

Example for written reflection and feedback in ReFeed

Original written reflection:

The following is an example of a fictional physics lesson, completely made up to illustrate the feedback concept in an understandable way. It was a lesson in the tenth grade on the subject of ray optics. The students were given a worksheet for experimenting in the field of ray optics. The teacher had provided the materials in such a way that the students could carry out individual experiments in ray optics independently, guided by the experiment manual. In various stages, the material instructed the students to note down and justify hypotheses about an experimental situation. In a second step, the students were to experiment, note down their observations, and evaluate them. For the experiments themselves, optical devices (lenses, prisms, and mirrors) and light sources were placed precisely on the worksheet so that ray paths could be traced. During the lesson, the students worked with the work manual for about 60 minutes. As the teacher, I was able to observe the students' independent work from the outside and evaluate their behavior. A review phase was already included in the planning of the manual, so that at the end of the lesson there was time for questions, which, however, were undifferentiated and not very technical. The feedback from the students was consistently positive, and I decided to use the manual again in future years. Alternatively, the topic can also be illustrated with demonstration experiments. However, this student-oriented approach to experimentation was certainly more successful. The introduction of the law of refraction and the basics of ray optics using lenses and prisms worked well as I had planned.

Basic (computer-generated) Feedback:

Feedback on your written reflection

Below you will find feedback on the implementation of the elements of the reflection model in your reflection.

Note: There are no right or wrong reflections. The key figures and classifications are intended to serve as a guide, but do not represent an evaluation in terms of good or bad!

Assignments:

Below you can see your (estimated) share of elements in the reflection model:

Element	Proportion in %
Circumstances	43.0%
Descriptions	36.0%
Evaluations	14.0%
Alternatives	7.0%
Consequences	0.0%

Tips for further work (if available):

Try to write fewer general statements.

Note down more consequences for your professional development.

Tendency toward complex sentences in your reflection:

Below are some sentences that may be more difficult to understand than the other sentences in your reflection. This is determined by how coherent these sentences are structured. This may serve as a guide for how you can further develop your reflection text:

A backup phase was already included in the planning of the manual so that there was time for questions at the end of the lesson, but these were undifferentiated and not very technical.

Elaborate (human) Feedback:

Feedback on self-reflection of a physics lesson

Dear student,

Below you will find feedback on your reflection text, which you wrote about an experimental situation. We have divided your text into individual sections, but have not changed the order. You can recognize your text by the gray background. In all feedback, we try to combine your thoughts with subject-specific didactic perspectives in order to support your further learning in the field of teaching analysis and reflection, especially with regard to physics.

The following is an example of a fictional physics lesson, completely made up to illustrate the feedback concept in an understandable way. It was a lesson in the tenth grade on the subject of ray optics. The students were given a worksheet for experimenting in the field of ray optics. The teacher had provided the materials in such a way that the students could carry out individual experiments in ray optics independently, guided by the experiment manual.

Circumstances: You state two important general conditions for your lesson, namely the grade level and the topic, while remaining neutral. For greater clarity, you should also specify the length of the lesson and refer to your learning objectives and the students' prior knowledge. Learning objectives and prior knowledge are also important pillars for reflection, which places a special focus on the students' physics learning. In addition, the question of whether the learning objectives have been achieved in the following steps also serves as a meaningful assessment criterion.

In various stages, the material guided the students to note down and justify hypotheses about an experimental situation. In a second step, the students were asked to experiment, note down their observations, and evaluate them. For the experiments themselves, optical devices (lenses, prisms, and mirrors) and light sources were placed precisely on the worksheet so that the paths of the rays could be traced. During the lesson, the students worked with the work manual for about 60 minutes.

Description: You describe the work phase with the experiment manuals in a neutral and highly summarized manner. Neutrality is important here in order to be able to make as objective an assessment as possible in the next step. You describe primarily what the learners should do, but do not report in detail on the behavior of the students. However, this close observation of the class is important in order to analyze their physics learning. You can limit yourself to one or two specific points of reflection that are relevant to physics learning and examine them in greater depth. In your lesson, for example, the following points would have been suitable: the comprehensibility of the experiment manual for the learners, the formulation of hypotheses, the setup and observation of the experiments, or their evaluation.

As a teacher, I was able to observe the students' independent work from the outside and evaluate their behavior. A review phase was already included in the planning of the manual, so that there was time at the end of the lesson for questions, but these were undifferentiated and not very technical.

Evaluation: You write that you were able to assess the class's independent work, but you do not explain which aspects you observed and how you assessed them. You can assess positive and negative aspects. For a comprehensible and well-founded assessment, it is important that you

generate evidence for your assessments in your description and base them on the details described there. For a sound technical foundation, it is also helpful to link your assessment to your knowledge of learning theory and physics didactics. If problems arise, look for explanations as to why they occurred. You evaluate the subsequent questions as “undifferentiated and not very technical.” You do not justify this assessment. Here, too, you can use the points mentioned above as a guide and, for example, argue with statements made by individual students.

The feedback from the students was consistently positive, and I have decided to use the manual again in future years. Alternatively, the topic can also be illustrated with demonstration experiments. However, this student-oriented experimental approach was certainly more successful. The introduction of the law of refraction and the basics of ray optics using lenses and prisms was good, as I had planned here.

Alternatives: Based on the positive feedback from the class, you decide to continue using the manual. You are making a well-founded decision here, but you could reinforce your reasoning, especially on a technical level, by reflecting on whether you were able to achieve the learning objectives with the manual and also by arguing in favor of your manual with references to theory. You write that you consider the student experiments to be more “successful” than an alternative demonstration experiment, but you do not justify this statement. Your assessment that the introduction to the topic was as successful as you had planned is also difficult to understand, as you have neither discussed your goals nor described any evidence of their achievement.

Consequences: You do not draw any conclusions. The aim of reflection is to interpret personal experiences and use them to benefit your personal professional development. Therefore, drawing conclusions is a central aspect of a complete reflection. Otherwise, it is more of an analysis of your teaching. Consider what you can take away from your experiences, what you want to do, or what challenges you have become aware of.