

## ABSTRAK

### Ihsan Nurdiansah. 2022. **PENGARUH MODEL *BLENDED PROJECT BASED LEARNING* (B-PjBL) BERBASIS LABORATORIUM TERHADAP KETERAMPILAN PROSES SAINS PESERTA DIDIK PADA MATERI GERAK PARABOLA**

Penelitian ini dilatar belakangi oleh rendahnya keterampilan proses sains peserta didik pada materi gerak parabola, kurang aktifnya peserta didik dalam pembelajaran fisika, dan keterbatasan waktu belajar pada saat di kelas. Upaya yang dilakukan peneliti untuk mengatasi masalah tersebut adalah dengan menerapkan model pembelajaran *Blended Project Based Learning* (B-PjBL) berbasis laboratorium. Tujuan penelitian ini adalah untuk mengetahui pengaruh model *Blended Project Based Learning* (B-PjBL) berbasis laboratorium terhadap keterampilan proses sains peserta didik pada materi gerak parabola di kelas X IPA SMA Negeri 9 Tasikmalaya tahun ajaran 2022/2023. Penelitian ini dilaksanakan mulai bulan Oktober 2022 di SMA Negeri 9 Tasikmalaya. Metode Penelitian yang digunakan adalah *quasi experiment* dengan desain penelitian *posttest only control group desain*. Populasi penelitian ini yaitu seluruh kelas X IPA SMA Negeri 9 Tasikmalaya sebanyak 4 kelas dengan jumlah peserta didik 144 orang. Sampel penelitian diambil dengan menggunakan teknik *cluster random sampling* sebanyak 2 kelas, yaitu kelas X IPA 1 sebagai kelas eksperimen dan kelas X IPA 2 sebagai kelas kontrol, dengan rincian masing-masing kelas berjumlah 36 peserta didik. Untuk mengukur keterampilan proses sains peserta didik dilakukan tes setelah diberi perlakuan (*posttest*) berbentuk *essay* dengan jumlah soal 15 butir materi gerak parabola, masing-masing soal tersebut mencakup 10 indikator keterampilan proses sains. Teknik analisis data yang digunakan adalah uji prasyarat (uji normalitas, uji homogenitas), dan uji hipotesis (uji t). Hasil uji hipotesis menggunakan uji t pada taraf signifikansi ( $\alpha = 0,05$ ) menunjukkan bahwa setelah diterapkannya model *Blended Project Based Learning* (B-PjBL) berbasis laboratorium diperoleh  $t_{hitung} > t_{tabel}$  yaitu  $5,43 > 1,67$  sehingga  $H_a$  diterima dan  $H_0$  ditolak. Artinya pada taraf kepercayaan 95% dapat disimpulkan bahwa ada pengaruh model *Blended Project Based Learning* (B-PjBL) berbasis laboratorium terhadap keterampilan proses sains peserta didik pada materi gerak parabola di kelas X IPA SMA Negeri 9 Tasikmalaya tahun ajaran 2022/2023.

Kata kunci: gerak parabola, keterampilan proses sains, model *Blended Project Based Learning* (B-PjBL) berbasis laboratorium.

## **ABSTRACT**

Ihsan Nurdiansah. 2022. **THE EFFECT OF THE LABORATORY-BASED BLENDED PROJECT BASED LEARNING (B-PjBL) MODEL ON THE SCIENCE PROCESS SKILLS OF STUDENTS IN THE MATERIAL OF PARABOLIC MOTION**

*This research is motivated by the low science process skills of students in parabolic motion material, the lack of activity of students in learning physics, and the limited time for learning in class. Efforts made by researchers to overcome this problem are by applying a laboratory-based Blended Project Based Learning (B-PjBL) learning model. The purpose of this study was to determine the effect of the laboratory-based Blended Project Based Learning (B-PjBL) model on students' science process skills in parabolic motion material in class X IPA SMA Negeri 9 Tasikmalaya in the 2022/2023 academic year. This research was conducted starting in October 2022 at SMA Negeri 9 Tasikmalaya. The research method used was a quasi experiment with a posttest only control group research design. The population of this study was all class X IPA SMA Negeri 9 Tasikmalaya with 4 classes with 144 students. The research sample was taken using the cluster random sampling technique for 2 classes, namely class X IPA 1 as the experimental class and class X IPA 2 as the control class, with details of each class totaling 36 students. To measure students' science process skills, a test was carried out after being given treatment (posttest) in the form of an essay with a total of 15 items of parabolic motion material, each of which includes 10 indicators of science process skills. Data analysis techniques used are prerequisite tests (normality test, homogeneity test), and hypothesis testing ( $t$  test). The results of hypothesis testing using the  $t$  test at the significance level ( $\alpha = 0.05$ ) show that after applying the laboratory-based Blended Project Based Learning (B-PjBL) model,  $t_{\text{count}} > t_{\text{table}}$  is  $5.43 > 1.67$  so that  $H_a$  is accepted and  $H_o$  is rejected. This means that at a confidence level of 95% it can be concluded that there is an influence of the laboratory-based Blended Project Based Learning (B-PjBL) model on students' science process skills in parabolic motion material in class X IPA SMA Negeri 9 Tasikmalaya in the 2022/2023 academic year.*

*Keywords: parabolic motion, science process skills, laboratory-Based Blended Project Based Learning (B-PjBL) mode*