Assessment in pi LVs (courses with continuous assessment) (2)

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Formative and summative assessment

Overview

When planning for competence- and outcomes-oriented learning processes including their assessment, it is useful to distinguish between summative or formative assessment.

When we talk about **examinations**, we usually think of **summative assessment**. Exams typically take place at the end of the semester and should establish what students have learned in a course. In most cases, the result is used to let students move on in their studies or into employment. **Evaluation** and a **focus on results** are therefore central to the summative procedure.

Formative assessment, on the other hand, focuses on **observing and supporting teaching/learning processes:** Understanding what level of knowledge and skills students have acquired allows the teacher to offer **targeted feedback** and thus provide guidance for subsequent learning activities. Thus, formative assessment must happen alongside the learning process so that differentiated feedback and timely support for learning are possible.[1] Furthermore, formative assessment formats are helpful for teachers because they receive feedback (e.g. on their students' learning progress, what they understand and what remains unclear), which they can use to adjust their teaching strategies accordingly.

The following definition clearly illustrates the difference in orientation:[2]

- Summative: Assessment *of* Learning
- Formative: Assessment *for* Learning

1. Partial achievements as formative assessment

A formative partial achievement can be a summary of a text, an arithmetic problem, a short presentation, a lab experiment, etc., which is not graded. Instead, **the student work serves as basis for specific feedback** concerning student work processes, identifiable difficulties, or frequent errors. Feedback (https://infopool.univie.ac.at/en/start-page/teaching-advising/feedback/feedback-on-student-presentations/) can be used in many ways, depending on settings and possibilities. It can be feedback from the teacher, peer feedback, or a combination of both. It can be provided to individuals or as a summary to the entire class. Feedback combined with concrete suggestions for improvement may strengthen students' perceived self-efficacy (https://infopool.univie.ac.at/en/start-page/teaching-learning-at-the-university/perceived-self-efficacy/).

You may **combine both variants, formative and summative assessment**, in courses, as they serve different purposes. However, it is important not to blend the two functions: "Examinations that accompany and support the learning process [...] (should) not take on a summative function at the same time."[3] We suggest you communicate clearly to students whether a partial achievement is intended to support the ongoing learning process (formative) or to assess what students have learned (summative).

Classroom Assessment Techniques (CATs) are **simple and ready-to-use tools** to support student learning in a formative way. These quick methods help teachers gauge what their students have learned and in which areas they need more support. CATs can also help you reflect on your teaching.[4] They are usually applied anonymously and are not graded. Their results are reported back to the learners; thus CATs create a shared dialogue about the teaching/learning processes in a class. Teachers may use CATs in a variety of ways, ranging from **clarifying prerequisites of learning** to the students' **learning processes** to **learning outcomes**.

The following links provide collections of frequently used CATs

- https://poorvucenter.yale.edu/Classroom-Assessment-Techniques
- https://www.celt.iastate.edu/instructional-strategies/evaluating-teaching/classroom-assessment-techniques-quick-strategies-to-check-student-learning-in-class/

2. Scenarios for implementation

- A **cognitive map** helps gauge **learning prerequisites**: At the beginning of the course, invite participants to sketch their personal cognitive map on the course topic. Analysing these maps provides you with information about what students know and how heterogeneous they are in their learning progress.[5]
- **Muddiest Point** is a method that focuses on the learning process. At the end of a session, ask the students to write down what they consider the muddiest point (something they did not understand or something that remains unclear), perhaps along with a short explanation for why they think the point is problematic for them. This technique allows you to see the course content through the eyes of your students and to adjust your teaching as needed.
- The *RSQC2* technique aims at **learning outcomes**. Participants answer five short questions in which they

1. state the most important learning outcomes (**recall**),
2. summarise these outcomes in one sentence (**summarise**),
3. ask one or two open questions on the topic (**question**),
4. connect the main points of the summary to the course goals/learning outcomes (**connect**) and
5. formulate one or two comments on the unit/session (**comment**).

This method supports students in **consolidating learning goals** and reveals to teachers the areas in which the results deviate from the intended student learning outcomes.

References:

[1] Metzger, Christoph, and Charlotte Nüesch. *Fair prüfen. Ein Qualitätsleitfaden für Prüfende an Hochschulen*. St. Gallen: Institut für Wirtschaftspädagogik, 2004, 5.

[2] Walzik, Sebastian. *Was lernen die Studierenden in meiner Lehrveranstaltung wirklich?Lernerfolgskontrollen formativ einsetzen.* Vortrag im Rahmen der CTL-Lecture am 6. Dezember 2018 am Center for Teaching and Learning der Universität Wien. https://www.youtube.com/watch?v=yOjLdMPx4Ys [last accessed on 23.09.2020]

[3] Metzger and Nüesch, Fair prüfen, 5 [1].

[4] Angelo, Thomas A., and K. Patricia Cross. *Classroom Assessment Techniques: A Handbook for College Teacher*. San Francisco: Jossey-Bass, 1993.

[5] For an example of how a teacher at the University of Vienna uses cognitive maps, please see the following video (in German): Video mit Tilo Grenz: „Warum halten Studierende bestimmte Lehrinhalte für relevant?“ (https://infopool.univie.ac.at/videos/grenz/) [last accessed on 15.10.2020]

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