

**PENGARUH MODEL PJBL TIPE *OPEN ENDED*
BERBANTUAN *E-WORKSHEET* TERHADAP KEMAMPUAN
PEMAHAMAN KONSEP IPAS SISWA SD**

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ABSTRAK

Penelitian ini dilatarbelakangi oleh rendahnya kemampuan pemahaman konsep IPAS siswa pada pembelajaran yang masih didominasi oleh metode konvensional sehingga diperlukan model pembelajaran yang lebih inovatif. Penelitian ini bertujuan untuk mengetahui gambaran aktivitas pembelajaran, perbedaan kemampuan pemahaman konsep IPAS siswa yang menggunakan model *Project Based Learning* (PjBL) tipe *Open Ended* berbantuan *E-Worksheet* dan pembelajaran konvensional, serta besarnya pengaruh model *Project Based Learning* (PjBL) tipe *Open Ended* berbantuan *E-Worksheet* terhadap kemampuan pemahaman konsep IPAS siswa. Metode yang digunakan adalah penelitian kuantitatif dengan desain *quasi experiment* tipe *nonequivalent control group design*. Subjek penelitian terdiri atas 26 siswa kelas eksperimen dan 26 siswa kelas kontrol. Data dianalisis menggunakan analisis deskriptif, uji normalitas, uji homogenitas, uji-t, dan *effect size*. Hasil penelitian menunjukkan bahwa aktivitas siswa pada kelas eksperimen berada pada kategori sangat baik dengan persentase 84%. Hasil uji-t menunjukkan nilai signifikansi (Sig. 2-tailed) sebesar $0,000 < 0,05$ yang berarti terdapat perbedaan yang signifikan antara kemampuan pemahaman konsep IPAS siswa yang belajar menggunakan model *Project Based Learning* (PjBL) tipe *Open Ended* berbantuan *E-Worksheet* dan siswa yang belajar menggunakan pembelajaran konvensional. Selain itu, hasil perhitungan *effect size* menggunakan *Cohen's d* memperoleh nilai sebesar 2,132 yang termasuk kategori sangat besar (*very large effect*). Maka, model *Project Based Learning* (PjBL) tipe *Open Ended* berbantuan *E-Worksheet* memberikan pengaruh yang sangat besar terhadap kemampuan pemahaman konsep IPAS siswa kelas IV sekolah dasar.

Kata Kunci: *Project Based Learning* (PjBL) tipe *Open Ended*, *E-Worksheet*, kemampuan pemahaman konsep, IPAS.

**THE EFFECT OF THE OPEN-ENDED TYPE PROJECT-BASED
LEARNING (PJBL) MODEL ASSISTED BY E-WORKSHEETS
ON FOURTH-GRADE ELEMENTARY SCHOOL STUDENTS'
UNDERSTANDING OF SCIENCE AND SOCIAL STUDIES
(IPAS) CONCEPTS**

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ABSTRACT

This research was motivated by the low conceptual understanding of science and social studies (IPAS) among students due to teacher-centered conventional learning. The study aimed to determine the implementation of learning activities, the differences in students' conceptual understanding between those taught using the Project Based Learning (PjBL) Open Ended model assisted by E-Worksheet and those taught through conventional learning, as well as the magnitude of the model's effect on students' conceptual understanding. This study employed a quantitative approach using a quasi-experimental method with a nonequivalent control group design. The research subjects consisted of 26 students in the experimental class and 26 students in the control class. Data were analyzed using descriptive analysis, normality test, homogeneity test, independent sample t-test, and effect size analysis. The results showed that student learning activities in the experimental class were categorized as very good, with a percentage of 84%. The independent sample t-test yielded a significance value (Sig. 2-tailed) of $0.000 < 0.05$, indicating a significant difference in students' conceptual understanding between the experimental and control groups. Furthermore, the effect size calculated using Cohen's d was 2.132, which falls into the very large effect category. Therefore, the Project Based Learning (PjBL) Open Ended model assisted by E-Worksheet had a very large effect on improving the conceptual understanding of fourth-grade elementary school students.

Keywords: *Project Based Learning (PjBL) Open Ended, E-Worksheet, conceptual understanding, IPAS.*

PANGARUH MODÉL PJBL TIPE OPEN ENDED DIBANTU KU E-WORKSHEET KANA KAMAMPUH PAMAHAMAN KONSEP IPAS MURID SD

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RINGKESAN

Panalungtikan ieu dipuseurkeun ku handapna kamampuh pamahaman konsép IPAS siswa dina prosés diajar anu masih didominasi ku métode konvénsional, ku kituna diperlukeun modél pangajaran anu leuwih inovatif. Tujuan panalungtikan ieu nyaéta pikeun mikanyaho gambaran kagiatan pangajaran, bédana kamampuh pamahaman konsép IPAS siswa anu diajar ngagunakeun modél Project Based Learning (PjBL) tipe Open Ended dibantuan ku E-Worksheet jeung pangajaran konvénsional, ogé pikeun mikanyaho gedéna pangaruh modél éta kana kamampuh pamahaman konsép IPAS siswa. Métode anu digunakeun nyaéta panalungtikan kuantitatif kalayan desain quasi experiment tipe nonequivalent control group design. Subjek panalungtikan diwangun ku 26 siswa kelas ékspérimén jeung 26 siswa kelas kontrol. Analisis data dilakukeun ngagunakeun analisis déskriptif, uji normalitas, uji homogénitas, uji-t, sarta effect size. Hasil panalungtikan némbongkeun yén kagiatan siswa di kelas ékspérimén kaasup kana kategori hadé pisan kalayan perséntase 84%. Hasil uji-t némbongkeun nilai signifikansi (Sig. 2-tailed) $0,000 < 0,05$, hartina aya bédana anu signifikan dina kamampuh pamahaman konsép IPAS antara siswa anu diajar ngagunakeun modél Project Based Learning (PjBL) tipe Open Ended dibantuan ku E-Worksheet jeung siswa anu diajar ngagunakeun pangajaran konvénsional. Salian ti éta, hasil itungan effect size ngagunakeun Cohen's d ngahasilkeun nilai 2,132 anu kaasup kana kategori pangaruh kacida gedéna (very large effect). Ku kituna, modél Project Based Learning (PjBL) tipe Open Ended dibantuan ku E-Worksheet miboga pangaruh anu kacida gedéna dina ngaronjatkeun kamampuh pamahaman konsép IPAS siswa kelas IV sakola dasar.

Kecap Galeuh: *Project Based Learning (PjBL) tipe Open Ended, E-Worksheet, kemampuan pamahaman konsép, IPAS.*