

# Program integrating course: A tool for reflection and quality management

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**Abstract**—This paper describes the structure of the course DM1578 Program Integrating Course, a reflection course spread out during the entire M.Sc. programme in media technology at KTH, and the results after the first year of running the course. We argue that such a course is a good way for students to continuously reflect on their learning, develop critical thinking, and to get a better perspective of their studies. Furthermore, it proved to be a good quality tool for the programme management to get feedback on how to develop the programme, and for the teachers to get better understanding of their own courses' positions within the programme.

**Index Terms**— Reflection, electronic portfolios

## I. OVERVIEW

PROGRAM Integrating Course is a mandatory course at the M.Sc. Programme in media technology at KTH. The course runs during the whole programme, where the students meet four times per year, once after each study period. After each period, all of approximately 230 students get together for seminars in groups of six to eight students led by a teacher. Each group contains students from each year of the programme. All ten media technology teachers at the department, including professors, were engaged as supervisors/mentors for roughly four groups each, for a total of 39 groups.

Before each seminar, each student wrote a reflection document where they discussed the courses they had taken, what they had learned during the courses, in which way they thought the courses connected to the overall goals of the education, how they had studied, a self assessment of their work and other matters they found relevant.

Additionally, each seminar had a specific theme related to the programme or their education, such as learning and learning styles, what their personal goals with their education are and employability combined with a study visit to alumni from the programme.

The documents were distributed within each group before the seminar and all students and the teacher in the group prepared themselves by reading the documents. How the seminars were conducted was up to the teacher, but the most common method was to start with the first year students describing the courses they had read. The older students then

commented on how the courses were when they took them and the discussions were allowed to go in most directions, with the teacher commenting and moderating the discussion. Next the second year students commented on their courses and so on. Time was also allocated to discuss the theme of seminar.

At the end of the course, the students were asked to fill out a questionnaire about the course. The response frequency was about 70% or 146 students out of the approximately 210 students who followed the course at that time.

## II. RESULTS

### A. Organization

Organizing a course which runs at a low pace over several years involving several teachers and hundreds of seminars proved to be a challenge. The problems could be divided into two parts; first organizing the students into suitable groups, and second to get a schedule which works reasonably well for students and teachers alike. The first problem, of organizing students into well balanced groups, was difficult mainly because it was difficult to get good data on which students who were actually going to participate in the course, and in finding out which year they actually followed. With better support systems this task could hopefully be simplified.

The second problem, of getting a schedule that works well for teachers and students required that the course was given highest priority when the schedules for the university were created, so time was allocated where neither teachers nor students involved had other activities. Even so, people fall ill, are on vacation, have other urgent meetings and so on, so a fair amount of work of moving seminars and changing groups had to be done near the dates of the seminars.

### B. Student perspective

Most students saw this course as a positive experience. The students were asked to grade the course on a Likert scale between one and five and the average was 3.77, which is above average but not outstanding. Two students gave the course the lowest grade, partly because they felt the seminars were a waste of time, but also because their seminars often were at eight in the morning.

Most students agreed that the students in grade one to three got more out of the course than the students in grade four, this because the fourth year students could not learn from older students or hear about courses they would follow upcoming years.

The comments about the course in the replies from the

questionnaire could roughly be categorized into five categories, with the most frequently occurring listed first.

1. The contact with both older and younger students from the same programme was the most appreciated aspect. The older students gave important insights into upcoming courses to the younger students and the older students got an opportunity to see their own development, and to look back upon what they have actually learned so far.

2. The students got a better picture of the educational programme as a whole, especially about which specializations are available and what the content of the specializations actually is. This made the students feel they were better prepared for which courses to focus on and which specializations to aim at.

3. The actual reflection, which combined with the understanding of the programme as a whole, and the connection to "the real world" helped them to clarify to themselves why they were studying, and what they actually wanted to achieve with their studies.

4. The possibility to actually affect the individual courses and the educational programme as a whole. Many students felt this was a better way to give feedback to the teachers and to the programme management than the regular course questionnaires and course board meetings, which many students rarely take time to complete and which others believe don't actually affect the courses.

5. The more personal and continuing contact with one teacher.

### *C. Teacher and course perspective*

The teachers acting as mentors got a better understanding of the structure of the programme, and the content of other courses. This made it easier to spot possible overlap in courses, and to clearer see the role of the teachers' own courses in the programme.

Perhaps more controversial was the fact that close colleagues now got relatively detailed information about courses given by the teacher. In the cases that the courses were good and appreciated, this was very both inspiring to the teachers giving the appreciated courses and to the colleagues who could get inspiration on pedagogical approaches and administrative solutions used in the courses. However, in the case of courses which did not work very well, this might be considered difficult by the teachers responsible.

### *D. Program management's perspective*

Even though the course was not original intended to be a tool for programme development, the student themselves wanted their comments to be used for that purpose, since they put much more effort into giving creative feedback in their reflection documents than in course evaluations. Furthermore, all students participating in the courses gave their opinions, not only those answering the course evaluation forms, which gave a much more complete picture of a course than what would otherwise have been achieved.

The teachers were therefore encouraged to agree with each group on three matters they would like to bring to the

programme management's attention. In the questionnaire we asked whether the students were interesting making the reflection documents available outside the group; to the programme management, to the teachers involved or even to all other students. The attitude towards making the documents available to the responsible teacher and to the programme management was generally very positive, but not all agreed. To make the documents available to other students were also regarded as positive by a clear majority, but the views were more divided on this, and good arguments against this were put forward, such as not making students negative to courses which got bad reviews, even before the course has started. For the upcoming year we have therefore added that students willing to anonymously share their documents with the responsible teacher and/or programme management should indicate so in their documents, with the default being not to share their documents. No option to share documents to fellow students outside the group will be provided, at least this year.

One benefit to the programme management was the information given about courses in the programme not given at our department. With firsthand information of the students' opinions of these courses, constructive dialogues were held with the departments responsible for these courses, which have resulted in changes to this year.

Furthermore, students and teachers alike have now heard of several good elective courses given at other parts of the university, which would probably not have been "discovered" otherwise. This was perceived as very valuable, since students and teachers alike have difficulties finding suitable courses amongst the huge number of courses given at the university.

Finally, the study visits to alumni gave a much needed connection to the students' future professional roles, and since the students were required to interview the alumni on how they, with their professional eyes, would like to affect the programme, we have received much important input to the programme relevant to the industry.

## III. DISCUSSION

An educational programme is in one respect very similar to a hard drive on a computer; it is either new or full. There is a tendency to want to squeeze in more content into courses and more courses into programmes, but not wanting to remove existing courses. It is therefore relevant to critically evaluate if a course such as this has room in a programme, or if room should be made for another more traditional course.

I would like to argue that a course such as this has its well-deserved place in most programmes. Reflecting on what, why and how you learn can add much more value to the other courses, and will likely result in more motivated students thinking critically about their education who are better prepared for life after the university.

The positive effects for the teacher and for the programme management is, in itself, not good enough arguments for giving such a course, but given that the course itself has a place, these effects will hopefully add value to the programme and thereby also the programme's students in a longer perspective.