

How Context and Problem Based Learning Effects Students Behaviors in Teaching Thermodynamics

Authors : Mukadder Baran, Mustafa Sözbilir

Abstract : The purpose of this paper is to investigate the applicability of the Context- and Problem-Based Learning (CPBL) in general chemistry course to the subject of "Thermodynamics" but also the influence of CPBL on students' achievement, retention of knowledge, their interest, attitudes, motivation and problem-solving skills. The study group included 13 freshman students who were selected with the sampling method appropriate to the purpose among those taking the course of General Chemistry within the Program of Medical Laboratory Techniques at Hakkari University. The application was carried out in the Spring Term of the academic year of 2012-2013. As the data collection tool, Lesson Observation form were used. In the light of the observations held, it was revealed that CPBL increased the students' intragroup and intergroup communication skills as well as their self-confidence and developed their skills in time management, presentation, reporting, and technology use; and that they were able to relate chemistry to daily life. Depending on these findings, it could be suggested that the area of use of CPBL be widened; that seminars related to constructive methods be organized for teachers. In this way, it is believed that students will not be passive in the group any longer. In addition, it was concluded that in order to avoid the negative effects of the socio-cultural structure on the education system, research should be conducted in places where there is socio-cultural obstacles, and appropriate solutions should be suggested and put into practice.

Keywords : chemistry, education, science, context-based learning

Conference Title : ICSME 2015 : International Conference on Science and Mathematics Education

Conference Location : Rome, Italy

Conference Dates : March 05-06, 2015