

**ABSTRACT**

**DIFFERENCIATION OF MATH ACHIEVEMENT  
THROUGH PROBLEM-BASED LEARNING  
WITH GROUPING AND VARIETY  
INITIAL COMPETENCE**

**By:**

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The aim of math subject for Junior High School covers three aspects namely: (1) Concept Comprehension, (2) High level Thinking and Communication, and (3) Problem Solving. That is why in the implementation level, the achievement of math achievement happens when students are able to solve math problems. The purpose of the research is to see the difference of students' achievement average after the implementation of individual Problem-based Learning and group Problem-based Learning. Queasy experiment is used in the research.

The collected data is analyzed using two-way variant analysis (ANAVA) with significance level 0,05, than it is treated with *Tukey method*. The research reveals that (1) both average is of test found that  $F = 10.120$  with the significance is  $0.002 < 0.05$ . That is mean the interaction between technical study in individual and groups with student initial competence, (2) the average of math achievement from individual class is 80.71 and 65.521 for the group class. The data is mean that students' achievement average in the implementation of individual Problem-based Learning is higher than in group Problem-based Learning, (3) students' achievement for students with high and low initial competence is found 79.412 and 67.088. That is mean students with high initial competence have better achievement than students with low initial competence, (4) the achievement average for students with high initial competence in individual and group class is found 84.443 and 73.84. That is mean that the students with high initial competence in individual Problem-based learning have better achievement than those who study in group Problem-based learning, (5) the average of achievement for students with low initial competence in individual and group class is found 76.67 and 57.20. That is mean students with low initial competence in individual problem-based

learning have better achievement than those who study in group  
Problem-based learning.