IMPROVING STUDENTS INDEPENDENCE AND LEARNING ACHIEVEMENT IN MATHEMATICS TEACHING THROUGH PROBLEM BASED INSTRUCTION (PBI) ON THE TOPIC OF CIRCLE
(CAR of Mathematics Learning in Grade VIII A of SMP Al Islam 1 Surakarta Academic Year 2012/2013)

Research Paper
Submitted as a Partial Fulfillment of the Requirements
For Getting Bachelor Degree of Education
In Mathematics Department

Proposed By:
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TEACHER TRAINING AND EDUCATION FACULTY
MUHAMMADIYAH UNIVERSITY OF SURAKARTA
2013
APPROVAL

IMPROVING STUDENTS INDEPENDENCE AND LEARNING ACHIEVEMENT IN MATHEMATICS TEACHING THROUGH PROBLEM BASED INSTRUCTION (PBI) ON THE TOPIC OF CIRCLE (CAR of Mathematics Learning in Grade VIII A of SMP Al Islam 1 Surakarta Academic Year 2012/2013)

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Date : March 21, 2013
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Accepted and approved by the Board of Examiners
On April 8, 2013
And otherwise are qualified

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Surakarta, April 13 2013

Teacher Training and Education Faculty
Muhammadiyah University of Surakarta

Dean,
TESTIMONY

Herewith, I testify that in this research paper, there are no plagiarisms of the previous literary work which has been submitted to obtain bachelor degree of university, as far as I’m concerned there is no opinions or masterpieces which have been written or published by other, except those which the writing was referred in the manuscript and mentioned in bibliography.

Hence, later if it is proven that there are some untrue statements in this testimony, I will be fully responsible.

Surakarta, March 2013

THORIQ SAIFUL ANSHORI
A 410 090 180
"Those who believe, and whose hearts find satisfaction in the remembrance of Allah: for without doubt in the remembrance of Allah do hearts find satisfaction.”

(Q.S Ar – Ra’ad : 28)

“Do not said to me how hard you have worked. Say how much you have completed”

(Walter Elliot)

"every success achieved through planning and hard work, there is nothing to achieve instant"

(Writer)
DEDICATION

With heartfelt I Dedicate this research paper to:

➢ My Beloved Father (Kasmanto) and Mother (Sri Wahyuni)
who never stop pray for, give support, motivation, and give genuine affection

to me.

➢ My Lovely Sister and Brothers
Who continually support and encouragement as I fell.

➢ My Friends in mathematics RSBI ’09.
Were always encouraging and give support for me.

➢ My Beloved Almamater

➢ Dear Readers
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Surakarta, March 2013

The Writer
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ABSTRACT

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This research aims to know the improving of learning independence and student achievement in mathematics learning through Problem Based Instruction (PBI) on the topic of the circle. This research uses a qualitative approach by the design of Classroom Action Research (CAR), which is implemented in three cycles. Researcher and mathematics teacher of grade VIII A SMP Al Islam 1 Surakarta as the subject of the action given. While students of grade VIII A by the number 32 students is the subject receiving the action. Data collection method used are observation, field notes, tests, documentation. The data analyzed by descriptive qualitative use flow method which are data reduction, data presentation and data verification. Based on the research results, it can be concluded that the application of Problem Based Instruction (PBI) can increase independence learning and students achievement in mathematics learning of students at grade VIII A. It can be seen from several indicators: 1) the student’s courage in expressing opinions/questions increases from 22.59\% to 70.00\%, 2) the student’s ability to solve the problems independently in a group increases from 32.26\% to 76, 66\%, 3) the student’s ability to work in group by teamwork increases from 38.71\% to 76.66\%, 4) the student’s confidence in solving individual problems increases from 48.39\% to 83.33\%, 5) the student’s ability to achieve test scores based on KKM standardized increases from 38.71\% to 86.67\%.

\textbf{Keywords:} Mathematics learning; Learning independence; Students achievement; Problem Based Instruction (PBI)