

Promoting Faculty Professional Development in Higher Education

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Abstract. Continuous Professional Development (CPD) of school teachers is promoted worldwide and broadly researched and described in many publications every year. At the same time Faculty Professional Development is addressed rarely and at most locally. Usually staff members of science faculties have a high-level content knowledge, but at the same time the lack of interpersonal skills, pedagogical knowledge and self-reflection on their own teaching is very common among academics. In order to address this issues we proposed this Summer semester the course for the first-year PhD students. The results of the course development as well as students' engagement and their perception of the course will be reported in a case study.

1 Introduction

Continuous Professional Development (CPD) of mathematics and science teachers is promoted worldwide and broadly researched and described in publications every year, for example [1-4]. During the last decade also many European projects funded within the 7th Framework Programme [5-7] focused on trainings for in-service teachers, providing CPD to thousands of them across Europe. At the same time Faculty Professional Development in Higher Teaching is addressed rarely and at most locally, despite Bologna process and existence of overarching documents setting up the general framework of the uniform Higher Education in Europe. As a result the same learning outcomes described in students records in different countries are provided on the basis of very different approaches and consistency across Europe is not secured.

Usually staff members of science faculties have a very high-level content knowledge they transfer to the students, but at the same time the lack of interpersonal skills, pedagogical knowledge and self-reflection on their own teaching is very common among academics. Sometimes the faculties offer seminars or short courses concerning these issues, nevertheless such actions are rather incidental and sparsely attended by staff members. Moreover, PhD students starting their first classes without any professional instruction, tend to copy the ways of teaching, classroom management and even interpersonal relations from the experience gained during their own studies. This way the process of changing the teaching habits from frontal and teacher-centered to more active and student-centered ones is very slow, ineffective and does not secure meeting the contemporary standards of alumni qualification. Consequently, the employers complain about too theoretical knowledge of the alumni and the lack most of the key competences [9], including practical and social competences, low level of sense of initiative and entrepreneurship, as well as low abilities to pursue and persist in continuous learning.

2 A Piloting Course in Higher Education Didactics for PhD Students

In order to address this issues we proposed the course "Introduction to Higher Education Didactics" for the first-year PhD students. The course is divided into two parts: (1) interactive lecture and workshop on the fundamentals of Higher Education Didactics and (2) workshop on laboratory activities and demonstrations of physics experiments accompanying lectures. The

first part has started in the Summer semester this year, the second part will be introduced during the Autumn semester in the next academic year.

In this contribution we will present the results of the case study of the first part of the course. The main aim of it to raise PhD student awareness of a crucial impact of social dimensions in higher education. This part consists of (I) Pedagogy, (II) Course Design and (III) Use of Technology. PhD students reflect on learning and teaching styles, learn about different practices and student-centered methodologies as well as assessment techniques coherent with learning styles and expected learning outcomes. They discuss classroom management (environment, groups, communication, goals, objectives and expectations, special needs students). They learn how to design a course – how to write a syllabus for it, how to develop and transform instructional content, how to prepare assignments and how to use new technologies as supportive tools. On the top of that, PhD students are also encouraged to do practitioner inquiry [10] in their classes and to engage themselves in practitioner learning groups during their future work as higher education teachers.

3 Results and discussion

The piloting group consists of eight physics PhD students and one biophysics PhD students. Five of them did not have any experience in teaching students prior to the course and each of the other four had already taught one group of students, mostly in the lab for undergraduate students.

The results of the course development as well as students' engagement and their perception of the course at the end of it will be reported during presentation in a form of a case study.

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