

Research proposal

Innovation call CEE 2016

Underpinned scenarios and good practices for teacher coaching

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Introduction

The introduction of the Bachelor College (BC) has caused a relatively wide variety of choices for students. This was done both to fit students' individual interests and ambitions and to meet the demand from trade and industry for more differentiation in recently graduated engineers. Students are stimulated to find out what kind of engineer they want to become, to form an idea of what that particular job or function entails in practice and make decisions for their free choice modules based on that information.

Parallel to this, the TU/e has chosen to implement teacher coaching, because the professional identity of their teachers can be a role model for students as well. Teacher coaching has two intended purposes: (1) to help students get awareness of the kind of engineer they want to become, and (2) to coach students on the choices they can make during their studies in order to achieve that goal. Based on interfaculty starting meetings with intended coaches, a preferred coaching model was designed, which was inspired by a model for passing through a process of choices cyclically (Knoop, 2008). The basic principle of this is that students are in the lead or learn to be so. The implementation is supported by providing scenarios for conversation for coaches in a wiki-environment and assignments for students on the students' website, interfaculty meetings for coaches during the first year to interchange experiences, a newly developed training for teacher coaches, "een keuzemarkt", and the developing of a "Plan app".

Problem statement: evaluation of teacher coaching in the BC

A qualitative research of students of two Majors (academic year 2013-2014) showed a fairly large discrepancy between how students perceive the role of teacher coaches and the way that role is described above. Students viewed the primary tasks of teacher coaches to be supplying of information on free module courses, discussing study progress and planning, and preparing students for appointments with the academic advisor. In addition to this, students found the quality and frequency of coaching meetings to be very dependent on the quality of the individual coach.

This image was partly confirmed by the way teachers see their coaching role. They, too, seem to focus more on providing information about free module courses than on supervising the process of choice-making. In addition, many coaches find it too soon to talk about professional identity with first-year students. In some faculties students do not show up for their scheduled coaching appointments. Finally, relatively few teachers make use of the short training for coaches and the wiki.

This qualitative image matches the results of the P-survey, which has been held for three years now. These results show that students, on average, take part in less coaching appointments (2.4) than the intended four. Second-year students even only had one coaching appointment (curriculum survey 2013-2014). The fact that some departments have chosen to replace one or more individual coaching meeting with a plenary one, may have been of some influence on this. Furthermore, the results are mediocre on the categories 'my coach has helped me well to make choices in my studies' and 'the coaching meetings have helped me in getting my interests and ambitions clear': 3.2 and 3.0 out of 5. These two categories were valued higher in the first year of the BC (3.6 and 3.7). Also, there are large differences between departments in how students value these categories.

The above mentioned evaluation shows that both the content goals of implementing teacher coaching have not been reached fully and that the role of the teacher coach is not clear enough for both teachers and students. At the moment, the quality of the coaching is very dependent on the quality of the individual coach. Nevertheless, during an informal meeting, some Program Directors have stated to be enthusiastic about teacher coaching in their faculties. Pilots around coaching have also started: at Mechanical Engineering by using alumni to coach second-year students (2014-2015) and at Computer Science by making students more responsible by letting them choose from three coaching profiles that each asks a different level of commitment (just started).

In short, there is a clear need for a different approach when it comes to realising the content goals of coaching, but how can they be reached? What are good practices? How can teacher coaching be arranged in a way that works? This project focuses on two studies in the BC: Industrial Design and Computer Science. These two studies can provide a wealth of specific information and input on the research questions and on how to develop new (training) tools for coaching.

Industrial Design

Industrial Design (ID) can boast a rich history of coaching. With the introduction of the Graduate School and the formulating of the objective to integrate better with the BC, it was decided to replace competency coaching with teacher coaching starting this academic year (2015-2016). As of September 2015, all years of ID work with teacher coaching. ID worked from the fact that many teachers were already experienced coaches. At the moment of writing, the first round of coaching meeting has almost been concluded. The far majority of students reap the benefits of teacher coaching, but the goals seem to be ambitious. There are also examples known of which students are very enthusiastic.

Computer Science

The second study to take part in this project is Computer Science (CS), with its Majors Software Science and Web Science. The problems as described above were recognised by the staff of CS. As a result, it was decided to arrange teacher coaching differently and an interesting pilot was introduced. In the first year, there is 'coaching on demand', in addition to the student coach in the first semester. At the beginning of the second year, students choose the most fitting from three profiles. These profiles are based on various degrees of self-confidence and motivation. Each profile stands for a different form of coaching, offered structure and commitment of the student.

Research questions

In this project, both studies will be seen as a case study. If possible, we will gladly take the evaluation results of Technical Engineering into account and expand the range of this project to three case studies. We have created research questions that will be answered separately for both case studies.

Then we will draw conclusions on the basis of both case studies. Our research questions are as follows:

1. How can teacher coaching be described for both studies, in terms of who coaches when, how, to what purpose (content goals and ambitions), why in this way, and what are important preconditions for success?
2. In what way do teachers and students of both studies experience teacher coaching, in terms of who coaches when, how, to what purpose (content goals and ambitions), why in this way, and what are important preconditions for success?
3. How do teachers use teacher coaching time now? What good practices do we know?
4. What is the desired situation for teacher coaching according to teachers and students of both studies?
5. How can we realise this desired situation?
6. What scenarios, deduced from question 3, 4 and 5, are possible to arrange teacher coaching?
7. In what way can we improve support for teachers in their role of teacher coach?

Project Approach

We strive to keep the net amount of time teachers and students need to spend, to a minimum in this project. For that reasons we use existing data as much as possible, and incorporate research activities in set educational activities, like evaluation meetings.

1. How can teacher coaching be described for both studies, in terms of who coaches when, how, to what purpose (content goals and ambitions), why in this way, and what are important preconditions for success?

This research questions will be answered on the basis of existing documentation for as much as possible. Examples of mentioned documentation are: policy documents, presentations to teachers, instruction material, etc. The results will be then be reported in a matrix, in which both studies are assigned their own column. The separate dimensions of coaching (who coaches when, how, to what purpose (content goals and ambitions), why in this way, and what are important preconditions for success) will be assigned their own row. This method makes it easy to compare the two studies, and clarify the similarities and differences. After we have done all this, we will present the results to the Program Directors for verification.

Period: February-March 2016

2. In what way do teachers and students of both studies experience teacher coaching, in terms of who coaches when, how, to what purpose (content goals and ambitions), why in this way, and what are important preconditions for success?

We will organise group meetings to evaluate teacher coaching 2015-2016. During these meetings, we will ask the teachers (in sub-groups) to complete the matrix in terms of the dimensions we distinguish (who coaches when, how, to what purpose (content goals and ambitions), why in this way, and what are important preconditions for success). This way we will get a general image of teachers' experiences, and will we be able to compare the results. Also, during these group meetings teachers will be asked to nominate students who, in their opinion, have used teacher coaching time in a good way. We will use a survey to determine how students experience teacher coaching. This semi-structured survey will be based on the dimensions we distinguish (who coaches when, how, to

what purpose (content goals and ambitions), why in this way, and what are important preconditions for success)

Period: May-July 2016

3. How do teachers use teacher coaching time now? What good practices do we know?

To answer this research question, we will use the survey for students about teacher coaching (see method for answering research question two). In addition to that, we will ask students to nominate teachers who display good practice. The nominated teacher coaches and students will then be interviewed in order to find out how they arrange teacher coaching and to harvest good practices and workable elements for teacher coaching. We will also ask teachers to record some good practices, if at all possible, so we can show them to other teachers later on. If teacher coaches and students do not appreciate their recording being shown to others, we will ask whether we can make vignettes based on the recordings. In this case, the vignettes will be re-enacted and recorded.

Period: August-September 2016

4. What is the desired situation for teacher coaching according to teachers and students of both studies?

During the group meeting for teacher coaches, will we ask what the desired situation for each dimension of coaching is. We will use the matrix again to analyse the results. In addition to that, we will enquire the desired situation for teacher coaching for students for every dimension of coaching.

Period: August-September 2016

5. How can we realise this desired situation?

We will ask teachers (at the group meeting) and students (in the survey) what measures need to be taken in order to realise the desired situation.

Period: August-September 2016

6. What scenarios, deduced from question 3, 4 and 5, are possible to arrange teacher coaching?

The information gathered at the group meeting and the answers to research questions 3, 4 and 5 will be summarised, after which we will organise a meeting with the sounding board to convert the findings into scenarios for teacher coaching.

Period: August-September 2016

7. In what way can we improve support for teachers in their role of teacher coach?

During this same meeting with the sounding board we will discuss the manner in which we can improve support for teachers. Is a professionalization course needed? What content needs to be included in a booklet for coaches?

Period: October 2016.

In November and December 2016 the multimedia booklet will be composed and other output (see below) will be realized.

Dissemination

This project will render the following output:

- Clips/vignettes with good practices;
- Portraits of both studies, including:
 - A collection of good practices;
 - Insight in strengths and weaknesses;
 - A plan for improvement;
 - Scenarios for arranging teacher coaching, that are possible useful for other studies struggling with teacher coaching.

The output will be converted into a multimedia book(let). In this booklet we will discuss good practices, vignettes, and possibly the scenarios, but also answer the question of what good teacher coaching entails. The latter will provide teacher with tools to improve their own practice as a teacher coach. The booklet will be made available through the CEE's website. In addition to this, we will set up a proposal, in close consultation with teacher coaches, for a professionalization workshop or training for teacher coaches.

Project coordination

Author: dr. M. Bruns (Director Education Industrial Design)

Project group

dr. M.R. van Diggelen (project leader, educationalist and expert in this field through PhD research)
Project worker (to be assigned)

Sounding board

dr. A.A. Vinke, policy staff member Bachelor College
dr. M. Van Lierop, Director of Computer Science
dr. R. Klaassen, educational consultant/OC Focus TU Delft
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