

Course analysis – FLH3000 vt24-1 (x2), vt24-2

Course responsible

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Course teachers

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Examiner

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Courses given (approximately 8 weeks)

(Period 3) 2024-01-16 to 2024-03-15

Tuesday course (37 students registered)

Thursday course (31 students registered)

(Period 4) 2024-03-18 to 2024-06-03

Tuesday course (32 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. The blended approach is appreciated by doctoral students, allowing wider participation and engagement.

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 provided during the course. The course has been designed with a student-centred approach that requires students to actively engage in group work 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 3 = 42 respondents out of 67 (55% answer frequency) both courses

Period 4 = 17 respondents out of 32 (53% answer frequency)

Last time the LEQ is used. Learners have been told about the new course evaluation to be implemented from autumn 2024.

Students' workload

Students seem to perceive the course's workload differently. For example, in period 3 (Tuesday), 47,6% of the student indicated that they spent 6-8 hours a week on the course, and 38% spent 3-5 hours. For the During period 4, 47% said they spent 6-8 hours, while 41% said they spent 3-5 hours. We can then conclude that despite the variation in percentages, almost half of all the students (47%) from three courses spend between 6-8 hours weekly.

Generally, students expressed the workload was fine. However, one has mentioned that compared to other courses at KTH, the workload is similar to a 5-credit course. 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 94%.

Overall results¹

Period 3 Tuesday = 36 students completed the course, 37 were admitted (97%)

Period 3 Thursday = 29 students completed the course, 31 were admitted (93%)

Period 4 = 30 students completed the course, 32 were admitted (93%)

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.

We find a recurring situation in which statement number 4 'The course was challenging in a stimulating way' is the lowest score averaging 5.8 (out of 7). When we read the written comments, we notice that the students indicated that the activities were challenging and engaging.

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. Students are briefly introduced to the importance of communication in teaching. Bain's natural critical learning environment is the central theme of the course and is thoroughly discussed during the meeting. 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): We have used a Mentimeter presentation with embedded questions. 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 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): 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). Supervision is briefly discussed within the framework of giving feedback.

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 (interviews), 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. Since period 2 (autumn 23), we have collaborated with KTH Library in presenting the kind of support PhDs can get from the library, both for their research and teaching. The article Principles of Instruction (Rosenshine) gathers many of the main concepts discussed throughout the course.

Answers to general (open) questions

According to overall answers,

- 1) Suggestions have been made to allow recordings longer than 10 minutes.
- 2) One suggestion is to have the lesson plans prepared in groups.
- 3) Group dynamics may not always work as expected.

Course development

Improvements suggestions for the autumn term 2024:

- 1) Implement new course evaluation questions.
- 2) Discuss the possibility of having students design and present their teaching sessions in small groups.
- 3) Add a thread about academic integrity under general course information.
- 4) A small change in session 4 will be implemented from period 1 (2024).

General comments

Changes made to Meeting 3 (between periods 3 and 4) worked out well. To address the fact that feedback from the teachers could be perceived differently, a clearer format was agreed upon for period 4, improving the feedback teachers received in the course evaluation.

Even though it has been suggested the recording could be longer than 10 minutes, to manage the everyone's workload (feedback), the suggestion is unfortunately not feasible.

In session 4, it was observed that there was little time to introduce students to the concept of supervision. We therefore decided to integrate supervision session with feedback. The preparatory work for supervision will be removed and another activity will be planned.