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 VIIIA 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:

THORIQ SAIFUL ANSHORI
A 410 090 180

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 VIIIA of SMP Al Islam 1 Surakarta Academic Year 2012/2013)

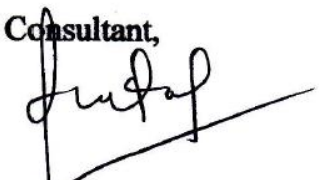
Prepared and compiled by:

THORIQ SAIFUL ANSHORI
A 410 090 180

Approved For Lecturer

In front of Examiner Bachelor Degree of Education,

Consultant,



Rita P. Khotimah, S.Si, M.Sc.
Date : March 21, 2013

ACCEPTANCE

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 VIIIA of SMP Al Islam Surakarta Academic Year 2012/2013)

Prepared and compiled by:

THORIQ SAIFUL ANSHORI
A 410 090 180

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

Team of Examiners:

1. Rita P. Khotimah, M.Sc. ( )
2. Dra. Nining Setyaningsih, M.Si. ( )
3. Drs. Slamet HW, M.Pd. ( )

Surakarta, April 13 2013

Teacher Training and Education Faculty

Muhammadiyah University of Surakarta

Dean,

Drs. H. Sofyan Anif, M.Si.

NIK. 547

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'am 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

MOTTO

"Those who believe, and whose hearts find satisfaction in the rememberance of Allah: for without doubt in the remeberance 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**

ACKNOWLEDGEMENT

Assalamu'alaikum Warahmatullahi Wabarakatuh,

Alhamdulillahirobbil 'alamin, the writer thanks to Allah SWT, the most merciful, the most beneficent, that blessed the writer so that the writer can finally accomplish this research paper title: "IMPROVING STUDENTS INDEPENDENCE AND LEARNING ACHIEVEMENT IN MATHEMATICS TEACHING THROUGH PROBLEM BASED INSTRUCTION (PBI) ON THE TOPIC OF CIRCLE " as a partial fulfillment of the requirements for getting Bachelor Degree of Education. Praise to our greatest Prophet Muhammad SAW that be uswatun hasanah the life of Muslims.

During the preparation of this paper, the writer can not be separated from the support, motivation and guidance from various parties. Thus, the writer would like to salute and express her great gratitude and appreciation to:

1. Mr. Drs. H. Sofyan Anif, M.Si. as the Dean of School of Teacher Training and Education of Muhammadiyah University of Surakarta,
2. Mrs. Dra. Sri Sutarni, M.Pd. as the Head of Mathematics Department of School of Teaher Training and Education,
3. Mrs. Rita Pramujiyanti Khotimah, S.Si., M.Sc. as the Consultant, who has given great advice, helps, correction, and guidance in accomplishing this research paper,
4. Mr. Drs. Syakuri as supporting consultant for guiding and supporting to finish the research paper.
5. Mrs. Dra. N. Setyaningsih, M.Si. as the Academic Consultant,
6. All of the lecturers in Mathematics Department,
7. Mr. Mufti Addin S.Pd. as Principal of SMP Al Islam 1 Surakarta who have the pleasure to give permission to the author to conduct research,
8. Mr. Abdul Aziz, S.Pd. as who has supported the implementation of research and help provide guidance and input to make this research can proceed smoothly and as expected the author.

9. All people, who contribute and supports her a lot that cannot be mentioned one by one, with her head lowered he salutes them sincerely.

The researcher realizes that this research is still far from being perfect. Therefore, he would be very pleased to admit any constructive criticism, to give comment, and suggestion to make this research paper better. The researcher wishes that this research paper would contribute in education, especially in mathematics learning.

Wassalamu'alaikum Warahmatullahi Wabarakatuh.

Surakarta, March 2013

The Writer

LIST OF CONTENTS

LIST OF FIGURE

LIST OF TABLE

LIST OF APPENDIXES

ABSTRACT

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 VIIIA of SMP Al Islam 1 Surakarta Academic Year 2012/2013)

Thoriq Saiful Anshori[1)], Rita Pramujiyanti Khotimah[2)]
1) Student of Mathematics Department of UMS
2) Lecturer Staff of Mathematics Department of UMS
Email:
1) Syafans0606@yahoo.co.id
2) rpramujiyanti@yahoo.com

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 VIIIA SMP Al Islam 1 Surakarta as the subject of the action given. While students of grade VIIIA 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 VIIIA. 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%.

Keywords: *Mathematics learning; Learning independence; Students achievement; Problem Based Instruction (PBI)*