Feedback matters!

High-quality feedback

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Centre of Expertise for Higher Education *(University of Antwerp)*

'Feedback falls in the top 5 to 10 highest influences on achievement … Clearly, feedback can be powerful.'
(Hattie & Timperley, 2007)

Feedback can have a very powerful effect – if not one of the most powerful effects of all – on student learning. Hattie and Timperley (2007) base this assertion on an analysis of a large number of studies on the effect of feedback. There is, of course, a caveat: feedback must be of high quality to be effective. And that is precisely what we will be focusing on in this tip. What is high-quality feedback? When does feedback result in a powerful learning effect? In this ECHO Teaching Tip, we will discuss the conditions for effective feedback. The focus will mainly be on assignment feedback, but the principles can certainly be applied more broadly.

Sadler's framework

Today, no discussion of feedback that leads to learning would be complete without mentioning Royce Sadler's feedback framework. Sadler is an Australian professor at the University of Queensland. In the 1980s, he wrote several groundbreaking articles on high-quality feedback (see the references for some of his articles). His work was so pioneering that we still refer to it four decades later when we talk about high-quality feedback.

In his framework, Sadler referred to three conditions that must be met for feedback to lead to learning. These conditions are:

- setting criteria and making sure your students understand exactly what the criteria mean (feed up);

- drawing a comparison, expressed in terms of criteria, between the level at which the student performs the task and the expected level (feedback);

- suggesting ways to improve, so as to enable students to reduce and ultimately eliminate the gap between their current task performance and the desired task performance (feed forward).

We will clarify each of these conditions below.

First condition: feed up

Sadler's first condition is focused on **establishing and clarifying criteria**. These criteria indicate what is important in an assignment: what should the student be mindful of when performing the assignment? Logically, the criteria also refer to the learning goals of the assignment and the possible learning effect.

Possible criteria for writing assignments include: scientific style, argumentation, spelling, language, structure, construction, heuristics, source analysis, source referencing, critical attitude, form, etc.

Possible criteria for presentations include: conveying information, eye contact, body language, use of language, timing, structure, clarity, use of media, speech rate, voice

projection, interaction with the audience, intelligibility, etc.

Possible criteria for a lab report include: description of the aim of the experiment, structure and language, layout of graphs and tables, reaction equations, discussion and comparison of results, calculations, etc.

How do you determine the criteria? Where do you start? The criteria should cover everything the student has to be mindful of in order to do the assignment well. So a good starting point is: 'What should a student be mindful of when carrying out the assignment?' In other words: 'What does the student need to know, or be able to do, in order to do the assignment well?' By answering these **basic questions**, you will arrive at some general criteria, such as 'argumentation' and 'structure' for a written assignment, or 'body language' and 'voice projection' for presentations. The next step is then to **specify** these general criteria further. Make explicit what you mean by those general criteria specifically, and/or determine which specific characteristics of those general criteria ensure the proper execution of the assignment.

To clarify this process, let's refer back to the examples of criteria given earlier. Suppose you are a lecturer who wants to set criteria for a presentation to be given by the students. What do students need to know or be mindful of in order to do this assignment well? The answer to this question may then lead you to general criteria such as 'body language' and 'speech rate'.

You can then further specify these criteria by asking yourself what you look at in particular when you gauge someone's 'body language' during a presentation. You might then arrive at clarifications such as 'using relevant hand gestures to reinforce the message and the point', 'having a stable posture, not fidgeting or moving too much', and so on.

Of course, variation is possible here. Different lecturers will look at different things during a presentation. The point is that it must be very clear what the criteria actually mean to you as the feedback giver, to your students, and also to any fellow feedback givers. Especially for the latter, it is very important that the specific contents of the criteria are clear to everyone.

The basic questions, 'What should a student be mindful of when carrying out the assignment?' and 'What should the student know, or be able to do, in order to do the assignment well?', will help you start the process of

developing criteria. There are also a number of **tools** that can support this process:

- Use pairwise comparison to discover general criteria. In this method, you compare two assignments and decide which one is the best. By reflecting on why exactly you think one assignment is better than the other, you will ultimately arrive at certain criteria (for more information on this, see this ECHO Teaching Tip from 2021). The purpose of this comparison is to establish general criteria.

- Do a side-by-side comparison of a good and a bad assignment, focusing on one single criterion for that assignment. For example, take a lab report in which the graphs and layout are well done and compare it to a lab report in which the graphs and layout are poorly done. By analysing both versions, you can find out what it is that you look at exactly when you gauge a document's layout and graphs. You start from a concrete criterion to make this specific.

- Use your network. Get inspired by discussing criteria with colleagues.

- No need to reinvent the wheel. Take a look at criteria for other, similar assignments, either within your department or institution, or by searching online.

- Keep in mind that the development process often continues as you use the criteria. Adjust the criteria based on insights gained when giving feedback. You may find yourself adding new criteria to the list, removing certain criteria, or specifying some of them further. However, do not change the 'rules of the game' during play. In other words, only use the adapted criteria list the next time, when you set the assignment again in your learning environment (e.g. in another student group).

We have now discussed criteria and how to set them up. To complete the story of Sadler's first condition, we still need to address the **clarification** aspect. 'Feed up' is about establishing criteria and **communicating** them to your student group. This is important because it creates a **common frame of reference**, or a common language, between you and your student group. This framework ensures that the feedback given later on will be clear. What

University of Antwerp

do you mean by the criteria specifically? How can students use the criteria to carry out the assignment properly? Your level of thoroughness here will depend on how familiar your students are with the assignment and its criteria.

There are **different ways** to clarify criteria, which can be divided into two categories. The first category includes a range of methods where students **have less active input**. You explain the criteria, and students try to understand your explanations.

A first method in this category is to draw up a very detailed list of criteria. This assumes that students have little experience with the criteria and therefore benefit from in-depth clarification.

A second method is to explain the criteria in detail. You could choose to make the list of criteria less detailed in writing, but still explain it in-depth orally. Of course, a combination of a very detailed list of criteria with an in-depth explanation is also possible.

A third method consists of clarifying a list of criteria by comparing a well-executed and a poorly executed assignment. For instance, you could take a well-structured and a poorly structured written assignment and compare them to clarify the 'structure' criterion. The advantage of this method is that students get to see specific examples and clarifications of what you consider to be a properly structured assignment.

Besides the less active methods, there is a second category of methods. Here, students **are actively involved** in discovering and understanding the criteria. These methods take more time, but they have the advantage that students gain a deeper understanding of the criteria.

You can actively involve your students by asking them to rephrase certain criteria in their own words during class. You can do this individually, but it can also be done as a small group assignment. Such a rephrasing exercise makes the students put into words how they understand the criteria. The subsequent plenary discussion gives you valuable feedback on how the students interpret the criteria, enabling you to identify any mismatch between their interpretations and yours. This mismatch can then be corrected.

Earlier we talked about pairwise comparison as a tool to help you discover and establish criteria. You can also use this method with your students so that they can actively find out which criteria are potentially important for

certain assignments. The procedure to be used here is similar to that for lecturers (see above). For more information on pairwise comparison, see this ECHO Teaching Tip from 2021.

A final method is to give students an elaborated assignment with your feedback attached. By analysing it, students can come up with a list of criteria. This analysis can be done individually or in groups. The different lists can then be discussed further with the entire student group so that, in the end, everyone has the same understanding of the criteria to be used.

Keep in mind that you should **regularly refer back** to the criteria as students carry out the assignment and get feedback. The more often you do this, the more strongly the students will internalise the criteria.

Second condition: feedback

Once the criteria have been established and explained, it is time for the 'real work': giving feedback. This is where you **compare** the current level of task performance to the expected level, expressed in terms of criteria. Your feedback should focus specifically on the criteria you have established.

Example of feedback on a report of a practical, focusing on the criterion of 'discussion and comparison of results':

'Discuss results as specifically as possible. When comparing different measured values, or measured values and theoretical values, comment on the differences according to the absolute or relative deviation.'

Example of feedback on a writing assignment, focusing on the 'coherence' criterion:

'The structure of the first part in particular is excellent: you provide a counterargument, you refute it, you give the counterargument a second chance by reinterpreting it, and then you refute this reinterpretation, too. Well done! The second part is solid, but here the refutation becomes a little less transparent. You want to refute the counterargument, but it becomes a little unclear how this refutation is structured. In fact, it is one refutation with three supporting reasons rather than three separate refutations.'

Providing feedback on criteria has a number of **advantages**:

- In the previous condition, you conveyed what you consider important for the proper execution of the task, through the criteria. So by giving feedback on the criteria in this condition, you provide input on the essence of the assignment. In other words, you use the right emphasis in your feedback.

- Communicating about criteria helps students understand what's important in a given assignment. This is reinforced by providing feedback on the same criteria in this condition. Ultimately, this could even lead to more self-directed and independent students. By repeatedly pointing out the criteria and giving feedback on the criteria, we hope that students will eventually remember which criteria are important for a particular assignment. In addition, they can hopefully transfer this insight to other, similar assignments.

The above also implies that you do not just give feedback on certain criteria. It is necessary to give feedback **on all the criteria** – also on criteria for which the student's task performance is already good. In other words, give feedback not only on parts of the assignment that need work, but also **on strong or positive points**. Students also benefit from specific feedback on things that are already going well. This also has informative value.

Giving feedback on positive assignment elements is also useful because it **motivates** students to 'do something' with the feedback. In the end, feedback should not discourage or dishearten students, but encourage them to continue with the assignment or produce a better product in the future. This motivating aspect can be achieved by giving positive feedback, but also by being mindful of the wording of your feedback. You could say something is a 'point of attention' or 'needs more work', 'needs to be refined' or 'needs to be taken to a higher level' instead of simply calling it 'bad', to make sure the feedback is motivational.

While motivation is important, being **clear** is also a prerequisite of good feedback. If the result is not good, you should say so. Maintaining a good **balance** between these two aspects is important. Make it clear that the result is not good, but at the same time try to think about how you can keep the student engaged. For example, in a general feedback comment at the bottom of the assignment you can say that the assignment is not yet satisfactory, and in particular for a number of reasons. State these reasons,

and also state that the purpose of the feedback is to help them to improve upon the points of attention, and that there are also some good elements (if any, of course).

Third condition: feed forward

High-quality feedback also means looking ahead in your feedback comments. In the previous condition, you made it clear to the student how their task performance was at a specific moment, pointing out strengths and weaknesses. How can the student now improve upon the weaker points to do better in future similar assignments, or when reworking this assignment? What **suggestions for improvement** can you give? Sadler's last condition is that the feedback should create a learning effect, so there is a need to not only look back (through feedback) but also to look forward (through feed forward).

Let's return to the previous example of feedback given on the report on a practical. The feedback is repeated, with the suggestions for improvement underlined.

'Discussion and comparison of results' criterion

'Discuss results as specifically as possible. When comparing different measured values, or measured values and theoretical values, comment on the differences according to the absolute or relative deviation. Avoid terms like "close", "not far from", "almost the same", etc. Also give one or more possible explanations for the differences observed. If you have used different methods to obtain a certain result, indicate which method you think has produced the most and/or the least accurate result, as well as a possible explanation for this.'

'Conclusion' criterion

'Your conclusion should provide an answer to the goals set at the start of the experiment. Report all the results and link them back to the original goals. You have reported the results for NaOH correctly, but those for the HCl and CH_3COOH solutions are missing from the conclusion. Be sure to include these as well.'

In our feedback on the writing assignment (see previous example), we will now focus on the feedback on the 'critical attitude' criterion: 'The student shows a critical attitude towards the arguments both for and against the claim.' Again, the suggestions for improvement are underlined.

'You show a good critical attitude, but try to empathise a bit more with the counterarguments. For example, take a more critical look at the connection between social media and the right to privacy. Does a photo on your social media violate your right to keep something "hidden"?'

As you can see in the examples, suggestions for improvement **can take various forms**. You can:

- explicitly state or demonstrate what you expect from the student, for instance by providing the solution, correcting flawed argumentation or rewriting the introduction;

- use guiding questions, suggestions or hints to let the student think about possible solutions or adjustments to the assignment, without just giving everything away;

- cite sources that the student can consult to find possible solutions or to look in the right direction for a solution.

Which form your suggestions take, is up to you. You can also use a mix of different forms. This choice will also depend on the level of experience of your students. The underlying principle here is that your level of support should match the students' estimated level of experience. Less experienced students will benefit from more support. The degree of experience can also be viewed from two angles. Students may be more or less experienced in the subject matter of the assignment, but may also be more or less experienced in how self-directed they are in processing feedback.

Actively dealing with feedback

We have now discussed all three conditions for high-quality feedback. Of course, you now want your students to respond to and/or 'do something' with this feedback. The previously mentioned methods of actively involving your students in discovering and understanding the criteria are actually a first step in this regard. These methods actively engage them in the feedback process right from the start. For more methods to get your students to actively engage with your feedback, we recommend this Teaching Tip from 2013.

Timing of the feedback

One last precondition for effective feedback that we want to address is the timing. To maximise the learning effect of the feedback, it is important that students receive the feedback **as early on as possible**. They should still be able to connect it to their original thinking. The longer students have to wait for feedback, the harder it is for them to remember the original assignment situation. After a while, students forget why exactly they used a certain strategy or what led them to include or exclude certain aspects (Hattie & Timperley, 2007). Of course, this is easier said than done. Below are **some practical tips** to provide students with timely feedback.

- **Draw up a list of common mistakes.** Students make similar mistakes every year. You can make a numbered list of these common mistakes and use it as a guide when giving feedback on assignments. You can then take a quick look at each assignment and provide feedback by means of the error number. This way, students get their assignments back quickly. Be sure to include the numbered list (i.e. the guideline). However, it's important that the guide not only states what is wrong, but also contains information on how to correct the error (cf. Sadler's third condition). The students can then correct these mistakes, while you get more time to go over the assignments more thoroughly.

- **Use model answers or an answer key and source references.** If you have to give feedback on an assignment or exam that consists of open-ended questions, you can write out a model answer beforehand. You can then give this model answer to your students as a form of feedback. For a multiple-choice assignment or exam, you can draw up an answer key. However, it is important to also include a short explanation of why the wrong alternatives are incorrect and why the right alternative is the correct one. In addition, for each question you could also indicate the source where students can find the correct answer.

- **Use group feedback.** Instead of giving individual feedback to each student, you can also make some general comments on the quality of the work. You can show some examples of good answer elements and common pitfalls during class. Once again, it's important to indicate how

students can improve their work as they continue working on the assignment (cf. Sadler's third condition). Students can then take this information to heart and do better. Afterwards, you can still take the time to look at each assignment in more detail and provide additional individual feedback.

- **Use the sampling method.** Let's explain the sampling method with a specific example. Suppose you are a lecturer responsible for a programme component where 100 students have to complete four assignments each. You can choose to provide early feedback to a group of 25 students for the first assignment, while the remaining 75 students get their feedback later. For the second assignment, another group of 25 students receives feedback early on, while the other students receive feedback later, and so on. The advantage is that every student gets feedback early on for at least one assignment. While this is not the most ideal scenario, the sampling method is a workable solution to partially meet the requirement of early feedback.

In short

In short, for feedback to be high-quality and effective, students need to:

- know what success looks like, by means of clear criteria and/or good examples;

- know what the gap is between the current situation and the expected situation;

- know how they can go about closing this gap;

- be encouraged and motivated to do better;

- receive feedback as early on as possible.

Want to know more?

ECHO Teaching Tips (in English)

- [Actively dealing with feedback (2013)](#)
- [Comproved: Why make assessing difficult when it can be easy? (2021)](#)
- [Thematical page Assessment and feedback](#)

Sources accessible only to UAntwerp staff (login required, in Dutch)

Good practices: in these good practices, criteria are used as a basis for feedback on (and/or assessment of) assignments

- [De methodologische leerlijn in de opleiding geschiedenis](#)
- [Ondersteuning academisch schrijven in het schakelprogramma verpleeg- en vroedkunde](#)
- [Peer evaluatie bij grote groepen (FSW)](#)
- [Peer feedback bij individuele presentaties](#)
- [Peer feedback systeem voor groepswerk](#)

[50 onderwijstips](#)

- Tip 42: aandachtspunten bij criteria

Literature

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