Peer reviewing written assignments

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Many lecturers struggle to give sufficient and timely (interim) feedback on written assignments. What if you could involve the students themselves — after providing them with detailed instructions — in giving feedback on the papers of their fellow students? What if giving and receiving peer feedback could help students hone their language skills and acquire professional and personal competences with regard to peer learning, critical thinking and lifelong learning? What if you could save a considerable amount of time without compromising on quality?

Involving students in the (interim) assessment of written assignments compels them to look at these assignments in a different way and to take the assessment criteria into account more thoroughly. It also teaches them to give feedback in a constructive way and to deal with both positive and critical feedback from their peers. The time saved can be used by the lecturer to improve the quality, validity and reliability of the feedback itself, or to provide extra follow-up to students with a lower starting level.

In this Teaching Tip, we will provide practical guidance for lecturers who are considering incorporating a peer review or peer feedback process into one of their programme components.

Peer assessment, peer feedback, or peer review?

The concepts of **peer assessment**, **peer feedback** and **peer review** are sometimes used interchangeably. Peer assessment is used by many lecturers to convert a group grade to individual grades (see this ECHO Tip from 2013 on peer assessment). Peer feedback refers to feedback that is not linked to an assessment. Peer review is mostly known as the process that precedes the publication of a scientific article, with an anonymous assessment (including feedback) given by several colleagues, or peers. In education literature, these three concepts are sometimes used as synonyms, although a clear distinction is often made. We will delineate these concepts based on their scientific definitions and then clarify the concept of peer review as it is used in this Teaching Tip.

***Peer assessment** is a system for students to assess the level, value or quality of a product (e.g. a paper, portfolio or presentation) or a performance of another student of equal status. Peer assessment can be either summative or formative (Topping, 2009).*

According to Liu & Carless (2006), there is a clear distinction between peer feedback and peer assessment. ***Peer feedback** is primarily about giving detailed feedback, without any formal assessment, whereas peer assessment does involve assessment (possibly but not necessarily accompanied by feedback).*

In an educational context, according to Pearce et al. (2009), **peer review** is '*the educational approach whereby students assess the quality of their fellow students' work and give feedback on it*'. In the literature, this is also referred to as 'peer evaluation', 'peer response', or even 'peer editing' (Lundstrom & Baker, 2009).

> *In this Teaching Tip, we will use the term 'peer review' to refer to the process of students providing one another's work with **both feedback and assessment**.*

However, even if you decide to have students give only formative peer feedback, most of the tips below can still be useful.

To peer review or not to peer review?

Peer reviewing can have **advantages** for both the students and the lecturer. As described in Wu & Schunn (2020), students can get **faster**, **more detailed** (Cho & MacArthur, 2010), and sometimes **more understandable feedback** (Hovardas et al., 2014) from their fellow students compared to feedback provided by the lecturer. Specifically for academic writing assignments, receiving feedback but also giving it significantly improves the quality of the writing assignment (Huisman et al., 2018). On the one hand, the feedback giver will be inclined to detect and identify problems, and to reflect on and formulate possible solutions. On the other hand, the feedback recipient will be encouraged to reflect on the identified discrepancies between the current situation and the desired target situation and how to eliminate them (Huisman et al., 2018). According to Lundstrom & Baker (2009), the impact on the writing process is even greater when feedback is given than when it is received. Writing a review encourages critical thinking, the application of assessment criteria, and reflection on one's own work after having observed a fellow student's work (Nicol et al., 2014).

For the lecturer, the main motivation is **how much time can be gained** by not having to read and comment on every single text (Hoogeveen & Van Gelderen, 2014). This extra time can be used to set more writing assignments, so that the students can receive even more peer feedback. The likelihood that a student will act on comments received is more than double when those particular comments are received repeatedly (Wu & Schunn, 2020). In the short term, however, there is no time gain, as the lecturer must first invest additional time in organising, training and monitoring the peer review (Topping, 2009). A second possible motivator is that the **quality** of the texts the lecturer receives tend to be higher.

Of course, there are also some drawbacks and **pitfalls** (e.g. low enthusiasm, superficial feedback), but these can be overcome with a well-designed peer review process. A frequently heard remark from students is that a review by a fellow student is of lower quality or less reliable than a review by the lecturer, or that they do not feel confident or experienced enough to carry out the review (Mulder et al., 2014). Consequently, they fear that they will not get enough useful pointers to do better next time. Furthermore, sometimes the feedback received is not specific or constructive enough, even when the feedback was deemed extremely useful (Misiejuk et al., 2021). This may be due to insufficient preparation or effort on the part of the students.

Lecturer feedback and peer feedback are indeed of a different order, but they can **complement** each other. Peer feedback is often more extensive, clearer and more motivating, but it is not always correct. The preference for either peer feedback or lecturer feedback also depends on what the feedback is about. Comments by peers on language use are often less appreciated, whereas feedback on the contents, structure and purpose of the text can create a greater learning effect (Rombouts et al., 2019). Finally, lecturers often underestimate the difficulty of the task, seeing it through the lens of their own extensive expertise, which sometimes causes their feedback to miss the mark (Cho & MacArthur, 2010).

Designing the peer review process

Before you include a peer review process in your programme component, it is important to thoroughly reflect on the desired competences and to draw up a number of instruction and assessment documents. **We highly recommend that you involve your colleagues in this process.**

In what way and for which types of assignments can peer review (or peer feedback) be used? Although this form of feedback can also be applied to presentations (e.g. bachelor dissertation), or even computer code (Rodgers, 2019), we will focus on **written assignments** in this Teaching Tip. Peer review can be used successfully for individual, pair or group writing assignments.

Below are some recommendations that Topping (2009) believes are essential when designing a peer review.

- **Work in groups —** Discuss the objectives, the concept and the process with your colleagues involved in the programme component and with educational support workers. They can lighten the initial workload and optimise the peer review process based on their own expertise.

- **Create support —** Involve all stakeholders, and especially the students, from an early stage.

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Clarify the assessment criteria, the potential benefits and possible challenges they may encounter (Carless & Boud, 2018). This gives them a sense of ownership and eliminates fear of or reluctance to implement a new feedback and/or assessment system.

- **Peer matching —** In some cases (e.g. language teaching) it is necessary to split up the students based on their previously tested level. It is best for students of the same level to be paired with each other. Students with a lower starting level can then be monitored more closely by the lecturer.

- **Provide training —** State the goal and explain what is expected of the students. Discuss assessment and/or feedback processes and strategies instead of focusing on the details of a specific assignment (Carless & Boud, 2018). Give examples of good feedback and poor feedback – either made up or from previous years – or provide a fully commented and assessed example assignment. This can be seen as a form of 'feed up', where you clearly indicate to the students in advance what they should work towards.

- **Provide clear guidelines —** Provide the necessary documents, such as templates (both for the written assignment and for the assessment), clear assessment criteria (for instance, see Andrade, 2005, or Van den Berg et al., 2014), and instructions (preferably including an overview of the steps to be followed). Rubrics (see Teaching Tip ['Rubrics as a guidance and assessment tool' (2017)](#)) and Comproved (see Teaching Tip ['Comproved: Why make assessing difficult when it can be easy?' (2021)](#)) can be helpful tools.

- **Set deadlines —** Be clear about the timing and ensure that deadlines are respected. Be sure to monitor this process at regular intervals (e.g. every week). Provide a summary document containing all deadlines and state the consequences of not meeting these deadlines (e.g. a mark deduction).

- **Monitor and coach —** Especially at the beginning, it is important to do **spot checks** to ensure the form and quality of the feedback and/or the assessment. Intervene when the feedback is too vague or negative. You might even consider scheduling an **extra session** after the first round of the peer review process to discuss the feedback given.

- **Check —** Continue to monitor the **quality**, **validity** and **reliability** of the peer review. This can be built into the process either by reviewing an assignment yourself and providing feedback on it when you notice that the differences between reviews are too great, or by regularly reviewing a few random assignments yourself to compare the marks obtained.

- **Give feedback on the feedback —** It is very useful to give feedback on the feedback provided. Only then will students get better at giving feedback. You can either do this yourself, or ask the students how meaningful, clear and useful the feedback was to them. This process, also called 'backward evaluation', is strongly recommended to increase student engagement (Misiejuk et al., 2021).

The recommendations above can contribute to a strong peer review concept supported by the students. Developing this process will take a considerable amount of time in the first year, and it is advisable to keep assessing and tweaking the process during the first few years, based on your experiences and those of fellow lecturers, and supplemented by information obtained from student surveys or focus group discussions dedicated to this topic.

Outsourcing assessment

Most lecturers do not mind using peer assessment to produce individualised scores for group assignments. However, having part of the assessment done through peer review may be met with some resistance, including from students.

One of the ways to anticipate a possible pitfall is to use a **double-blind** peer review, where the identity of both parties in the peer review process is kept secret (Rombouts et al., 2019). Social pressure or personal relationships can lead to less reliable feedback and assessments (Dochy et al., 1999). In Lin (2018), it was shown that anonymous assessments lead to more cognitive and less affective feedback, and to a greater perceived learning effect.

Another option is to **limit the impact** of the peer review process on the overall mark for the programme component. For example, you can have smaller writing assignments peer reviewed, as a sort of preparation for a larger writing assignment that will only be assessed by the lecturer(s).

It is also advisable to use **several peers** to increase reliability. Their feedback can turn out to be similar, complementary, or contradictory (Rombouts et al., 2019). Note that contradictory feedback is not necessarily a problem. On the contrary, it may prompt the author to engage in critical reflection. In addition, it might cause one of the reviewers to detect the main problems or to give very constructive advice (Wu & Schunn, 2020).

If several peers give very different feedback, it is best that you assess the paper and provide feedback yourself. You will also occasionally have students who do not agree with the feedback given, especially if it corresponds to a score they deem too low. To counter this, be sure to communicate in advance that your assessment is binding. Experience has shown that the lecturer's assessment tends to be close to the average. The fact that there will never be any complaints about excessively high scores will balance everything out, since some peers are even more demanding assessors than the lecturer.

Are students reliable assessors? Rodgers (2019) shows that, on average, students tend to give slightly higher scores than lecturers. But overall, students' and lecturers' assessments turned out to be rather similar. Almost all peer reviews were within the interval 'lecturer assessment ± 10%'. Finally, it was also found that the **reliability** increased when using two peers instead of only one.

This is in line with our own experience: students do not tend to be overly generous with excessively high marks. See also this ECHO Tip from 2017 that discusses different ways to increase the reliability of peer assessment.

Does it work?

The use of a rubric in the peer review process is strongly recommended by Reddy & Andrade (2010). Students feel that this clarifies the objectives, leading to more transparent and fairer assessments, and ultimately to better end products.

Training students to give good peer feedback results in more constructive feedback, including references to the criteria, but also in better final results (Sluijsmans et al., 2010).

When papers are assessed before and after peer feedback, there is a significant improvement in quality. Great improvement and impact are especially noticeable in below-average students (Mulder et al., 2014). On average, their work improves by up to **20%**, while this is only 3% for the top students. In half of the writing assignments examined, there was a significant improvement after peer feedback; about one third of students showed no improvement or even a slight decrease in their scores.

> *From our own experience, we can conclude that the average scores awarded by lecturers are **significantly higher** after the introduction of a peer review process. However, it is important to note that we cannot determine to what extent this stems from the peer review process itself or from the fact that the assessment criteria are made explicit through the rubric and example reports.*
>
> *From the student surveys (2 academic years, n = 57), we can conclude the following, which is in line with the effects described in the literature:*
>
> *Time spent* — *The vast majority of the students spend a considerable amount of time performing the peer review (5%: < 30 min., 56%: 31–60 min., 28%: 61–90 min. and 11%: > 90 min. per review). The lecturer, on average, spends 45 minutes on a review.*
>
> *Learning effects* — *The students indicate that this helps them to look more critically at their own and other texts, and that they learn especially from reviewing other people's reports and then applying the lessons learnt to their own reports. The clarification of the assessment criteria by the lecturer helps them with the writing assignment.*
>
> *Quality* — *Writing and reviewing more assignments helps to become better at writing papers.*

This is in line with the recommendation of Donia et al. (2018) to implement peer review (or peer feedback) in the curriculum in a systematic and recurring manner.

Finally, when we look at the effect on the time spent by lecturers, we see that before the introduction of the peer review process, it took about 90 hours to correct the reports, and almost no interim feedback was provided to the students. In the year that the peer review process was implemented, the time gain was limited to 10 hours, but from the second year onwards, there has been an approximate time gain of 50 hours per year, and the students now receive extensive weekly peer feedback on their writing assignments.

Summary

In this Teaching Tip, we discussed how having students peer review writing assignments can help you, as a lecturer, to bolster students' language, critical thinking and self-regulation skills. The effect on the final result will be greatest for below-average students, but all students ultimately benefit from acquiring the competences linked to giving and receiving feedback.

Introducing a peer review process takes a considerable amount of time initially, but it pays off in the long run. Be sure to involve your colleagues, the educational support staff and the students in shaping this process. Training students to formulate good feedback and convincing them of the benefits of the peer review concept is crucial. Consider implementing peer review not only for final products, but also for interim versions or even first drafts of papers. To achieve real success, it is advisable not to limit the peer review concept to one programme component, but to make it a recurring element throughout the curriculum.

Let's conclude with a quote from Nicol et al. (2014):

'Peer-reviewing will not only result in students gaining a deeper insight into subject matter but, crucially, it will also enable them to acquire skills which are currently not explicitly developed through the curriculum [...]. These skills include the ability to engage with and take ownership of evaluation criteria, to make informed judgments about the quality of the work of others, to formulate and articulate these judgments in written form and, fundamentally, the ability to evaluate and improve one's own work based on these processes.'

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Want to know more?

Highly recommended literature

Andrade, H. (2005). *Teaching With Rubrics: The Good, the Bad, and the Ugly*. College Teaching, 53:1, 27-31.

Topping, K.J. (2009). *Peer Assessment*. Theory into Practice, 48(1), 20-27.

Lundstrom, K. & Baker, W. (2009). *To give is better than to receive: The benefits of peer review to the reviewer's own writing*. Journal of Second Language Writing, 18, 30-43.

Mulder, R., Baik, C., Naylor, R. & Pearce, J. (2014). *How does student peer review influence perceptions, engagement and academic outcomes? A case study*. Assessment & Evaluation in Higher Education. 39 (6), 657-677.

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Wu, Y.& Schunn, C.D. (2020). *When peers agree, do students listen? The central role of feedback quality and feedback frequency in determining uptake of feedback*. Contemporary Educational Psychology, 62.

Further reading

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Andrade, H. (2005). *Teaching With Rubrics: The Good, the Bad, and the Ugly*. College Teaching, 53:1, 27-31.

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Cho, K., & MacArthur, C. (2010). *Student revision with peer and expert reviewing*. Learning and Instruction, 20, 328-338.

Reddy, Y.M. & Andrade, H. (2010). *A review of rubric use in higher education*. Assessment & Evaluation in Higher Education, 35(4), 435-448.

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Hoogeveen, M. & Van Gelderen, A. (2014). *Effecten van leren schrijven met peer response en instructie in genrekennis*. Levende Talen Tijdschrift, 15(2), 15-26.

Hovardas, T., Tsivitanidou, O. E., & Zacharia, Z. C. (2014). *Peer versus expert feedback: An investigation of the quality of peer feedback among secondary school students.* Computers & Education, 71, 133–152.

Nicol, D., Thomson, A., & Breslin, C. (2014). *Rethinking feedback practices in higher education: a peer review perspective*. Assessment & Evaluation in Higher Education, 39(1), 102-122.

Carless, D., & Boud, D. (2018). *The development of student feedback literacy: enabling uptake of feedback.* Assessment and Evaluation in Higher Education, 43(8), 1315-1325.

Donia, M. B. L., O'Neill, T. A., & Brutus, S. (2018). *The longitudinal effects of peer feedback in the development and transfer of student teamwork skills*. Learning and Individual Differences, 61, 87-98.

Lin, G.-Y. (2018). *Anonymous versus identified peer assessment via a Facebook-based learning application: Effects on quality of peer feedback, perceived learning, perceived fairness, and attitude toward the system*. Computers & Education, 116, 81-92.

Huisman, B., Saab, N., Van Driel, J. & Van den Broek, P. (2018). *Peer feedback on academic writing: undergraduate students' peer feedback role, peer feedback perceptions and essay performance*. Assessment & Evaluation in Higher Education, 43(6), 955-968.

Rodgers, T.L. (2019). *Peer-Marking and peer-feedback for coding exercises*. Education for Chemical Engineers, 29, 56-60.

Misiejuk, K., Wasson, B. & Egelandsdal, K. (2021). *Using learning analytics to understand student perceptions of peer feedback*. Computers in Human Behavior, 117, 106658.

ECHO Teaching Tips (in English)

- Peer assessment (2013)
- Reliability of peer assessment (2017)

ECHO Teaching Tips (in Dutch)

- Actief omgaan met feedback (2013)
- Rubrieken als begeleidings- en beoordelingsinstrument (2017)
- Various ECHO Tips on giving feedback

Good practices (Education Info Centre > Good practices, in Dutch)
(Requires logging in with UAntwerp account)

- Peer Feedback bij mondelinge oefeningen taalvaardigheid
- Video-opnames voor feedback op presentaties van de bachelorproef
- Peer evaluatie bij grote groepen
- Online (peer) review via beoordelingsschema
- Peer feedback systeem voor groepswerk