Implementation of a formative, two-stage feedback practice

Claus Thorp Hansen
Technical University of Denmark, Denmark, ctha@dtu.dk

ABSTRACT
Keywords – Formative feedback, two-stage feedback, feedback processes.

Please indicate clearly the type of contribution you are submitting: _X_ hands-on, ___explore, ___poster.

Background
Feedback is important for student learning, but not every way to provide feedback is equally useful for students' learning. This hands-on presentation describes and discusses the feedback practice developed in the course Arenas and concepts. It is a feedback practice that is very effective measured on both the students' evaluation of the course and the grade profile. Furthermore, it is a feedback practice that is not overwhelming in teacher effort.

Description of the feedback practice
The course Arenas and concepts runs in parallel with the students' bachelor projects, and it contributes with theory to the projects. The course terminology and models are practiced on the students' own bachelor projects, i.e. the students work in their bachelor groups when answering the course assignments. In the course, two assignments are handed in during the 13-weeks period: first an *Arena* assignment and later a *Concept* assignment. Students receive formative feedback the week after hand in (i.e. quick feedback while students remember their assignments). Both teacher and teaching assistant provide feedback:
1) First, teacher provides systematic written feedback in relation to the course terminology and models. Thereafter, time is allocated to oral feedback (discussion) with each bachelor group, where they can ask questions and make comments on the written feedback.
2) The teaching assistant gives oral feedback (discussion) from student perspective: What do I believe you can do better in the Final assignment.

Based on the two assignments handed in, the feedback discussions with teacher and teaching assistant and further work in the bachelor project, the students submit a Final assignment. The content of the Final assignment is an improved and updated description of the *arena* for the bachelor project, an improved description of one or more promising *concepts*, and consideration regarding staging of the further design and realization work. The form of the Final assignment is a written synopsis and an oral presentation with subsequent examination.

How effective is the feedback practice?
In order to evaluate the effectiveness of the feedback practice we focus on the students' evaluation of the course and on the grade profile. The students' evaluation of the course in spring 2020 and spring 2021 shows high student satisfaction in general, and with respect to the question "During the course, I have had the opportunity to get feedback on my performance" the course is remarkably better than the department's average as well as the DTU average. The grade profiles from spring 2020 and 2021 shows that more than 50% of the students obtain grades 10 or 12. Thus, we observe that the feedback practice is very effective.

Why is the feedback practice effective?
The feedback practice consists of at least three elements, which are productive for student learning:

1) The students apply the course terminology and models on a relevant and interesting problem: their own bachelor project. Biggs & Tang (2011) write that appropriate student motivating involves: First, the task provided "*must be* valued *by the student and not seen as busywork and trivial*." Second, "*The student must have a reasonable* probability of success *in achieving the task*." It should be evident that assignments, which in content are based on the student's own bachelor project, are motivating.

2) Based on the two assignments handed in and the feedback discussions with teacher and teaching assistant, students are expected to prepare improved descriptions for the Final assignment. Carless et al. (2010) write, "*A more promising assessment design strategy involves two-stage (or multi-stage) assignments in which two (or more) related tasks form the assessment for a course. Two-stage assignments can involve feedback on the first stage, intended to enable the student to improve the quality of work for a second-stage submission*." The feedback practice implemented in Arenas and concepts is a two-stage strategy.

3) Only formative feedback is provided – nothing with partial grades. Research shows that the most effective feedback with respect to student learning is pure formative. As soon as grades or partial grades are included in a feedback process students tend to focus on the grades obtained and loose awareness of how to improve their work (Ulriksen, 2014).

How expensive in teacher effort is the feedback practice?
The course is dimensioned for a maximum of 30-45 students working in their bachelor groups, i.e. groups of 1 to 4 students. In order to submit written feedback to the bachelor groups at the latest the day before oral feedback is scheduled, the teacher has three working days to read and comment on the assignments handed in. During a four-hour module each bachelor group has a discussion first with the teacher and then with the teaching assistant. For the teaching assistant to prepare for oral feedback is allocated in total 14.5 hours.

Hands on session
Introduction (10 minutes)
The feedback practice will be described, empirical data to evaluate its effectivity will be presented, and some reasons for the feedback practice's effectivity will be discussed.

Hands-on activity (60 minutes)
The participants will apply the proposed formative, two-stage feedback practice. The participants will be grouped into smaller groups. Each group will select one of the group members' courses and try to redesign it with respect to improved feedback using the presented feedback practice as inspiration.

Discussion and conclusion (20 minutes)
In the last part of the session, the participants will discuss the result of the hands-on activity and share their experiences focusing on the question: how can you implement elements of the practice in your own teaching?

Expected outcomes/results
The expected outcome from the hands–on session is ideas and/or proposals of how to implement a formative, two-stage feedback practice in own teaching.

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