

**PENGARUH MODEL *PROBLEM BASED LEARNING* (PBL)
BERBANTUAN MEDIA *AUGMENTED REALITY* (AR) TERHADAP
KEMAMPUAN BERPIKIR KREATIF MATEMATIS SISWA SD**

Oleh:

TRIANA RAHMALIA NUR SOLEHAH

NPM 225060151

ABSTRAK

Penelitian ini dilatarbelakangi oleh rendahnya kemampuan berpikir kreatif matematis siswa sekolah dasar dalam pembelajaran matematika, khususnya pada materi bangun datar. Siswa masih mengalami kesulitan dalam mengembangkan ide, menemukan berbagai strategi penyelesaian, serta menghubungkan konsep matematika dengan permasalahan dalam kehidupan sehari-hari. Penelitian ini bertujuan untuk (1) mengetahui gambaran proses pembelajaran menggunakan model *Problem Based Learning* (PBL) berbantuan media *Augmented Reality* (AR), (2) mengetahui perbedaan kemampuan berpikir kreatif matematis siswa yang menggunakan model *Problem Based Learning* (PBL) berbantuan media *Augmented Reality* (AR) dengan siswa yang menggunakan model pembelajaran konvensional, dan (3) mengetahui besar pengaruh model *Problem Based Learning* (PBL) berbantuan media *Augmented Reality* (AR) terhadap kemampuan berpikir kreatif matematis siswa. Metode yang digunakan dalam penelitian ini adalah metode kuasi eksperimen dengan desain *Nonequivalent Control Group Design*. Sampel penelitian terdiri atas dua kelas, yaitu kelas eksperimen yang menggunakan model *Problem Based Learning* (PBL) berbantuan media *Augmented Reality* (AR) dan kelas kontrol yang menggunakan pembelajaran konvensional. Teknik pengumpulan data menggunakan tes berupa *pretest* dan *posttest* serta lembar observasi aktivitas guru dan peserta didik. Analisis data dilakukan menggunakan uji statistik dengan bantuan aplikasi SPSS. Hasil penelitian menunjukkan bahwa proses pembelajaran pada kelas eksperimen berjalan sesuai tahapan model *Problem Based Learning* (PBL) dan menunjukkan aktivitas belajar yang lebih aktif dibandingkan kelas kontrol. Hasil uji *Independent Samples t-test* menunjukkan nilai signifikansi $< 0,001$ sehingga terdapat perbedaan yang signifikan antara kemampuan berpikir kreatif matematis siswa kelas eksperimen dan kelas kontrol. Selain itu, hasil perhitungan *effect size* menunjukkan bahwa model *Problem Based Learning* (PBL) berbantuan media *Augmented Reality* (AR) memberikan pengaruh yang besar terhadap kemampuan berpikir kreatif matematis siswa. Dengan demikian, model *Problem Based Learning* (PBL) berbantuan media *Augmented Reality* (AR) dapat menjadi alternatif pembelajaran untuk meningkatkan kemampuan berpikir kreatif matematis siswa sekolah dasar.

Kata kunci: *Problem Based Learning*, *Augmented Reality*, kemampuan berpikir kreatif matematis, matematika sekolah dasar.

**THE EFFECT OF PROBLEM BASED LEARNING MODEL ASSISTED
(PBL) BY AUGMENTED REALITY (AR) MEDIA ON STUDENTS'
MATHEMATICAL CREATIVE THINKING ABILITY
IN ELEMENTARY SCHOOL**

By:

TRIANA RAHMALIA NUR SOLEHAH

NPM 225060151

ABSTRACT

This research is motivated by the low ability of elementary school students' mathematical creative thinking in mathematics learning, particularly in the topic of plane figures. Students still experience difficulties in developing ideas, finding various problem-solving strategies, and connecting mathematical concepts with problems in daily life. This study aims to (1) describe the learning process using the Problem Based Learning (PBL) model assisted by Augmented Reality (AR) media, (2) determine the differences in students' mathematical creative thinking abilities between those who learn using the Problem Based Learning (PBL) model assisted by Augmented Reality (AR) media and those who learn using conventional learning models, and (3) determine the extent of the effect of the Problem Based Learning (PBL) model assisted by Augmented Reality (AR) media on students' mathematical creative thinking abilities. The method used in this research was a quasi-experimental method with a Nonequivalent Control Group Design. The research sample consisted of two classes, namely the experimental class that implemented the Problem Based Learning (PBL) model assisted by Augmented Reality (AR) media and the control class that implemented conventional learning. Data collection techniques used tests in the form of pretests and posttests, as well as observation sheets of teacher and student activities. Data analysis was conducted using statistical tests assisted by SPSS software. The results showed that the learning process in the experimental class was carried out according to the stages of the Problem Based Learning (PBL) model and demonstrated more active learning activities compared to the control class. The results of the Independent Samples t-test showed a significance value of < 0.001 , indicating a significant difference between the mathematical creative thinking abilities of students in the experimental class and the control class. Furthermore, the effect size calculation showed that the Problem Based Learning (PBL) model assisted by Augmented Reality (AR) media had a large effect on students' mathematical creative thinking abilities. Therefore, the Problem Based Learning (PBL) model assisted by Augmented Reality (AR) media can be used as an alternative learning approach to improve elementary school students' mathematical creative thinking abilities.

Keywords: Problem Based Learning, Augmented Reality, mathematical creative thinking ability, elementary school mathematics.

**PANGARUH MODEL *PROBLEM BASED LEARNING* (PBL) DIBANTUAN
KU MEDIA *AUGMENTED REALITY* (AR) KANA KAMAMPUH MIKIR
KREATIF MATEMATIS SISWA SD**

Ku:

TRIANA RAHMALIA NUR SOLEHAH

NPM 225060151

RINGKESAN

Panalungtikan ieu dilatarbelakangi ku handapna kamampuh mikir kreatif matematis siswa sakola dasar dina pangajaran matematika, hususna dina materi bangun datar. Siswa masih ngalaman kasusah dina mekarkeun gagasan, manggihan rupa-rupa strategi pikeun ngaréngsékeun masalah, sarta ngahubungkeun konsép matematika jeung masalah dina kahirupan sapopoe. Panalungtikan ieu miboga tujuan pikeun (1) mikanyaho gambaran prosés pangajaran anu ngagunakeun model Problem Based Learning (PBL) dibantuan ku media Augmented Reality (AR), (2) mikanyaho bédana kamampuh mikir kreatif matematis antara siswa anu diajar ngagunakeun model Problem Based Learning (PBL) dibantuan ku media Augmented Reality (AR) jeung siswa anu diajar ngagunakeun model pangajaran konvensional, sarta (3) mikanyaho gedéna pangaruh model Problem Based Learning (PBL) dibantuan ku media Augmented Reality (AR) kana kamampuh mikir kreatif matematis siswa. Méthode anu digunakeun dina ieu panalungtikan nyaéta méthode kuasi ékspérimén kalayan desain Nonequivalent Control Group Design. Sampel dina ieu panalungtikan ngawengku dua kelas, nyaéta kelas ékspérimén anu ngagunakeun model Problem Based Learning (PBL) dibantuan ku media Augmented Reality (AR) jeung kelas kontrol anu ngagunakeun pangajaran konvensional. Téhnik ngumpulkeun data ngagunakeun tés dina wangun pretest jeung posttest, ogé lembar observasi aktivitas guru jeung siswa. Analisis data dilakukeun ngagunakeun uji statistik kalayan bantuan aplikasi SPSS. Hasil panalungtikan némbongkeun yén prosés pangajaran dina kelas ékspérimén lumangsung luyu jeung tahapan model Problem Based Learning (PBL) sarta némbongkeun aktivitas diajar siswa anu leuwih aktif dibandingkeun jeung kelas kontrol. Hasil uji Independent Samples t-test némbongkeun nilai signifikansi $< 0,001$, anu hartina aya bédana anu signifikan antara kamampuh mikir kreatif matematis siswa dina kelas ékspérimén jeung kelas kontrol. Salian ti éta, hasil itungan effect size némbongkeun yén model Problem Based Learning (PBL) dibantuan ku media Augmented Reality (AR) miboga pangaruh anu gedé kana kamampuh mikir kreatif matematis siswa. Ku kituna, model Problem Based Learning (PBL) dibantuan ku media Augmented Reality (AR) tiasa dijadikeun salah sahiji alternatif pangajaran pikeun ngaronjatkeun kamampuh mikir kreatif matematis siswa sakola dasar.

Kecap Pamageuh: Problem Based Learning, Augmented Reality, kamampuh mikir kreatif matematis, matematika sakola dasar.