ABSTRACT

I.D. No.: 5629499

Key Words: SELF-EFFICACY, INQUIRY-BASED LABORATORY, ATTITUDES TOWARD CHEMISTRY

Name: MS. PAWINEE NARUEPONJIRAKOON

Thesis Title: A COMPARATIVE STUDY ON SELF-EFFICACY FOR PERFORMING LEARNING INQUIRY TASKS AND ATTITUDES TOWARD LEARNING CHEMISTRY THROUGH INQUIRY-BASED LABORATORIES IN GRADES 9-12 STUDENTS AT CONCORDIAN INTERNATIONAL SCHOOL, THAILAND

Thesis Advisor: ASSOC. PROF. DR. SUWATTANA EAMORAPHAN

The purpose of conducting this research was to determine students’ self-efficacy as well as attitudes toward learning chemistry of middle and high school students before and after learned inquiry-based laboratories. The inquiry-based laboratory offered many benefits to students without difficulties of planning and performing laboratory for science classes. The inquiry-based laboratory process was comprised of developing a hypothesis, designing an experiment, and interpreting data. The attitudes toward learning chemistry were favorable views about laboratory skills, lectures, and real world applications of the students. The students’ self-efficacy and attitudes toward learning chemistry were collected through valid and reliable survey by using
Student Perceptions in Chemistry Evaluation (SPiCE) created by Winkelmann, Baloga, Marcinkowski, Giannoulis, Anquandah, and Cohen (2014). Pre- and post-evaluations were given to 48 grades 9-12 students after finishing the pre-lab session and post-lab session respective. Results indicated that the students’ self-efficacy in learning inquiry tasks of pre- and post-tests were moderate, attitudes toward learning chemistry, lectures, and real world applications of pre- and post-tests were neutral, and attitude toward laboratory skills of pre- and post-tests were satisfied. Therefore, there were no significant differences found in this study. Discussions of what factors might affect the results were presented along with recommendations for teachers and future researchers.

Field of Study: Curriculum and Instruction
Graduate School of Education
Academic Year 2015

Student’s signature......................
Advisor’s signature ......................