THE USE OF CONTEXTUAL PROBLEMS TO SUPPORT MATHEMATICAL LEARNING

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Abstract

This paper examines the use of contextual problems to support mathematical learning based on current classroom practice. The use contextual problems offers some potentials to engage and motivate students in learning mathematics but it also presents some challenges for students in classrooms. Examples of the use of contextual problems from several primary classrooms in Indonesia will be discussed. Contextual problems do not lend themselves to a meaningful learning for students. Teachers need to engage students in interpreting the context in order to explore key mathematical ideas. It is critical to establish explicit links between the context and the mathematics ideas to support students' progression in their mathematical thinking.

Keyword: *Contextual Problems, Context, Mathematical Learning*

Abstrak

Makalah ini membahas penggunaan masalah kontekstual untuk mendukung pembelajaran matematika berdasarkan pada praktek pengajaran terkini. Masalah penggunaan kontekstual menawarkan beberapa potensi untuk terlibat dan memotivasi siswa dalam belajar matematika tetapi juga menyajikan beberapa tantangan bagi siswa di kelas. Contoh penggunaan masalah kontekstual dari kelas utama beberapa di Indonesia akan dibahas. Masalah kontekstual tidak meminjamkan diri untuk belajar bermakna bagi siswa. Guru perlu melibatkan para siswa dalam menafsirkan konteks untuk mengeksplorasi ide-ide matematika kunci. Hal ini penting untuk membangun hubungan eksplisit antara konteks dan ide-ide matematika untuk mendukung perkembangan siswa dalam berpikir matematika mereka.

Kata Kunci: *Masalah Kontekstual, Konteks, Pembelajaran Matematika*

The role of contexts in mathematics teaching and learning has gained much attention. Lee (2012) presents examples of contextual problems dated over 1500 years ago in China so clearly the use of context is not a novelty. In Realistic Mathematics Education theory, a context plays a significant role as a starting point of learning for students to explore mathematical notions in a situation that is 'experientially real' for them (Gravemeijer & Doorman, 1999). Gravemeijer and Doorman (1997) underlines that experientially real situation does not exclude pure mathematical problem and "experiential reality grows with the mathematical development of the student." (p. 127). Freudenthal (1991) is critical about the use of context to help students in exploring mathematics and progressing in their mathematical thinking. He underlines that a context is not "a mere garment clothing nude mathematics" (p. 75) One of the key characteristics of good contextual problems is its' capacity to bring out a variety of mathematical interpretations and solution strategies. These informal strategies