

ABSTRAK

Penelitian ini bertujuan untuk (1) mengkaji peningkatan kemampuan pemecahan masalah dan pencapaian resiliensi matematis mahasiswa yang mendapatkan model pembelajaran *Problem-Based Learning* dengan pendekatan Metakognitif (PBLM) dan yang mendapatkan model pembelajaran konvensional, (2) mengkaji interaksi pembelajaran dan kemampuan awal matematis (KAM) terhadap kemampuan pemecahan masalah dan resiliensi matematis, serta (3) mengkaji perilaku mahasiswa dalam meningkatkan kemampuan pemecahan masalah dan resiliensi matematis berdasarkan model pembelajarannya. Penelitian ini menggunakan metode penelitian kuantitatif. Subjek penelitian yaitu mahasiswa yang mengikuti perkuliahan Statistika Dasar, dibagi menjadi dua kelas yaitu kelas eksperimen dan kelas kontrol. Instrumen penelitian terdiri instrumen berupa tes kemampuan pemecahan masalah matematis dan skala resiliensi matematis, serta instrumen non-tes berupa pedoman wawancara, lembar observasi, angket, dan dokumentasi. Temuan penelitian yang diperoleh diantaranya: (1) peningkatan kemampuan pemecahan masalah matematis mahasiswa yang memperoleh pembelajaran PBLM tidak lebih tinggi secara signifikan dibandingkan yang memperoleh pembelajaran konvensional, baik secara keseluruhan maupun berdasarkan KAM, (2) tidak terdapat interaksi model pembelajaran dan KAM terhadap peningkatan kemampuan pemecahan masalah matematis, (3) pencapaian resiliensi matematis mahasiswa yang memperoleh pembelajaran PBLM tidak lebih tinggi secara signifikan dibandingkan yang memperoleh pembelajaran konvensional, baik secara keseluruhan maupun berdasarkan KAM, (4) tidak terdapat interaksi model pembelajaran dan KAM terhadap pencapaian resiliensi matematis mahasiswa, (5) mahasiswa kelas eksperimen dan kontrol menunjukkan perilaku yang berbeda dalam meningkatkan kemampuan pemecahan masalah matematis, dan (6) mahasiswa kelas eksperimen maupun kontrol tidak menunjukkan perbedaan perilaku yang dominan dalam meningkatkan pencapaian resiliensi matematis.

Kata Kunci: *Pemecahan Masalah Matematis, Resiliensi Matematis, Problem-Based Learning, Metakognitif.*

ABSTRACT

This research was aimed to (1) examine the improvement of problem solving ability and the achievement of students' mathematical resilience which get the Problem-Based Learning with Metacognitive approach (PBLM) learning model and which get the conventional learning model, (2) to examine the interaction between learning model and mathematical prior knowledge (MPK) against problem solving ability and mathematical resilience, and (3) to analyze the students' behavior in improving problem solving and mathematical resilience based on the learning model. This study was quantitative research. Research subjects were students were grouped into two classes namely experimental class and control class. The research instrument consisted of test instrument in the form of mathematical problem solving test and mathematical resilience scale, and non-test instrument in the form of interview guides, observation sheet, questionnaire, and documentation. The findings of the research are: (1) improvement of problem solving ability of mathematical students who received PBLM learning were not significantly higher than students who received conventional learning, either overall or based on MPK, (2) there was no interaction between learning model and MPK against improving mathematical problem solving abilities, 3) the achievement of mathematical resilience of students who received PBLM learning were not significantly higher than students who received conventional learning, either overall or based on MPK, (4) there was no interaction between learning model and MPK against achievement of student mathematical resilience, (5) students in experimental class and control class showed different behaviors in improving mathematical problem solving skills, and (6)) both experimental and control class students showed no dominant behavioral difference in improving mathematical resilience achievement.

Keyword: *Mathematical Problem Solving, Mathematical Resilience, Problem-Based Learning, Metacognitive*