

One Health Meets Food Microbiology



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ABSTRACTS BOOK



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# Conference Workshops Tuesday 19 July

## 2nd WPAEFM Symposium – Food Microbiology Education in Practice

### INNOVATING FOOD MICROBIOLOGY LABORATORY CLASSES

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Due to increasing student numbers, courses in Basic and Advanced Food Microbiology at Wageningen University were facing challenges to achieve the learning outcomes of the courses, especially for the laboratory classes. Therefore, these courses were innovated in 2015/2016.

In the basic course, practical classes were reduced from three to two weeks, while five former experiments were replaced by digital assignments, enabling students to interpret a larger data set than those previously obtained in the practical classes. Furthermore, short video clips were recorded to reduce the efforts of teaching staff to explain lab procedures. Clips were made available via a (protected) YouTube channel during lab classes and digital assignments.

The advanced course contained an experiment, where the students had to design a protocol to preserve a fresh food product. In the past, many students faced difficulties in designing the experiments and obtaining approval for their experiments by staff was time consuming. To solve these issues we developed an e-learning case using the online LabBuddy™-tool. The students designed their preservation experiment in the experiment designer, and in the laboratory they were supported by another newly-developed online laboratory manual. The e-learning case has the following features:

- providing just-in-time feedback;
- assisting students to choose a relevant combination of food product, preservation technique; storage conditions and appropriate spoilage microorganisms to investigate;
- assisting students to order the correct type and amount of media;
- easy access to online protocols which also use the videos recorded for the basic course.

An improvement in the design of the experiment, the practical instructions, and the interpretation of the results is expected, enhancing quality of teaching and learning and reducing time. The new set-ups will be presented and the results of supervisor and student feedback after the runs in September 2015 and January 2016 will be discussed.

**Keywords:** Design tool, Web manual, Digital assignments, BSc/MSc courses, Lab skills videos