

Structured Approach for Enhanced Course Evaluation Meetings

Peter Persson, Ronnie Thomasson, Wiveca Axner, Hans Bagge

Abstract—The paper presents an effort to structure the course evaluation meetings at the Civil Engineering program (M.Sc.Eng.) at LTH Faculty of Engineering, at Lund University. A scheme has been developed to be used at the yearly course evaluation meetings to structure and guide the discussions between the students, teachers, and the program committee representative. The hypothesis is that the use of this scheme will increase the knowledge and engagement for the course evaluation process and in the end increase the quality of the educational program.

Index Terms—course evaluation process, course experience questionnaires (CEQs), higher education, structured meetings.

I. INTRODUCTION

THE Faculty of Engineering, LTH, at Lund University use questionnaires to gather information of the students' experience of a course using the so-called course experience questionnaires (CEQs). For further information and background material see, for example, [1], [2].

This paper presents an effort to structure the course evaluation meetings, and to enhance the course evaluation process, at the Civil Engineering program (M.Sc.Eng.) at LTH Faculty of Engineering, at Lund University. The work has been driven by the related program committee of which is the authors are affiliated.

The purpose of our work is to clarify, structure, and increase both the awareness and understanding of the course evaluation process. The long-term aim is an increased quality of the evaluated courses and therefore the program as a whole. We have focused on the first-cycle courses at the Civil Engineering program (in short: V) given during the first three years at this five-year Master's program. An evaluation using CEQs is mandatory for these courses. Our target groups are the students and teachers, involved in this Master's program.

The main part of our work has been to develop a graphical scheme of the course evaluation process. The scheme is used during the yearly course evaluation meetings

between the students, teachers, and the program committee, which take place after the completion of a course. See Figure 1 for the developed scheme.

The ambition is that the scheme will be used as a map, making sure that necessary input is considered and discussed. One further ambition with this paper is to disseminate our work to the whole engineering faculty at Lund University, i.e. LTH; here, we have the same twofold aim given in the beginning of this section.

II. HYPOTHESIS

Our hypothesis is that a raised awareness and an increased understanding about the course evaluation process will lead to a higher engagement from both students as well as teachers. This in turn, will result in higher quality evaluations and therefore foster an adequate course development. In the end, this may also increase the quality of the educational program.

Because the course evaluation process is a rigorous process—which is also mandatory—we want to contribute to maximizing the benefits of the invested funds, and time spent by the students, teachers, program committee, and various administrators. Because the investments are expensive, in both time and funds—which is also pointed out by [3]—the positive outcome should be both maximized as well as considered to be valuable.

III. GOVERNING STRUCTURE OF THE SCHEME

The developed scheme is shown in Figure 1. In this section, a brief overview of the scheme is given. The general structure is that the yearly course evaluation meeting is located in the center of the scheme: the bronze colored box. There are eight boxes of different *input* to the meeting. Here we want to highlight importance of an additional operational evaluation [4]. After this meeting has taken place, a course evaluation report is produced which includes comments written by the meeting attendees. This report is part of the *output*. There are in total four boxes of output from the yearly course evaluation meeting.

IV. COMMUNICATION OF OUR WORK

The goal of early communicating our work to the stakeholder and end-users is twofold: (i) to create visibility and facilitate usage of the scheme; (ii) to solicit early, as well as, continuous feedback.

A draft version of the scheme was sent for referral to the students (via the student study council at V) and the teachers (via the Directors of Studies, or equivalent, at V), which make up the stakeholders and end-users. The specific

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P. Persson is with the Dept. of Construction Sciences at Lund University, Lund, Sweden (phone: +46 46 222 83 53; e-mail: peter.persson@construction.lth.se).

R. Thomasson is with Program Service at Lund University, Lund, Sweden (e-mail: ronnie.thomasson@lth.lu.se).

W. Axner is with the Student Service at Lund University, Lund, Sweden (e-mail: wiveca.axner@lth.lu.se).

H. Bagge is with the Dept. of Building and Environmental Technology at Lund University, Lund, Sweden (e-mail: hans.bagge@byggetek.lth.se).

The authors constitute the Civil Engineering program committee at Lund University, Lund, Sweden.

comments on the scheme from these groups were taken into account when the scheme was completed to its current form. The referral process was truly important, not only because of the comments received, but because it highlighted the importance of the course evaluation meeting for the stakeholders and end-users.

It should be noted that the teachers we reach also educate students at several other engineering programs at LTH, e.g.: Architecture (A); Surveying and Land Management (L); Environmental Engineering (W); Fire Protection Engineering (Bi) as well as international Master's programs.

V. LAUNCH OF THE SCHEME

The Civil Engineering program committee have had digital welcome receptions for the first, second and third year students at the start of the fall semester of 2021. During the receptions, the developed scheme was introduced and presented for students and teachers.

The scheme was used for the first time during the months of September and October, 2021, during the yearly course evaluation meetings for first-cycle courses during reading period 4 (given March to June, 2021).

Our impression is that it has had positive influence in guiding the discussions so that all important topics are covered to a relevant extent. The scheme will be continuously updated and improved, especially this first (*beta*) version; see Figure 1. During the spring semester of 2022, we plan to conduct a first evaluation the implementation of the implementation of the scheme.

VI. USE OF THE CEQ DATA

The CEQs have a central and important part in the course evaluation process. While they provide valuable input to the discussions taking place at the yearly course evaluation meetings, there are some issues that are repeatedly discussed. In our experience, there are mainly two: (i) the response rate; and (ii) the quantification of the workload.

The response rate at first-cycle courses at LTH typically lies between 30–35% [5]. For the Civil Engineering program, the response rate is, in average year 2020/2021, 29% for the 31 first-cycle courses at the program (min/max being 16/63%). For some involved in discussing and interpreting the CEQ data, this is considered too low. One way to increase the response rate is to use paper questionnaires instead of web-based ones [6]. However, the authors also state in [6] that the low response-rate data may still give a representative view of the whole student group's experiences of the course. This conclusion is supported by other studies. In [7], they discuss that rates around 50% can be sufficient—this in relation to [6] where rates of only 10% is being discussed as relevant data. The response rates of CEQs is further discussed in [8], where they argue that low response-rates may still be adequate data. Thus, a response rate of approximately 30% (coherent to both LTH's and the Civil Engineering program's average response rate) may be sufficient to fulfil the purpose of the CEQ data for the course evaluation meetings [2], [5]: to generate high-quality discussions at these yearly meetings. Some efforts may however be needed for the courses with very low response rates (say < 20%). It should be noted that only 4 out of the

31 studied courses' CEQ response-rates (year 2020/2021) were lower than 20%. Moreover, these four courses exceed 20% response-rate in a five-year average.

Another issue related to the CEQ data is to interpret the score on various items. It may be that not all items should have as high score as possible. In the preparatory work of the CEQ [1], it is stated that a high score on the workload-item indicate a reasonable workload. It should also be mentioned that the same author highlights the need for discussing the CEQ data, and that the data should be seen as problematizing rather than concluding [2]. This might be especially important for the workload item. As an example, there are indications that the students' view on the workload is changed a while after the first-year courses; their impression is that the workload being more appropriate when they have advanced in the program [9]. Our experience tells us that it is somewhat common among the teachers at the Civil Engineering program that a positive value on the workload item may reflect that the students have not been challenged enough during the course—however, this perception vary significantly among the teachers. It is not only the level of an adequate workload that is uncertain. A workload perceived as acceptable can be beneficial for learning because too much content can result in a surface-based approach; while work towards deep-learning outcomes must be encouraged [10]. Because the workload perception is influenced by several different factors [11], a balanced workload can be difficult to obtain. All in all, we believe that a high score on the workload-item in the CEQ data is not necessarily equivalent to an adequate workload.

Both issues highlight the importance of the discussions that the yearly course evaluation meeting provide.

VII. FOLLOWING UP

It is important to have a follow-up on the previous year's course evaluation during the course evaluation meeting. The students have occasionally requested a more rigorous follow-up on the courses which they experience as insufficiently planned and/or conducted. By having a designated box for using the previous year's course evaluation report as input to the meeting, this will be a natural thing to include in the evaluation discussions.

Moreover, if the students perceive that their efforts in answering the CEQs and participating in the yearly course evaluation meetings makes a difference they are more inclined to answer, [12]. This may be especially useful for the courses with very low response rates.

VIII. CLOSING REMARKS

By using the suggested scheme during the yearly course evaluation meetings, we believe that the course evaluation process can be enhanced. We foresee the following probable outcomes of using the scheme:

- The yearly meetings will include all aspects/input in a relevant manner.
- The CEQ data should be problematized, rather than treated as concluding data.
- The discussions being more structured and thus more rewarding.

- The comments in the course evaluation reports being more comprehensive.
- The engagement of students and teachers being increased.
- Increase the response-rate of the CEQs, which may be important for the courses with very low response rates.
- Successive improvements of the official course syllabuses.

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The yearly course evaluation meeting's role in the process

Version: 2021-09-23

Main purpose: Clarify, structure and increase the understanding of the course evaluation process among teachers and students

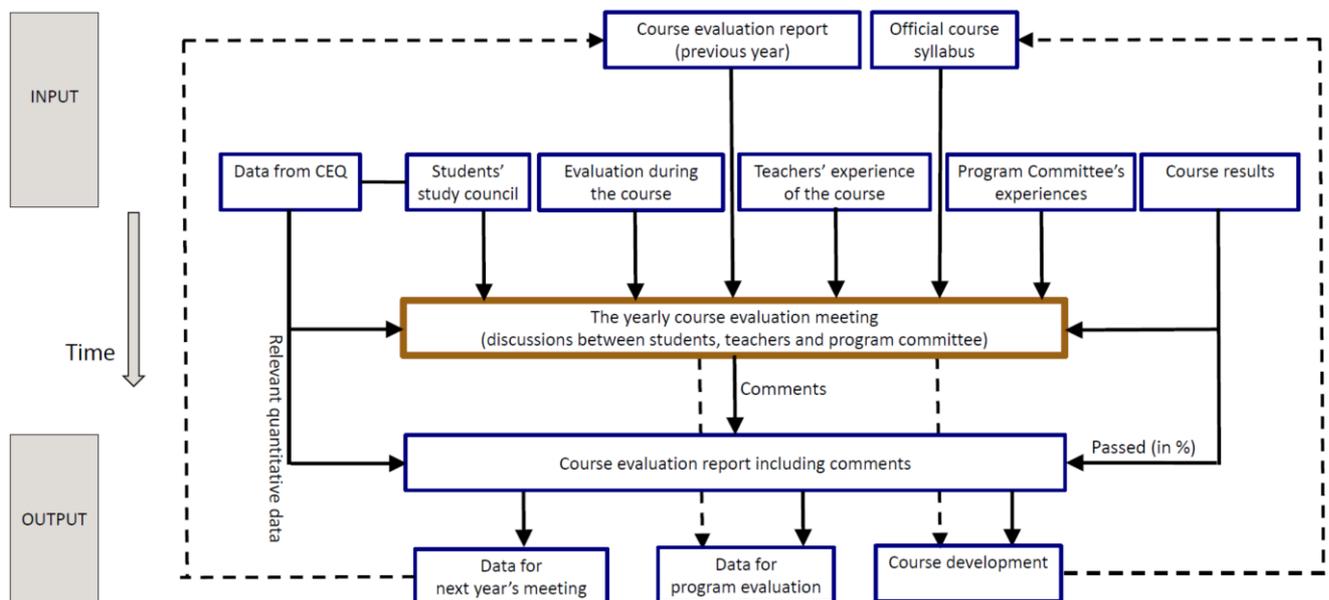


Fig. 1. Developed scheme over the yearly course evaluation meeting's role in the process.