ABSTRAK

Penelitian ini berjudul "Desain Didaktis Konsep Dasar Trigonometri dengan Pendekatan Sistem Koordinat Cartesius". Penelitian ini hakikatnya adalah menyusun suatu desain didaktis konsep dasar trigonometri yang didasari *learning obstacles* dan *learning trajectory*. Analisis *learning obstacle* diperoleh berdasarkan tes diagnostik dan observasi pembelajaran trigonometri di kelas. Uji *learning obstacles* dilakukan pada kelas XI MIA, sedangkan observasi pembelajaran trigonometri dilakukan pada kelas X MIA. Tujuan dari penelitian ini adalah mengetahui gambaran *learning obstacle* dari materi trigonometri, menyusun desain didaktis hipotesis konsep dasar trigonometri berdasarkan analisis masalah yang sudah teridentifikasi, menganalisis implementasi desain didaktis hipotesis, serta menyusun desain didaktis revisi berdasarkan hasil analisis implementasi. Penelitian ini menggunakan metode kualitatif yang berupa *Didactical Design Research* (Penelitian Desain Didaktis) dengan teknik pengumpulan data berupa observasi, uji diagnostik, serta studi dokumentasi. Hasil *learning obstacles* ditemukan adanya hambatan epistemologis terkait materi trigonometri. Hal ini disebabkan pengetahuan siswa terbatas pada perbandingan trigonometri segitiga siku-siku. Oleh karena itu, desain didaktis ini berupa desain didaktis konsep dasar trigonometri dengan pendekatan sistem koordinat cartesius untuk mengatasi *learning obstacles* tersebut. Dari hasil penelitian dapat disimpulkan bahwa desain didaktis ini merupakan salah satu alternatif dalam pembelajaran trigonometri sehingga *learning obstacles* dapat dikurangi. Desain didaktis tersebut merupakan hasil revisi dari desain didaktis hipotesis yang dianalisis berdasarkan hasil implementasi di kelas.

Kata kunci: Desain didaktis, trigonometri, *learning obstacles*

ABSTRACT

This research entitled "Dictatical Design of Basic Concepts of Trigonometry with Cartesian Coordinate Approach". This research is essentially a draft of a didactic design of the basic concept of trigonometry based on learning obstacles and learning trajectory. Obstacle learning analysis was obtained based on diagnostic tests and classroom trigonometric learning observations. The test of learning obstacles was done in class XI MIA, while the observation of trigonometric learning was done in class X MIA. The purpose of this research is to know the description of obstacle learning from trigonometric material, to design the didactic hypothesis of trigonometric basic concept based on identified problem analysis, to analyze the implementation of didactic design hypothesis, and to develop the revised didactic design based on the results of the implementation analysis. This research uses qualitative method in the form of Didactical Design Research with data collection techniques such as observation, diagnostic test, and documentation study. The result of learning obstacles found the existence of epistemological obstacles related to trigonometric material. This is due to limited student knowledge on the comparison of right triangular trigonometry. Therefore, didactic design is a didactic design of the basic concept of trigonometry with cartesian coordinate system approach to overcome the learning obstacles. From the research results can be concluded that this didactic design is one of the alternative in trigonometry learning so that learning obstacles can be reduced. The didactic design is the result of a revision of the didactic design of the hypothesis analyzed based on the results of the class implementation.

Kata kunci: Didactical Design, trigonometry, *learning obstacles*