

LOCAL INSTRUCTION THEORY ON DIVISION IN MATHEMATICS GASING

Rully Charitas Indra Prahmana, Petra Suwasti

Surya College of Education, Jl. Scientia Boulevard Blok U/7, Gading Serpong-Tangerang, Indonesia,
e-mail: rully.charitas@stkipsurya.ac.id

Abstract

Several studies on learning mathematics for rural area's student indicate that students have difficulty in understanding the concept of division operation. Students are more likely to be introduced by the use of the formula without involving the concept itself and learning division separate the concrete situation of learning process. This underlies the researcher to design division operation learning in the Mathematics of GASING (Math GASING), which always starts from concrete to abstract level. The research method used is a design research which describes how the Math GASING make a real contribution of students understanding in the concept of division operation.

Keywords: Division Operation, Design Research, Math GASING, Rural Area's Student

Abstrak

Beberapa penelitian dalam pembelajaran matematika untuk mahasiswa daerah pedesaan menunjukkan bahwa siswa mengalami kesulitan dalam memahami konsep operasi pembagian. Siswa lebih suka untuk diperkenalkan menggunakan rumus tanpa melibatkan konsep operasi pembagian itu sendiri dan pembelajaran operasi pembagian terpisah dari situasi konkret dalam proses pembelajar. Hal ini mendasari peneliti untuk merancang pembelajaran operasi pembagian dalam Matematika GASING (Math GASING), yang selalu dimulai dari sesuatu yang konkrit menuju ke level abstrak. Metode penelitian yang digunakan adalah *design research* yang menggambarkan bagaimana Math GASING memberikan kontribusi yang nyata pada pemahaman mahasiswa dalam konsep operasi pembagian.

Kata kunci: Operasi Pembagian, *Design Research*, Matematika GASING, Mahasiswa Pedesaan

Professional teacher as the product of reform in education must have higher education and be able to innovate in teaching and learning (Whitman, 2010). So, every prospective teacher should be able to prepare themselves to become professional teachers to equip themselves with a high education and knowledge of the learning and teaching process. In the other hands, prospective teachers who come from rural areas have a few accesses to get decent education and information as requirements to become a professional teacher. Surya College of Education has responsibility for it. Here, they get a great education to become a professional teacher including mathematics teacher. In addition, Surya and Moss (2012) have made and apply a learning innovation in mathematics education, named Math GASING. This learning has been applied to rural area's student began with learning number operations and produced many Olympic champions both nationally and internationally.

Furthermore, learning number operations at the primary school is important for learning other subjects (NCTM, 2000). It's because learning number operations tends to an understanding of notation, symbols, and other forms to represent (reference number), so it can support the students'