

Report ECTN Working Group

Lecturing Qualifications and Innovative Teaching Methods

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September 2020

Ambition

The ECTN **WG Lecturing Qualifications and Innovative Teaching Methods** is committed to improving quality of chemistry teaching at tertiary level by stimulating a development of teaching competences of university staff.

Aims

- improve teaching practice in chemistry laboratory classes in higher education
- improve quality of newly appointed higher education teaching staff (for example in laboratory classes)
- promote innovative active learning methods
- stimulate cooperation and partnership between the lecturers at different universities in their continuous professional development
- exchange of teaching experiences in international context

In this report we describe the activities of the working group from November 2019 to September 2020 and we summarize the relevant results achieved in this working group.

Results

The activities of the Working group Lecturing Qualifications and Innovative Teaching Methods are divided in two parts with each having a specific focus:

1. Online course "Teaching in University Science Laboratories (Developing Best Practice)"
2. Developments on new activities of the working group focused in continuous professional development (CPD) of HE lecturers

1. Online course "Teaching in University Science Laboratories (Developing Best Practice)"

The ECTN Working group has developed an online course entitled **Teaching in University Science Laboratories (Developing Best Practice)** that is located on the MOOC (Massive Open Online Courses) platform Coursera (partner institution University of Amsterdam). After two successful trials as Small Private Course (SPOC) on Coursera in December 2017 with 77 and in November 2018 with 142 participating lecturers from 22 countries and very positive evaluation, the working group decided to launch the online course as a MOOC on Coursera in October 2019. From that **moment a new MOOC session starts now every two weeks**. It takes the participants 6 weeks to finish the online course having 6 modules with the investment of 2 hours per week.

Up to now more than **1.600 active learners already joined this course** and more than 300 participants have achieved a certificate of this course.

The advertisement and the summary of the course can be found on the ECTN WG page:

<http://ectn.eu/work-groups/lecturing-qualifications-and-innovative-teaching-methods/online-course-for-lecturers/>

See for more information and free enrollment in this course at:

<https://www.coursera.org/learn/developing-university-lab-education>.

Research

The working group is following the learning process of the participants and is collecting the data about it. To get more insight in their progress, all participants in the course are asked to complete a reflective questionnaire on their teaching beliefs and intentions as a pre-test and a post-test. There is also a survey about the appreciation of the course that is taken after the course is finished. The members of the core development team have presented their work at different conferences a.o. 8th Variety in University Chemistry Education 2019 (Maciejowska, 2018; McDonnell, 2019; Brouwer, 2019) and are preparing a scientific publication about this research to be published in an international journal.

MOOC Core development team

Natasa Brouwer (WG leader, co-coordinator of module 6, University of Amsterdam),
Iwona Maciejowska, (coordinator modules 1 and 3, Jagiellonian University in Krakow, Poland),
Claire McDonnell (co-coordinator of module 3, Dublin Institute of Technology, Ireland),
Gunther Flerackers (coordinator modules 5 and 6, University College Leuven-Limburg, Belgium),
Mauro Mocerino (coordinator modules 2 and 4, Curtin University, Perth, Australia),
Nineta Hrastelj Majcen (EuCheMS, EU) (first trial period)

2. Developments on continuous professional development (CPD) of HE lecturers

At the Lecturing Qualifications and Innovative Teaching Methods Working group sessions at the ECTN General Assembly in Krakow in 2019 it was decided that the working group will focus further on lecturers' qualifications and continuous professional development (CPD) of university teaching staff.

- a. An inventory was started right after the Krakow meeting to **map out the situation about professional development of chemistry lecturers and PhD students** at the EU universities, in the first place the ECTN members. To tackle gaps in CPD of university chemistry teaching staff in the following actions the WG wanted to organize a Summer School having an approach "train the trainer". The ECTNA was willing to support the idea to organize a Summer School with a small funding. Soon this idea grew further and evolve into a new idea to apply for a project in the Call Erasmus+ Strategic Partnership. The Working group applied for some funding at the ECTNA to support the writing process of the proposal. On December 8 2019 the ECTNA approved the funding of 5.000 euro.
- b. **The consortium of six project partners was established** in December 2019: Jagiellonian University (Poland) (project leader), European Chemistry Thematic Network Association, University of Amsterdam (The Netherlands), University of Oulu (Finland), University of Naples Federico II (Italy), University of Ljubljana (UL). In the preparation and writing process from January 16 to submission date, all members of the consortium were involved with at least two persons. The collaboration was organized online using Google drive and bi-weekly one hour online meetings were organized at which all partners were present with at least one person.
- c. The preparation process in which the project has got its final form was a very pleasant adventure even in the difficult time of the COVID19 crisis and has led to a strong project proposal entitled STEM Continuous Professional Development at European Universities (acronym: **STEM-CPD@EUni**) and a motivated project team standing behind the proposal. The project proposal has got an excellent evaluation and was granted with a 36 months project and **a budget of 434.356,00 euro** starting from September 1 2020.

SIG STEM-CPD

In the coming 3 years the Working group Lecturing Qualifications and Innovative Teaching Methods will be involved in the activities of the STEM-CPD@EUni project. In order to assure sustainability, parallel to these activities the WG would like to establish a **Special Interest Group STEM-CPD** (SIG STEM-CPD) which will be a platform for the people from the ECTN member universities who are interested in the CPD.

The people can join the SIG STEM-CPD in two possible ways: **(a) Associated members or (b) Followers**. The Associated members are expected to actively participate in the activities of the SIG (during the project closely associated with the project activities) and Followers will only be personally informed about all relevant activities and results of the project. During the STEM-CPD project the core-leading group of SIG STEM-CPD will be integrated with the project and will together with associated members and followers establish the ground for sustainability for the future after project is finished.

References

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