

A FLIPPED CLASSROOM - IBSE APPROACH FOR THE TEACHING OF CHEMICAL REACTIONS

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In this current academic year (2016/17), a research/action on the learning of chemical reactions, using the pedagogical model of the Flipped Classroom[reference] and the IBSE approach (Inquiry Based Science Education),[reference] with emphasis on the 5E Learning Cycle,[reference] have been undertaken by two different classes teachers in collaboration with the UNICAM PLS project (Scientific Degrees National Plane).

The Flipped Classroom repurposes class time by reversing the traditional teaching segments, namely lecture-style teacher centered sessions and home self-study, to contents delivered outside the classroom elaborated by self-developed method according to an own acquisition style. As a consequence, the in-class time can be devoted to in-depth revision, under the teacher's guidance. After an initial online training about chemical reactions on UNICAM Moodle platform, the activities were planned according to five-phase sequence of Engage, Explore, Explain, Elaborate, Evaluate. During the Elaborate phase, the learning and skills processes upgrade have been evaluated. The result analysis shows an overall benefit, both in terms of skills acquired by pupils and acquisition of the new teaching practice by teachers.