The purpose of this study was to compare students' academic achievement under two different teaching methods which were teacher-centered learning method and inquiry-based learning method. The research included five objectives. Objective one was to determine students' academic achievement under teacher-centered learning method in pre-test and post-test. Objective two was to determine the significant difference between pre-test and post-test under teacher-centered method. Objective three was to determine students' academic achievement under inquiry-based learning method in pre-test and post-test. Objective four was to determine the significant difference between pre-test and post-test under inquiry-based learning method. Objective five was to determine the result between teacher-centered learning method and inquiry-based learning method in order to determine which learning
method was better and more efficient in terms of academic achievement. Two groups of Grade 6 students at Panchasap School, Bangkok, Thailand were used for this research study. This research study was conducted from December 2017 to February 2018 in science class. The topic was about electric circuit which emphasized on electricity, electric component symbols, types of electric circuit, electric current flow, electromagnets and the famous scientists involved in the discovery. The lessons were for 10 weeks with one class per week lasting for 50 minutes. The sample size of this study was 83 students where 42 students were under the teacher-centered learning method and 41 students were under the inquiry-based learning method. The data were collected by using pre-post test. The pre-post test scores were analyzed by means, standard deviations, paired samples t-test and an independent samples t-test (two-tailed). The findings of the study indicated a significant difference between teacher-centered learning method and inquiry-based learning method at a significance level of .05. Students achieved higher when exposed to inquiry-based learning method. Teachers and the school should be made aware of the inquiry-based learning method as it can really help our students.