

**PENGEMBANGAN MEDIA PEMBELAJARAN  
BERBASIS *ETHNOMATEMATICS* “JAM BENCET” DAN *AUGMENTED REALITY* DALAM  
MENINGKATKAN LITERASI MATEMATIS PADA SISWA KELAS X SMA AL-ISLAM  
SURAKARTA**

**TESIS**

Diajukan untuk memenuhi salah satu persyaratan meraih gelar  
Magister Pendidikan Matematika



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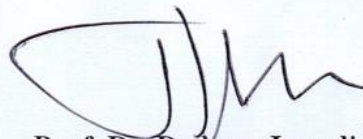
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## ABSTRAK

**Muhaimin, L. H., (2023),** Pengembangan Media Pembelajaran Berbasis *Ethnomatematics* “Jam Bencet” dan *Augmented Reality* dalam Meningkatkan Literasi Matematis Pada Siswa Kelas X SMA Al-Islam Surakarta.

**Abstrak.** Problematika literasi matematis di Indonesia masih belum teratasi sampai sekarang. Di sisi lain, pesatnya perkembangan teknologi membuat mudahnya pelestarian budaya daerah Indonesia di kalangan anak muda. Kurikulum yang berlaku saat ini melalui profil pelajar pancasila, menjadikan tuntutan pendidik untuk menempatkan pemahaman budaya lokal dalam pembelajaran, khususnya pada matematika. Oleh karena itu, tujuan penelitian ini adalah meningkatkan literasi matematis siswa melalui pengembangan media pembelajaran berbasis *ethnomathematics* dan *augmented reality*. Penelitian ini perlu untuk dilakukan karena melihat masih rendahnya literasi matematis siswa di Indonesia dan masih terdapatnya ketimpangan dari proses pembelajaran matematika saat ini, sehingga melalui penelitian ini diharapkan dapat memberikan solusi dari masalah tersebut. Penelitian ini mengadopsi model pengembangan Plomp, dengan alur penelitian meliputi identifikasi awal, desain produk, konstruksi produk, uji coba produk, dan implementasi produk. Hasil identifikasi awal menunjukkan bahwa literasi matematis siswa masih rendah, yang disebabkan oleh kesulitan siswa dalam memahami masalah. Selanjutnya, terungkap konsep kesejajaran dua garis, pengukuran dalam satuan, konsep bidang datar, konsep siku-siku (90 derajat), dan konsep pengukuran jarak antar garis sejajar dalam budaya bencet, sekaligus ini menjadi konten maupun konteks dalam media pembelajaran yang dikembangkan. Media pembelajaran yang dikembangkan ini berupa modul pembelajaran yang menunjukkan hasil valid, praktis, dan efektif dalam meningkatkan literasi matematis siswa.

**Kata Kunci:** *Augmented Reality*, Jam Bencet, *Ethnomathematics*, Literasi Matematis, Media Pembelajaran.

## **ABSTRACT**

**Muhaimin, L.H., (2023),** *Development of Ethnomathematics-Based Learning Media "Bencet" and Augmented Reality in Enhancing Mathematical Literacy of the 10<sup>th</sup> Grade Students of Al-Islam High School Surakarta.*

**Abstract.** *The problem of mathematical literacy in Indonesia has not been resolved until now. On the other hand, the rapid development of technology is causing the preservation of Indonesian regional culture to fade among young people. The current curriculum, through the Pancasila student profile, demands that educators place an understanding of local culture in learning, especially in mathematics. This research aims to enhancing students' mathematical literacy through developing learning media based on ethnomathematics and augmented reality. This research needs to be carried out because we see that students' mathematical literacy in Indonesia is still low and there are still gaps in the current mathematics learning process, so through this research it is hoped that we can provide a solution to this problem. This research adopts the Plomp development model, with the research flow including initial identification, product design, product construction, product testing, and product implementation. Initial identification results show that students' mathematical literacy is still low, which is caused by students' difficulties in understanding problems. The concept of parallelism between two lines, measurement in units, the concept of a flat plane, the concept of a right angle (90 degrees), and the concept of measuring the distance between parallel lines in the Bencet culture are revealed, and this also became the content and context of the learning media being developed. The learning media developed is in the form of learning modules that show valid, practical, and effective results in improving students' mathematical literacy.*

**Keywords:** *Augmented Reality, Bencet Sundial, Ethnomathematics, Learning Media, Mathematical Literacy.*

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