

**Title** : Developing 5Es Inquiry Instructional Activity Cooperated Think-Pair-Share Approach to Promote *Chemical Equilibrium* Problem-Solving for Mathayomsuksa 5 Students

**Author** : Peerakorn Thachitasing

**Degree** : Master of Education (Science Education)  
Rajabhat Maha Sarakham University

**Advisors** : Asst. Prof. Dr. Natchanok Jansawang Major Advisor  
Asst. Prof. Dr. Panwilai Chomchid Co-advisor

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## ABSTRACT

This research aimed to 1) determine the effectiveness of the 5Es Inquiry Instructional Activity Cooperated Think-Pair-Share to Promote *Chemical Equilibrium* Problem-Solving for Mathayomsuksa 5 students, 2) compare the learning achievement of the students with 75 percent threshold, and 3) compare the Problem-Solving Skills of the students with 75 percent threshold. Thirty-five grade 11 students were participated in the research gained from cluster random sampling teaching. The research instruments included 8 plans of 5Es Inquiry Instructional Activity Cooperated Think-Pair-Share to Promote *Chemical Equilibrium* Problem-Solving, an Achievement Test with 20 items and a *Chemical Equilibrium* Problem-Solving Test with 5 items. The collected data were analyzed by percentage, mean, standard deviation and *t*-test (for one sample).

The research findings were as follows: 1) the effectiveness of the developed lesson plans using the 5Es Inquiry Instructional Activity Cooperated Think-Pair-Share Approach to Promote *Chemical Equilibrium* Problem-Solving was 81.96/81.70. 2) Students achievement after learned via 5Es Inquiry Instructional Activity Cooperated Think-Pair-Share Approach to Promote *Chemical Equilibrium* Problem-Solving was statistically higher than 75 percent at the .01 significant levels. 3) The average *Chemical Equilibrium* Problem-Solving skills of the students were statistically

higher than 75 percent at the .01 level. Students solving skills in understanding the problem, devising a plan and carrying out the plan were statistically higher than 75 percent at the .01 significant levels.

**Keywords:** 5Es Inquiry Instructional Activity Cooperated Think-Pair-Share Approach, Problem-Solving and Learning Achievement