IMPLEMENTATION OF THE POLYA PROBLEM SOLVING APPROACH IN MATHEMATICS LEARNING THROUGH GROUP INVESTIGATION STRATEGY BASED ON STRATEGIC COMPETENCE FOR GRADE VII OF SMP N 1 SURAKARTA

RESEARCH PAPER

Submitted as a Partial Fulfillment of the Requirements for Getting Bachelor Degree of Education In Mathematics Department

by

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2013
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Approved to be Examined by

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ACCEPTANCE

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Dear

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TESTIMONY

I testify that in this research paper, there is no plagiarism of the previous study which has been raised to obtain bachelor degree of a university, nor there are opinions or masterpieces which have been written and published by others, except the written references which are referred in this research paper and mentioned in the bibliography.

Later it is proven that there are some untrue statement above, hence I will hold full responsible.

Surakarta, February 2013

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[Signature]

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MOTTO

“Ideas Are Only Seeds, To Pick The Crops Needs Perspiration”

(The writer’s mom)

“When you say ‘YES’ to others, make sure you are not saying ‘NO’ to yourself”.

(Paulo Coehlo)

“When life gives you a hundred reasons to cry, show that you have a thousand reasons to smile”.

(The writer’s friend)

“Dream, Explore, Discover”

(The Writer)

“Go fight and never give up”

(The Writer)
DEDICATION

From the bottom of my heart,

this research paper is dedicated to:

- **ALLAH SWT**, the Lord of the Universe

- **My beloved parents;** Ibu (Rakini) and Bapak (Giman) for praying, supporting, and deep affection “I do love you”.

- **My lovely sisters;** Aprila Dwi Anggraini and Junesya Tri Nugrahaningtyas
  
  “I Love you so much”.

- **My beloved all of My Best Friend in Mathematics ’09 RSBI**

- **All my family in “Tawangmangu” and “Wonogiri”**

- **My lovely friends;** Nining, Ociex, Miyoex, Ulil, I muL, B enjo, Dewaii, and all
  
  of her friends... Thanks for the friendship
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Surakarta,

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ABSTRACT

IMPLEMENTATION OF THE POLYA PROBLEM SOLVING APPROACH IN MATHEMATICS LEARNING THROUGH GROUP INVESTIGATION STRATEGY BASED ON STRATEGIC COMPETENCE FOR GRADE VII OF SMP N 1 SURAKARTA

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This research paper aims to analyze (1) the difference effect between Polya problem solving approach through Group Investigation strategy and conventional learning approach to student’s mathematics achievement on the set material (2) the difference effect of student’s strategic competence to student’s mathematics achievement on the set material (3) the interaction between learning approaches and student’s strategic competence to student’s mathematics achievement on the set material. Population of the research is all of students in grade VII of SMP N 1 Surakarta consist of 8 classes. The research sample was taken two classes, i.e. grade VII F consist of 24 students be experiment class using Polya problem solving approach through Group Investigation strategy and grade VII E consist of 24 students be control class using conventional learning approach. Type of research is experimental research with methods of collecting data using test, questionnaire and documentation. Prerequisites test this research using normality test and homogeneity test. In this research using analysis of variance tw o-ways. The result of hypothesis testing using a=5% it show that (1) $F_{\text{obs}} = 0.045 < F_{\text{table}} = 4.072$ so $H_0$ is accepted it means there is no difference effect of learning approach to student’s mathematics achievement on the set material. (2) $F_{\text{obs}} = 5.671 > F_{\text{table}} = 3.222$ so $H_0$ is rejected it means there is difference effect of student’s strategic competence to student’s mathematics achievement on the set material. (3) $F_{\text{obs}} = 0.288 < F_{\text{table}} = 3.222$ so $H_0$ is accepted it means there is no interaction between learning approaches and student’s strategic competence to student’s mathematics achievement on the set material.

Key words : Polya Problem Solving, Conventional, Strategic Competence, Set