelig Formidling".

The Context and Experiment

The course is taught in Blok 1 and gives the students 7,5 ECTS. Any type of student from the Faculty of Science can take the course, and in the fall of 2022, where the experiment was performed, 44 students participated. The students were mostly studying at BSc level, but a few took the course as part of their MSc. The students taking the course are generally really motivated, as the course is an elective. However, in the two years I have taught the course previously, the students have always expressed frustration over the one peer feedback assignment that was part of the course, and many did simply not do it. I wanted to see if I could change that behaviour, in other words: Get more students to participate in the assignment compared to earlier years. In addition, I wanted to see if I could affect the students' view on peer feedback, as I have gotten pushback from the students in 2020 and 2021 when introducing the peer feedback assignment. This pushback took the form of disbelief and critical comments proposed in class and/or in direct messages sent to the teachers via email and over Absalon, as well as in critical mentions in the written evaluation of the course. These critical comments were centred around the fact that the feedback was not given by experts and therefore was deemed worthless by the students. They clearly did not see their fellow students as capable of giving any sort of constructive feedback that would help them better their work, why it can be concluded that their focus was solely on what they would get out of *receiving* feedback.

To test whether I could make the students engage in the peer feedback assignment, I decided to focus on three parameters: A) How many students handed in the assignment? B) How many students questioned the assignment in class and/or via direct messages? In which ways? C) Was the assignment mentioned in the evaluation? In which ways?

Before going into detail of the changes I implemented to get more students to engage in the peer feedback assignment, I first want to explain why I chose this specific topic to focus on:

Why Have the Students Engage in Peer Feedback?

Research shows that peer feedback can increase learning for both the person giving and receiving feedback. As Lal puts it: “Feedback is an essential part of learning (...) Peer feedback in particular is especially effective.” (Lal 2020, 3). It does however seem that especially the person *providing* the peer feedback gains new knowledge in the process (Nicol et al., 2013).

In the case of science communication, the focus of the course in question, giving and receiving feedback are essential parts of the practice. Science communicators often work in teams and/or help advise clients – both contexts where giving proper feedback is essential. Lal also points to the fact that giving and receiving feedback is key for working in teams in most organisations (Lal 2020, 3), meaning it is not just important for science communicators. In other words, it was easy to find arguments of why it was important to teach the students to *give* feedback, even though the students seemed mostly focused on *receiving* feedback.

Why did we Experience Pushback?

When I presented the students with the arguments of why giving and receiving feedback was important in the 2021 version of the course, I did not specifically highlight the benefits of *giving* feedback. I presented the two positions, giving and receiving peer feedback, as equally good. Could I perhaps prevent the pushback from students in 2022 if I changed my focus? As noted by Nicol (2010), it is likely the symptom of a failed

dialogue if feedback is not perceived as beneficial by the students. I therefore had to ask myself: Which kind of dialogue had I neglected?

My hypothesis of how the problem occurred ended up being two-folded:

1) I did not explain clearly enough that to *give* feedback is a necessary skill for science communicators. In addition, I did not integrate the concept of *giving* peer feedback strongly enough into the course literature (no text was provided on giving feedback in 2020, and the one text on the matter was marked as optional reading in 2021). This might have made the students see the assignment as less important.

2) I did not consider how radically we changed the didactical contract without noting the students when we introduced peer feedback. During the course, the students work in groups that hand in weekly assignments, which they get feedback on from a teacher. In the one week where we work with peer feedback, they do not get the usual teacher's feedback, since we do not want to undermine the students' peer feedback. As described by Ellegaard et al. (2022), this drastically changes the didactical contract between students and teachers:

One can talk about a standard version of the [didactical] contract, and in this version, the role of the student is to submit an assignment, while the role of the teacher is to assess the assignment. In connection with peer feedback, this contract needs to be renegotiated, because the roles need to change. The role of the teacher changes from being the assessor to providing the framework for assessment. (Ellegaard et al. 2022, 54)

Was the “failed dialogue”, as Nicol (2010) frames it, due to my neglects of renegotiating the didactical contract? Could I engage the students more by making this change explicit?

To test my hypotheses, I had to make sure to 1) inform the students about the important learning outcome of *giving* peer feedback, and 2) I had to take special care of re-negotiating the didactical contract when switching from teacher-provided feedback to student-provided feedback.

The Experiment

Ellegaard et al. find four essential themes for peer feedback processes: “(A) Framework and context, (B) Purpose, (C) Criteria, and (D) Support and embedding” (2022, 55). If my hypotheses were correct, it was especially A and B I needed to work with to make the students engage in peer feedback.

I focused mostly on B in my experiment in the form of highlighting the important learning outcomes of *giving* peer feedback when working with science communication. To do so, I did also have to work with A, meaning I had to create a better integration of the topic in the course literature, which was connected to C, as the elected course literature on feedback also defined the criteria the students were to use.

The course literature included a text on rhetorical feedback, which the students were to use to give feedback on another student’s oral presentation in the weekly assignment. The text in question is written by Brendstrup (2018) and describes the important distinction between summative and formative feedback as well as the three C’s of rhetorical feedback: Working Constructively, being Concrete and delivering the feedback with Care. In addition to providing the text, I did an active lecture where I highlighted the many examples of giving feedback in science communication. In this active lecture, I also gave the students the assignment of preparing one piece of rhetorical feedback for an impromptu presentation of app. 3 minutes I did based on keywords chosen by the students. This was to let them test and discuss with others how to utilize the three C’s in a case very close to the one they had to give peer feedback: A live presentation (no possibility of pausing) performed by someone they know well (in the active lecture, the teacher, in the peer feedback assignment, a peer). The students later that week gave each other peer feedback as part of the weekly assignment (unchanged from 2020/2021).

To sum up, I used three elements in my experiment, connected to Ellegaard et al.’s definitions of (A) Framework and context, (B) Purpose, and (C) Criteria:

1. **(A) Framework + (C) Criteria:** The students were given guidelines of what to give feedback on and how to do it in the course

literature (text ‘promoted’ from optional reading in 2021 to obligatory reading in 2022).

2. **(B) Purpose:** I presented why *giving* feedback is an integral part of science communication in the active lecture (new element in 2022).

3. **(C) Criteria:** I made the students work in groups to formulate feedback based on the criteria in class (new element in 2022).

The outcome

To test the outcome of my experiment, I used the three parameters I set up in the beginning of this paper: A) How many students handed in the assignment? B) How many students questioned the assignment in class and/or via direct messages? In which ways? C) Was the assignment mentioned in the evaluation? In which ways?

A) How many students handed in the final assignment?

32 out of 44 people handed in the assignment in 2022 = 73 %

28 out of 49 people handed in the assignment in 2021 = 57 %

It is worth noting that the assignment was part of the course’s last week in 2022, but a part of the middle of the course in 2021. This usually makes a difference when it comes to how many students hand in the assignment: The students only have to hand in 5 out of 6 assignments to qualify for the exam, and at the end of the course, many of the students have already qualified. Since the end of a Blok often collides with the students’ need to study for other exams, more students tend to ‘skip’ the last assignment of the course, whatever it is. Both in 2020 and in 2021 we saw a drop in handed-in assignments in the last week, so the numbers from 2021 and 2022 might not be directly comparable.

B) How many students questioned the assignment in class and/or via messages? In which ways?

We had no questions about the relevance of the peer feedback assignment in 2022, not in class, nor over direct messages. To compare, in 2021 I personally received four messages about the matter and there was a good

deal of discussion in class in 2021, which the course responsible could confirm my memory of.

C) Was the assignment mentioned in the evaluation? In which ways?

No student mentioned the peer feedback in the written evaluation. However, very few students filled out the written evaluation this year compared to previous years: 16 out of 44 students answered the evaluation in 2021, while 39 out of 48 filled out the evaluation in 2022. This might be due to the fact that we did not have time to let the students answer the evaluation in class in the final week of the course in 2022, which we did in 2021.

Where to go Next?

My experiment was a success, especially when it comes to the students' attitude towards peer feedback, as we received no criticism or scepticism of the concept this year. Still, only 3 out of 4 students decided to participate in the exercise. Luckily, there are still two elements I could experiment with implementing next year: 1) to prioritize co-developing the peer feedback criteria with the students, and 2) making the task 'lighter' for the students.

A lot of the literature on peer feedback mentions how important it is to take student voices into account (Hämäläinen et al., 2017). Ellegaard et al. explain that a crucial step of implementing peer feedback is “to communicate, share or even co-develop the criteria with students” (2022, 54). While I took great length in communicating why and how we worked with peer feedback in the course, the student did not have much influence on the criteria handed to them. While it is important to have clear and concrete guidelines in peer feedback (Winstone and Carless, 2019), or as Ellegaard et al. advocate; that “the teacher explicitly states the goals, criteria, and steps of feedback processes” – one shouldn't forget to let “the students implement the instructions into their work” (Ellegaard et al. 2022, 61). A way to do this could be to present the students with the same text on rhetorical feedback next year, but this time let them develop their

own set of specific feedback criteria based on the text – an idea also recommended to me by my supervisors for my universitetspædagogikum.

When I mention making the task ‘lighter’ for the students, I am referring to both making the criteria even more clear (which could happen by involving the students more, as mentioned above) and in adapting the final assignments to not be as long and as dependent on one person. As of now, one student provides another student with very lengthy written feedback (1000-1500 words). That is usually considered a long text by these students, and if one person decides not to hand in the assignment, it is a big task to find another ‘feedbacker’ for the student left behind. Next year, we could have two students provide a shorter feedback text (500-700 words) to each presentation. This would also show the students how different feedback you get depending on who you ask. In addition, shifting my focus to Ellegaard et al.’s point on “(D) Support and embedding” (2022, 55), it is worth considering that “long and comprehensive feedback can have a tendency to overwhelm the recipients and lead to a frustrated response or lack of response” (Ellegaard et al. 2017, 742). Giving the students shorter feedback texts might therefore also be better for the students receiving the peer feedback in the end.

Future Implementation

I presented the text above to the course responsible in January 2023. She has been teaching the course several more years than I and started by confirming my memories of the students’ criticism and skepticism of peer feedback in previous years. She was, however, surprised to hear how ‘few’ students handed in the final assignment in 2021 and in 2022, why I went back and did a recount (the correct numbers are listed above).

Her experience was that nearly all her students (we divide the 44 students into two seminars, where she supervised 20 and I 24 students) did the presentation and provided each other with oral feedback while she was present. She only experienced students that took the assignment very seriously – both when it came to do the oral presentation and when it came to providing peer feedback. Some students must have participated in doing the oral presentations and in giving each other oral peer feedback, but did not hand in the longer written feedback for the official

assignment. My idea of the students doing shorter feedback might therefore be a good idea, even though the course responsible feared that the students would feel even less obligated to hand in the written peer feedback if they had to provide feedback for two students, one of them not even part of their usual study group. In addition, having two students provide peer feedback for each student would demand a lot more coordination for us teachers. We also considered whether too many people in the room would heighten or challenge the commitment of the students. The students were very dedicated in this version of the exercise, and we did not wish to challenge that if we could avoid it.

In the end, we agreed that the set-up of my experiment worked better than the peer feedback assignment had in previous years and decided to continue giving guidelines on what to give feedback on and how to do it in the course literature, as well as keep presenting how giving feedback is an integral part of science communication in the active lecture in the week of the assignment. While there still are elements we need to tweak, like having the students help formulate the final feedback criteria, we were overall happy with the way the exercise unfolded in 2022.

When considering the success of this experiment, we were reminded of another course in our department, “Introduction to University Pedagogy”, which is quite popular at our department. We therefore decided to talk to colleagues teaching this course in order to find inspiration for our future implications of peer feedback. We also discussed how students at our MSc leveled course “Naturvidenskabelig Formidling” asked for more practice-oriented exercises in their midway evaluation and considered copying this very exercise into that course next year.

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