World Academy of Science, Engineering and Technology
International Journal of Educational and Pedagogical Sciences
Vol:11, No:07, 2017

Investigation the Impact of Flipped Learning on Developing Meta-Cognitive Ability in Chemistry Courses of Science Education Students

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Abstract : The rise of the flipped or inverted classroom meet the conceptual needs of our time. The evidence of increased student satisfaction and course grades improvement promoted the flipped learning approach. Due to the successful outcomes of the inverted classroom, the flipped learning became a pedagogy and educational rising strategy among all education sciences. The aim of this study is to analyze the effect of flipped classroom on higher order learning in chemistry courses since it has been suggested that in higher education courses, class time should focus on knowledge application. The results of this study indicate improving meta-cognitive thinking and learning skills. The students showed better ability to cope with higher order learning assignments during the actual class time, using inverted classroom strategy. These results suggest that flipped learning can be used as an effective pedagogy and educational strategy for developing higher order thinking skills, proved to contribute to building lifelong learning.

Keywords : chemistry education, flipped classroom, flipped learning, inverted classroom, science education
Conference Title : ICTPE 2017 : International Conference on Technology, Pedagogy and Education
Conference Location : Barcelona, Spain
Conference Dates : July 27-28, 2017