

A PROBLEM-PROJECT BASED LEARNING (PPBL) APPLICATION TO THE TEACHING OF MATHEMATICS AND CHEMISTRY IN SECONDARY SCHOOLS AND TERTIARY EDUCATION

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ABSTRACT

In this paper, we employed the concept of Problem Project -Based learning as a tool for learning Mathematics and Chemistry and in fact all Sciences from the viewpoint of using life situations or simulated scenario. Action research design was adopted through the use of case studies and the methodology involves some level of brain storming, after which active learning took place and knowledge gained by students either way through a collaborative learning situation became personalized within the group. Observation was made during the sessions and information gathered from participants through their response to interview. Three cases were discussed involving PPBL namely: Graphical interpretation of experimental readings in a Chemistry/Science laboratory as it enhances or makes use of basic mathematical knowledge, calculus in Science and lastly, the integration of curricular for Mathematics and the basic sciences at higher secondary and lower university levels. This findings from this study underscore the need for integration of the curricular of some basic concepts in Mathematics and the Sciences in general from the school level, thus it makes it easier for students in the tertiary educational level to learn higher and applicable concepts.

Keywords: Problem Project-based learning, Active-learning, Collaborative learning, Calculus.