

ABSTRAK
PENGARUH MEDIA AUDIO VISUAL BERBASIS PEMBELAJARAN
***PROJECT BASED LEARNING (PjBL)* TERHADAP PENALARAN**
MATEMATIS SISWA DI SMA PERGURUAN ERIA MEDAN

Nurul Fauwzi Oktami
Email: nurulfauwzi@gmail.com

Penelitian ini membahas tentang pengaruh media audio visual berbasis pembelajaran *Project Based Learning (PjBL)* terhadap penalaran matematis siswa di SMA Perguruan ERIA Medan. Dengan tujuan 1) Untuk Mengetahui sejauh mana pengaruh penggunaan media audiovisual bergerak berbasis Model *Project Based Learning (PjBL)* terhadap penalaran matematis siswa kelas XI IPS-2 dalam materi turunan fungsi aljabar. 2) Untuk mengetahui bagaimana respon siswa dalam penggunaan media pembelajaran audiovisual berbasis Model *Project Based Learning (PjBL)*. Sampel penelitian siswa kelas XI IPS-2 berjumlah 30 siswa. Teknik pengambilan sampel *Purposive Sampel* dengan jenis penelitian *Pre-Experimental Desain (nondesain)*. Teknik pengumpulan data menggunakan angket respon siswa dan tes penalaran matematis, tes berisi 3 soal uraian yang sudah divalidasi ahli. Analisis data menggunakan uji deskriptif, uji normalitas, uji homogenitas, dan uji hipotesis. Pengujian hipotesis menggunakan uji regresi linier sederhana. Hasil penelitian menunjukkan bahwa persamaan $Y = 19,892 - 0,310X$, dengan $t_{hitung} = 10.359$ dan nilai signifikansi = 0,000 diperoleh nilai $t_{hitung} > t_{tabel}$ yaitu $10.359 > 2,0484$ dengan taraf signifikansi kurang dari $\alpha = 0,05$. Besar persen pengaruh dilihat dari tabel koefisien korelasi pada nilai *R square* (R^2). Dari hasil perhitungan diperoleh nilai $R^2 = 0,793$ menunjukkan bahwa media audio visual berbasis *Project Based Learning (PjBL)* terhadap penalaran matematis siswa SMA perguruan ERIA Medan berpengaruh positif dengan persentase sebesar 79,3% termasuk kategori tinggi. Sementara perolehan respon siswa sebesar 82,3%. Sehingga dapat dinyatakan pembelajaran menggunakan media audio visual berbasis *Project Based Learning (PjBL)* mendapat respon positif.

Kata kunci: Media Audio Visual, Project Based Learning (PjBL), Dan Penalaran Matematis

ABSTRACT

INFLUENCE OF AUDIO-VISUAL MEDIA BASED PROJECT LEARNING (PjBL) TOWARDS THE STUDENTS' MATHEMATICAL REASONING AT SMA PERGURUAN ERIA MEDAN

Nurul Fauwzi Oktami

Email: nurulfauwzi@gmail.com

This study discusses the influence of audio-visual media based on *Project Based Learning (PjBL)* learning towards the students' mathematical reasoning at SMA Perguruan ERIA Medan. With the objectives 1) To determine the extent of the influence of the use of moving audio-visual media based on the *Project Based Learning (PjBL)* Model towards the mathematical reasoning on the students of class XI IPS-2 in the material of algebraic function derivatives. 2) To find out how the students' response to the use of audio-visual learning media based on the *Project Based Learning (PjBL)* Model. The research sample of class XI IPS-2 students consisted of 30 students. The sample technique was *Purposive Sample* with the type of *Pre-Experimental Design (non-desaign)* research. The data collection technique used the students' response questionnaire and mathematical reasoning test, the test contained 3 essay questions that had been validated by experts. Data analysis used descriptive tests, normality tests, homogeneity test, and hypothesis test. Hypothesis testing used a simple linier regression test. The results of the study showed that the equation $Y = 19,892 - 0,310X$, with $t_{count} = 10.359$ and significance value = 0.000 obtained the value of $t_{count} > t_{table}$ which is $10.359 > 2,0484$ with a significance level of less than $\alpha = 0,05$. The percentage of the influence can be seen from the correlation coefficient table at the *R Square* value (R^2). From the calculation results obtained the value of $R^2 = 0,793$ indicating that audio-visual media based on *Project Based Learning (PjBL)* towards the students' mathematical reasoning of SMA Perguruan Eria Medan has a positive effect with a percentage of 79,3% including the high category. While acquisition of the students' responses was 82,3%. So, it can be stated that learning using audio-visual media based on *Project Based Learning (PjBL)* gets a positive response.

Keyword: *Audio-Visual Media, Project Based Learning (PjBL), and Mathematical Reasoning*