

ABSTRACT

Development Learning Design of Statistics Based IT Using Realistic Mathematics Education For Grade 8th Students

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Results of preliminary studies show, there are problems in statistical learning in class VIII SMP. Students are more likely to be introduced by the use of formulas without involving the discovery of the concept itself and separate from the learning experience of students everyday. It underlies the design flow to learn the topic of statistics and correlates with activity based on the student experience (experience-based activities). The purpose of this study was to design the flow of statistical learning topics of class VIII SMP-based IT approach Realistic Mathematics Education (RME), implemented through the RPP and IT media valid, practical and effective.

The methodology used in this study combines design research model of Plomp model Gravemeijer & Cobb, which consists of three phases which the preliminary study (preliminary research/ preparing for the experiment), a development phase (development or prototyping phase/ design experiment) and assessment phase (assessment phase/ retrospective analysis). The subjects were students of class VIII SMPN 2 Solok.

The results of the validity of the data analysis showed that the flow of learning, lesson plans and IT media with RME approach produced have valid criteria in terms of content and construct. Flow learn, lesson plans and IT media already practical terms, the ease and time required, as a learning tool developed can be applied in mathematics learning activities. Flow learn, lesson plans and IT media has also been effective because it can develop mathematical reasoning abilities. The results of teaching experiments show published in the context of IT media can help students to develop their knowledge to find the concept of statistics. Based on these results, we can conclude that the path of learning, lesson plans and IT media class VIII SMP statistical topic-based IT approach with Realistic Mathematics Education (RME) that have been produced can be declared valid, practical and effective.

ABSTRAK

Pengembangan Desain Pembelajaran Statistika Berbasis IT Menggunakan Pendekatan *Realistic Mathematics Education* Untuk Kelas VIII SMP

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Hasil studi pendahuluan menunjukkan, terdapat masalah dalam pembelajaran statistika kelas VIII SMP. Peserta didik lebih cenderung dikenalkan dengan penggunaan rumus tanpa melibatkan penemuan konsep itu sendiri dan pembelajaran terpisah dari pengalaman peserta didik sehari-hari. Hal tersebut mendasari untuk mendesain alur belajar topik statistika dan menghubungkannya dengan aktivitas berdasarkan pengalaman peserta didik (*experience-based activities*). Tujuan dari penelitian ini adalah untuk merancang alur belajar topik statistika kelas VIII SMP berbasis IT dengan pendekatan *Realistic Mathematics Education* (RME), dimplementasikan melalui RPP dan Media IT yang valid, praktis dan efektif.

Metodologi yang digunakan dalam penelitian ini mengkombinasikan *design research* model Plomp dengan model Gravemeijer & Cobb, yang terdiri dari 3 fase yaitu fase penelitian pendahuluan (*preliminary research/preparing for the experiment*), fase pengembangan (*development or prototyping phase/design experiment*) dan fase penilaian (*assessment phase/retrospective analysis*). Subjek penelitian adalah peserta didik kelas VIII SMPN 2 Kota Solok.

Hasil analisis data validitas menunjukkan bahwa alur belajar, RPP dan media IT dengan pendekatan RME yang dihasilkan telah memenuhi kriteria valid dari segi isi dan konstruk. Alur belajar, RPP dan media IT sudah praktis dari segi keterlaksanaan, kemudahan dan waktu yang diperlukan, karena perangkat pembelajaran yang dikembangkan dapat diterapkan dalam kegiatan pembelajaran matematika. Alur belajar, RPP dan media IT juga telah efektif karena dapat mengembangkan kemampuan penalaran matematis. Hasil dari *teaching experiment* menunjukkan konteks yang dimuat dalam media IT dapat membantu peserta didik untuk mengembangkan pengetahuan mereka untuk menemukan konsep statistika. Berdasarkan hasil tersebut, dapat disimpulkan bahwa alur belajar, RPP dan media IT topik statistika kelas VIII SMP berbasis IT dengan pendekatan *Realistic Mathematics Education* (RME) yang telah dihasilkan dapat dinyatakan valid, praktis dan efektif.