

ABSTRAK

Liyana Safitri.(2017). *Pengembangan Bahan Ajar Berbasis Android Pokok Bahasan Nilai Perbandingan Trigonometri dan Perbandingan Trigonometri Sudut-Sudut Berelasi Kelas X IPS 2 Di SMA Negeri 1 Depok. Program Studi Pendidikan Matematika, Jurusan Pendidikan matematika dan Ilmu Pengatahuan Alam, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sanata Dharma.*

Penelitian ini bertujuan: (1) Mengembangkan bahan ajar berbasis *Android* pada pokok bahasan nilai perbandingan trigonometri dan perbandingan trigonometri sudut-sudut berelasi, (2) untuk mengetahui keterlaksanaan bahan ajar berbasis *Android* dalam membantu siswa kelas X IPS 2 di SMA Negeri 1 Depok memahami konsep nilai perbandingan trigonometri dan perbandingan trigonometri sudut-sudut berelasi.

Subjek penelitian adalah 32 siswa di SMA Negeri 1 Depok, Sleman, Yogyakarta. Penelitian dilaksanakan pada bulan Desember 2016-April 2017, dengan menggunakan metode penelitian dan pengembangan yang terdiri dari tiga tahap, yaitu: tahap pendahuluan, tahap pengembangan produk, dan tahap pengujian produk. Data diperoleh dari hasil wawancara pembelajaran di kelas, hasil komentar terbuka ahli, hasil lembar observasi, hasil LKS atau tugas, dan hasil kuesioner terbuka siswa. Kemudian data dianalisis secara kualitatif untuk mengetahui jawaban dari masalah yang telah dirumuskan.

Hasil dari penelitian ini, yaitu (1) Membangun bahan ajar berbasis *Android* berupa aplikasi yang dapat menyajikan proses ditemukannya konsep, sehingga siswa dapat paham akan bahasan tersebut, tidak sekedar menghafal. Bahan ajar juga didesain supaya menjadi bahan ajar yang praktis, serta dapat digunakan oleh siswa kapanpun dan dimanapun. (2) Keterlaksanaan bahan ajar berbasis *Android* dalam membantu siswa kelas X IPS 2 SMA Negeri 1 Depok, Sleman, Yogyakarta memahami konsep nilai perbandingan trigonometri dan perbandingan trigonometri sudut-sudut berelasi yaitu aplikasi digunakan selama pembelajaran, namun apabila terdapat penjelasan di papan tulis, siswa lebih tertarik untuk memfoto hasil penjelasan tersebut daripada membuka aplikasi. Siswa merasa tertarik dengan aplikasi yang digunakan dan aplikasi membantu mereka memahami pokok bahasan nilai perbandingan trigonometri dan perbandingan trigonometri sudut-sudut berelasi.

Kata kunci : *Android*, Bahan ajar, Trigonometri, Trigonometri Sudut-Sudut Berelasi

ABSTRACT

Liyana Safitri.(2017). Development of Teaching Materials Based on Android Subjects of Comparative Trigonometric and Trigonometric Comparisons of related angles in Class X IPS 2 State High School One Depok. Mathematics Education Program, Department of Educational Science, Mathematical and Natural Sciences, Faculty of Teacher Training and Education, University of Sanata Dharma.

This study aims to: (1) Developing Android-based teaching materials on the subject of comparative trigonometric and trigonometric comparisons of related angles, (2) to know the implementation of teaching materials based on Android in helping students in Class X IPS 2 State High School One Depok understand the concept of comparative trigonometric and trigonometric comparisons of related angles.

Subjects were 32 students in State High School One Depok, Sleman, Yogyakarta. The experiment was conducted in December 2016-April 2017. Using the method of research and development which consists of three stages: a preliminary stage, the stage of product development, and product testing phase. Data obtained from interviews in the classroom, open comment expert, observation sheet, results of student worksheets or assignments, and open student questionnaire. Then the data were analyzed qualitatively to determine the answer to a problem that has been formulated.

The results of this study, is (1) A build Android-based teaching materials in the form of applications which can present the process of finding concepts, so that students can understand the subject, not just memorize. Teaching materials are also designed to be a practical resource, and can be used by students anytime and anywhere. (2) The implementation of teaching materials based on Android in helping students in Class X IPS 2 State High School One Depok understand the concept of comparative trigonometric and trigonometric comparisons of related angles is the applications is used during the learning, but if there is an explanation on the board, students are more interested to photograph the results of the explanation than to open the app. Students feel attracted to the applications used and applications help them understand the concept of comparative trigonometric and trigonometric comparisons of related angles.

Keywords : Android, Teaching Materials, Trigonometry, Trigonometric comparisons of related angles