

Course analysis – FLH3000 ht23-1 (x2), ht23-2

Course responsible

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Courses given (approximately 8 weeks)

2023-008-28 to 2023-10-27

Tuesday course (period 1, 35 students registered)

Thursday course (period 1, 28 students registered)

2023-10-30 to 2023-12-31 (period 2, 33 students registered)

Course material

What the best college teachers do (Ken Bain, 2004)

The Torch and the Firehouse (Mattuck 2009)

Articles related to higher education teaching and learning

Course structure

FLH3000 consists of six meetings and applies a mix of face-to-face, online and hybrid meetings. This blended approach has worked well for doctoral students, allowing wider participation and engagement. During autumn 2023, resources (teacher's time) were optimized by having mainly one teacher lead the sessions, for example meetings 3 and 4.

Continuous assessment is achieved through classroom participation in group discussions, individual written reflections, design and delivery of a teaching activity, and written peer feedback tasks. The course offers students an opportunity to meet a team of teachers with varied backgrounds, and to work with doctoral students from different departments.

Participants engage in discussions with regards to teaching and learning in higher education (with emphasis on metacognition in learning), sustainability integrated in teaching, feedback, supervision, and topics covered in the literature used in the course. Preparation tasks prior to the meetings include reading chapters in the main course literature, articles, watching videos, and reflecting upon those to ensure successful discussions.

The main concepts related to teaching and learning in higher education are illustrated in the course material (Bain) and Mattuck's booklet as well as articles used in the course. The course has been designed with a student-centred approach that requires students to actively work in groups and share experiences while practicing giving and receiving feedback.

The students are provided with tools and given responsibility to explore self-learning. It is, therefore, anticipated that learning occurs through discussions and reflections on teaching-related tasks. As we read the students' reflections upon completion of the course, we realise the course provides them with opportunities to rethink how people learn and how they could apply this knowledge to design activities with focus on learning.

During the course, students are presented with different concepts and strategies, which they are expected to show in their individual reflections, interview assignment, teaching planning activity/recording and group discussions. Participants are encouraged to share with peers and teachers how they intend to apply some of the concepts learned throughout the course in their own teaching. This is achieved through discussions and written reflections.

LEQ course evaluation (survey)

Period 1 = 19 respondents out of 35 (54% answer frequency) Tuesday course

20 respondents out of 33 (60% answer frequency) Thursday course

Period 2 = 16 respondents out of 28 (57% answer frequency)

The 12-question LEQ still works.

Students' workload

Students seem to perceive the course's workload differently. For example, in period 1 (Tuesday), 30% of the student indicated that they spent 6-8 hours a week on the course, and 45% spent 3-5 hours. For the Thursday group, 47% of the student indicated that they spent 6-8 hours a week on the course, and 26% spent 9-11 hours. During period 2 students have said, 50% said they spent 6-8 hours, while 19% said they spent 9-11 hours. We can then conclude that despite the variation in percentages, almost half of all the students (42%) from three courses spend between 6-8 hours weekly.

Many expressed the workload was fine. The course requires 80% attendance, which implies that students could miss only one out of the six meetings. Analysis of attendance register shows that the average attendance is about 83%.

Overall results¹

Period 1 Tuesday = 33 students completed the course, 37 were admitted (89%)

Period 1 Thursday = 27 students completed the course, 29 were admitted (93%)

Period 2 = 31 students completed the course, 32 were admitted (97%)

Overall impression of the learning environment

The polar diagram with the average response to the LEQ statements for different groups of respondents shows a very positive learning environment. Most students perceive that the activities in the course are well aligned with the learning objectives. The atmosphere in the course was described as open and inclusive, and the learners felt they were given autonomy to try their own ideas.

Statement number 4 'The course was challenging in a stimulating way' continues to show the lowest score. There is no clear evidence to describe the reason behind this score.

Analysis of the learning environment

Elements of the Natural Critical Learning Environment (Bain 2004) play a central role in the course. The course has been designed with the goal of supporting student learning, as opposed to covering content.

Meeting 1 (Concepts of Learning): Students are asked to prepare for this meeting by reflecting on education and learning, watching videos related to metacognition of learning and rethink the way we teach. Groups meet for the first time and spend some time getting to know each other. The field of teaching and learning in higher education is briefly introduced and discussed, followed by general information about the course. In the second half of this meeting, students have a workshop on sustainable development and are introduced to education for sustainable development, CDIO, and the concept of an integrated curriculum. Short videos are also used as preparation for this session. This workshop also provides insights for the interview assignment in which students investigate how teachers at KTH work with, among other questions, the integration of sustainability in their courses.

Meeting 2 (Natural Learning Environment): Flipped classroom. Bain's natural critical learning environment is thoroughly discussed during the meeting and a Padlet is used for group discussions. The concept of what we mean by curriculum in higher education is still being discussed. In the second half of the class, groups discuss how a teaching activity can be improved with focus on learning. The first group assignment (interviews) is introduced.

Meeting 3 (Teaching in Engineering Sciences): Students are briefly introduced to the importance of communication in teaching. Mentimeter presentations with embedded questions is introduced for meeting 3. A discussion on Mazur's video concerning peer instruction is carried out and much appreciated by participants. This meeting introduces concepts of how to design a teaching activity. A revised form/template has been introduced successfully in period 4, minimising frustration expressed in previous students' feedback. A brainstorm on designing a teaching activity is carried out in class, which is the first step towards the design and recording of a teaching activity.

¹ It may be relevant to point out that students have had the opportunity to complete the course when another course is offered.

Meeting 4 (Feedback and Supervision): Feedback according to Hattie's article (model) is discussed. As some engineers are not used to texts written for social sciences, students may point out that the literature is hard to digest. Nevertheless, the outcome of the discussions is very positive, and this is reflected in their last assignment (self-reflection 2). Students practice giving and receiving feedback (on their design of teaching activity). Less emphasis has been given to the supervision discussion as most of what is covered during the feedback session is applicable to supervision.

Group meeting 5 (What Makes a Good Teacher): This is a student-led meeting in which students meet at their own time. The group work, together with the video recording are by far the two most appreciated elements of the course. The groups feel they have the freedom to choose whom to interview and areas to investigate. A number of students mention they feel they get concrete examples of how to handle specific topics that novice teachers may not be confident to deal with. They also like the fact that they talk to more experienced teachers on how they plan their courses taking into consideration elements of the natural critical learning environment.

Meeting 6 (Your Teaching Developing Steps): The final meeting is a wrap-up of the contents in the course with focus on revising the main concepts presented in the course, the design of a teaching activity with the video recording, feedback and possible next steps. The article Principles of Instruction (Rosenshine) gathers many of the main concepts discussed throughout the course. In the autumn term, the session was optimised by having one teacher in charge of the discussion in zoom and the other in the classroom.

Answers to general (open) questions

According to overall answers,

1. A few have mentioned that they would prefer to have all meetings F2F.
2. A few students suggest reviewing the content in meeting 3.
3. Group work has worked well for most students and is appreciated as a form of learning.
4. The 3-hour sessions are not appreciated by all.
5. The interview assignment and the group work are the strengths.

Course development

Improvements suggestions for the spring term 2024:

- 1) Continue having one teacher per session;
- 2) Feedback by course leaders on students' recordings have worked well, leading to fewer complaints. We therefore continue during spring term 2024;
- 3) Consider further review of meeting 3.

General comments

Overall view of how students perceive their learning is positive. Group work has worked well in the course. Feedback has a central focus in the course and its importance is evident in the students' reflections. Students point out they understand feedback better, including how they would like to work with feedback in their teaching. Some mentioned they understand their role as a teacher much better.

The mix of face-to-face, online and hybrid meetings will be maintained. Interaction with students online remains a challenge but perhaps this should also be highlighted. The focus mode in zoom has helped students feel more comfortable in a big room.

Students' perspective on feedback in meeting 4 has improved because of them knowing how to give constructive feedback. The practice in class can be very engaging when students come to class prepared.

During the course evaluation meeting, we decided upon the value of prompting students to be more active in breakout rooms by turning their camera on.