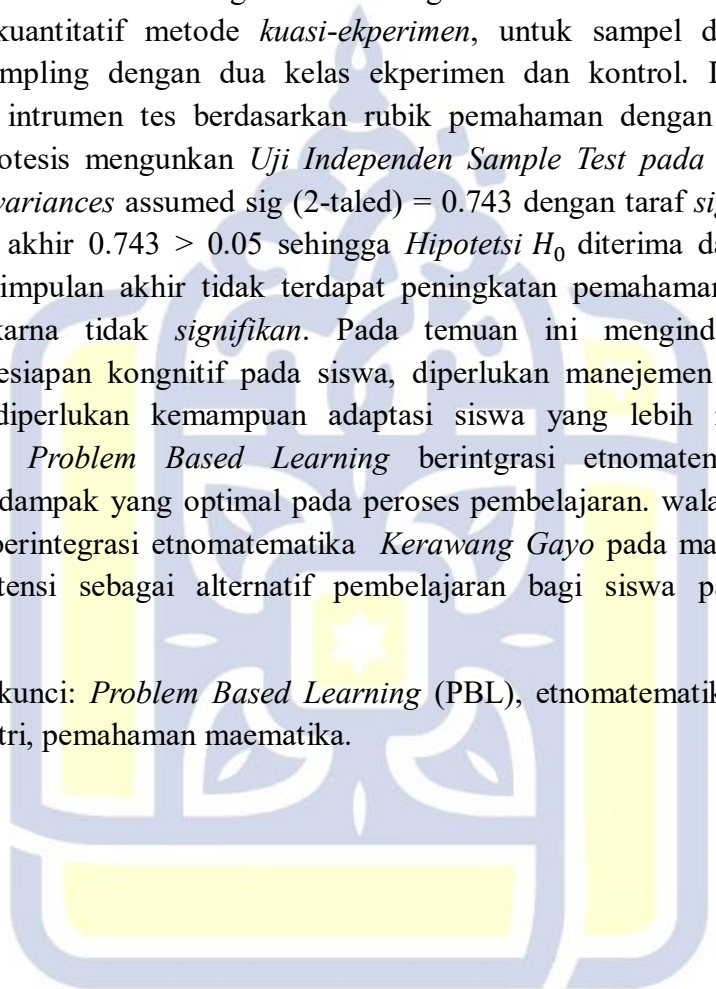


## ABSTRAK

Penelitian ini memiliki tujuan untuk menganalisis efektivitas dari penerapan model *problem based learning* (PBL) berbasis etnomatematika *Kerawang Gayo* pada materi geometri terhadap peningkatan pemahaman matematika siswa SMA Negeri 7 Takengon. Penelitian ini menggunakan pendekatan kuantitatif metode *kuasi-ekperimen*, untuk sampel dipilih secara purposive sampling dengan dua kelas eksperimen dan kontrol. Data diambil menggunakan instrumen tes berdasarkan rubrik pemahaman dengan 4 indikator. Hasil uji hipotesis menggunakan *Uji Independen Sample Test* pada software *spss* Hasil *Equal variances assumed sig (2-tailed) = 0.743* dengan taraf *signifikan 0.05* dengan hasil akhir  $0.743 > 0.05$  sehingga *Hipotesis  $H_0$*  diterima dan  *$H_1$*  ditolak sehingga kesimpulan akhir tidak terdapat peningkatan pemahaman pada kelas eksperimen karna tidak *signifikan*. Pada temuan ini mengindikasikan bahwa diperlukan kesiapan kognitif pada siswa, diperlukan manajemen waktu yang baik, serta diperlukan kemampuan adaptasi siswa yang lebih matang agar pembelajaran *Problem Based Learning* berintegrasi etnomatematika dapat memberikan dampak yang optimal pada proses pembelajaran. walaupun begitu, model PBL berintegrasi etnomatematika *Kerawang Gayo* pada materi geometri memiliki potensi sebagai alternatif pembelajaran bagi siswa pada SMA 7 Takengon.

Kata kunci: *Problem Based Learning* (PBL), etnomatematika *Kerawang Gayo*, geometri, pemahaman matematika.

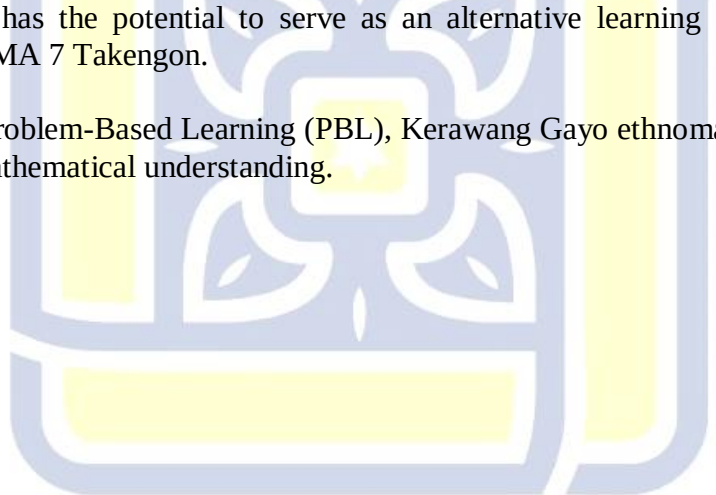


UNIVERSITAS ISLAM NEGERI  
SULTANAH NAHRASIYAH  
LHOKSEUMAWA

## ABSTRAK

The purpose of this study is to analyze the effectiveness of implementing a problem-based learning (PBL) model based on Kerawang Gayo ethnomathematics in geometry instruction on improving the mathematical understanding of students at SMA 7 Takengon. This study employed a quantitative, quasi-experimental approach, with samples selected through purposive sampling, comprising two classes—an experimental group and a control group. Data were collected using a test instrument based on a comprehension rubric with four indicators. Hypothesis testing results were obtained using the Independent Samples t-Test in SPSS software. The results, assuming equal variances, showed a sig (two-tailed) = 0.743 at a significance level of 0.05. The final result,  $0.743 > 0.05$ , led to the acceptance of null hypothesis  $H_0$  and the rejection of alternative hypothesis  $H_1$ . Thus, the final conclusion is that there was no improvement in understanding in the experimental class because the difference was not statistically significant. These findings indicate that students require cognitive readiness, good time management, and more mature adaptive skills so that Problem-Based Learning (PBL) integrated with ethnomathematics can have an optimal impact on the learning process. Nevertheless, the PBL model integrated with Kerawang Gayo ethnomathematics in geometry has the potential to serve as an alternative learning approach for students at SMA 7 Takengon.

Keywords: Problem-Based Learning (PBL), Kerawang Gayo ethnomathematics, geometry, mathematical understanding.



UNIVERSITAS ISLAM NEGERI  
SULTANAH NAHRASIYAH  
LHOKSEUMAWE