

THE IMPACT OF PROBLEM-BASED LEARNING APPROACH TO SENIOR HIGH SCHOOL STUDENTS' MATHEMATICS CRITICAL THINKING ABILITY

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Abstract

The study was report the findings of an only post-test control group research design and aims to analyze the influence of problem-based learning approach, school level, and students' prior mathematical ability to student's mathematics critical thinking ability. The research subjects were 140 grade ten senior high school students coming from excellent and moderate school level. The research instruments a set of mathematical critical thinking ability test, and the data were analyzed by using two ways ANOVA and t-test. The research found that the problem-based learning approach has significant impact to the ability of students' mathematics critical thinking in terms of school level and students' prior mathematical abilities. Furthermore. This research also found that there is no interaction between learning approach and school level, and learning approach and students' prior mathematics ability to students' mathematics critical thinking ability.

Keywords: problem-based learning, mathematical critical thinking ability

Abstrak

Makalah ini melaporkan temuan suatu penelitian berdesain hanya tes akhir kelompok kontrol dan bertujuan menganalisis pengaruh pendekatan berbasis masalah, level sekolah, dan kemampuan awal matematis siswa terhadap pencapaian kemampuan berpikir kritis matematis siswa. Subjek penelitian ini sebanyak 140 siswa kelas X SMA yang berasal dari level sekolah tinggi dan sedang. Instrumen penelitian ini adalah seperangkat tes kemampuan berpikir kritis matematis, dan data dianalisis dengan menggunakan ANAVA dua jalur dan uji-t. Studi menemukan bahwa pendekatan pembelajaran berbasis masalah memberikan pengaruh yang signifikan terhadap kemampuan berpikir kritis matematis ditinjau dari peran level sekolah dan kemampuan awal matematis siswa. Studi menemukan pula tidak terdapat interaksi antara pendekatan pembelajaran dan level sekolah, dan antara pendekatan pembelajaran dan kemampuan awal matematis terhadap kemampuan berpikir kritis matematis siswa.

Kata Kunci: pembelajaran berbasis masalah, berpikir kritis matematis

Nowadays, mathematical critical thinking ability is an important mathematics basic competence in math education unit level curriculum (SBC) which exist in the Republic of Indonesia. The importance of the ability not only to meet the demands of learn mathematics but also to the student awareness of the importance of mathematics in other subjects and human life. Ruseffendi (2008) stated that the use of mathematics taught in school, is math as a provision in everyday life and mathematics in order to educate the nation. Thus, the