

ECTN Working Group on Lecturing Qualifications and Innovative Teaching Methods

Background

The working group is examining the feasibility of developing and delivering a six week Massive Online Open Course (MOOC) on Teaching University Chemistry in an International Context. The group was started at the ECTN Plenary meeting in Ljubljana in 2015. The leader of the group was Paul Yates. In Ljubljana it was agreed that a pilot course on chemistry laboratory teaching will be developed. The following topics for the 6 sessions were defined and types of activities of participants in the online course were suggested such as reading and discussion:

- Session 1: (a) Welcome and introduction; (b) Practical classes and demonstrators
- Session 2: (a) Sharing experiences; (b) Learning theories
- Session 3: (a) Assistance strategies; (b) The good laboratory teacher
- Session 4: (a) Questioning skills; (b) Giving instruction
- Session 5: Case studies
- Session 6: (a) Assessment and Feedback; (b) Conclusions

Due to other duties in 2016 Paul Yates had to stop the leadership of this ECTN working group. A few weeks before the ECTN annual meeting in Gdansk the leadership was taken over by Natasa Brouwer.

Work to date

Outcomes of ECTN General Assembly in Gdansk

The participants who attended the Working group meeting in Ljubljana were invited to continue their participation in this working group. 25 participants joined the Working group meeting in Gdansk. 5 ECTN members who could not participate Gdansk meeting confirmed their participation in the working group.

At the Working group meeting the aims of the development of an Online Open Course about Chemistry Laboratory Teaching were (re)stated:

- I. To improve quality of newly appointed lecturers
- II. To support HE chemistry laboratory lecturers in how to use activating teaching methods in Chemistry Laboratory Courses
- III. To exchange experiences in European and international context between the lecturers and stimulate mobility and collaboration

The working group continued the development of Online Open Course in the context of previously defined 6 Sessions and:

- discussed learning outcomes of the course
- discussed active learning design of the online open course
- considered examples of possible online learning activities
- agreed upon developments after the meeting
- agreed upon collaboration after the meeting

In the “hands on part” of the working group meeting in Gdansk the participants were divided in three subgroups and started to design the expected Learning Outcomes of the Sessions (two Sessions were

discussed per subgroup) and considered the possibilities for learning activities as a part of an active online learning course design. In the “plenary part” that followed it was agreed to:

- continue on designing Learning outcomes. Three subgroup leaders were appointed. Several participants confirmed to participate in subgroups as developers. Several other participants appreciated to contribute by giving feedback on developments.
- launch an inventory to define what are the problems of students that are experienced by chemistry laboratory teachers.
- make working plan about the developments until the ECTN General Assembly on Malta
- have online meetings to discuss developments
- use Google drive for collaboration of the group members and where all the documentation of the working group will be shared.

Work after ECTN General Assembly in Gdansk

Up to October 7 2016 the following has been realized:

- the Google drive folder for collaboration on development was created at <https://drive.google.com/open?id=0B0xeI5N3nFtbcTNNcU9BR1BrcFU>
- the inventory was launched (<https://goo.gl/forms/Bgbooy4r2EszGfq1>). The members filled in the inventory based on discussion with the laboratory teachers at their university.
- work plan was created having the following activities (steps)
 - Fill in the WG Inventory
 - Define learning outcomes of the six Sessions
 - Define guidelines for the structure of materials offered in the Online Open Course
 - Starting with one Key Learning Outcome in one Session: collect or develop learning materials (e.g. select appropriate reading materials) for the 6 Sessions, design corresponding learning activities and set up (self)assessment
 - Ask Peer-feedback on developments from the Working group members
 - Choose learning platform and possible (open) tools outside the platform
 - Prepare for the ECTN meeting on Malta
- online meeting of subgroup leaders was held on October 7.
 - results of the inventory were discussed in the context of Key Learning Outcomes of the Sessions.
 - frequency of online Working group meetings was agreed upon: monthly, every last Friday of the month. The first online Working group meeting will be held on October 28. All group members who confirmed their participation in developments will be invited to join these monthly online meetings.
 - working group members will orientate on possibilities in the EU context to find funding to support and enrich development of the Open Online Course and its sustainability.

Future work

Once the prototype is complete members of the Working group will be invited to comment on the content and try out the learning activities.

Natasa Brouwer
8th October 2016