

ABSTRAK

Parwatha, Pande Made. 2024. Pengaruh Model *Project Based Learning* Berbantuan *Liveworksheets* terhadap Kemampuan Berpikir Kreatif dan Hasil Belajar IPA Siswa Kelas X SMK Negeri 1 Abang. Tesis, Teknologi Pendidikan, Program Pascasarjana, Universitas Pendidikan Ganesha.

Tesis ini sudah disetujui dan diperiksa oleh: Pembimbing I: Dr. I Komang Sudarma, S.Pd., M.Pd dan Pembimbing II: Dr. I Wayan Sukra Warpala, S.Pd., M.Sc

Tujuan penelitian ini adalah untuk menganalisis pengaruh model *Project Based Learning* Berbantuan *Liveworksheets* terhadap Kemampuan Berpikir Kreatif dan Hasil Belajar IPA. Untuk mencapai tujuan tersebut dilakukan penelitian kuasi eksperimen di SMK Negeri 1 Abang tahun pelajaran 2023/2024. Populasi penelitian adalah seluruh kelas X di SMK Negeri 1 Abang yang berjumlah 11 kelas. Sampel dipilih dengan menggunakan teknik simple random sampling. Berdasarkan hasil random diperoleh kelas X AKL 1 (25 orang) sebagai kelompok eksperimen dan kelas X AKL 2 (25 orang) sebagai kelompok kontrol. Data yang dikumpulkan dalam penelitian ini adalah data kemampuan berpikir kreatif dan hasil belajar siswa. Data kemampuan berpikir dan data hasil belajar dikumpulkan dengan menggunakan metode tes. Data yang terkumpul selanjutnya dianalisis menggunakan statistik multivariat. Sebelum pengujian hipotesis penelitian terlebih dahulu dilakukan uji asumsi data yang terdiri dari uji normalitas, uji homogenitas, uji linearitas, uji kolinearitas, dan uji homogenitas matriks varians kovarian. Setelah uji asumsi terpenuhi dilakukan uji hipotesis dengan menggunakan statistik multivariat. Berdasarkan hasil pengujian hipotesis dapat disimpulkan bahwa: 1) Terdapat perbedaan kemampuan berpikir kreatif dan hasil belajar secara bersamaan antara siswa yang belajar dengan Model *Project Based Learning Dan Direct Interaction* Berbantuan *liveworksheet*. Hal ini dibuktikan dengan hasil statistik multivariat *Pillai's Trace*, *Wilks' Lambda*, *Hotelling's Trace*, dan *Roy's Largest Root* pada model pembelajaran memiliki nilai signifikansi sebesar 0,001 yang lebih kecil dari taraf signifikansi yang ditetapkan sebesar 0,05; 2) Terdapat perbedaan kemampuan berpikir kreatif antara siswa yang belajar dengan *Project Based Learning Dan Direct Interaction* Berbantuan *Liveworksheets*. Rata-rata kemampuan berpikir kreatif kelompok *Project Based Learning* berbantuan *Liveworksheets* ($M=73,20$; $SD=4,84$) lebih besar dari *Direct Interaction* Berbantuan *Liveworksheets* ($M=69,92$; $SD=4,67$); dan 3) Terdapat perbedaan hasil belajar IPA antara siswa yang belajar dengan *Project Based Learning Dan Direct Interaction* Berbantuan *liveworksheet*. Rata-rata hasil belajar kelompok *Project Based Learning* berbantuan *Liveworksheets* ($M=70,60$; $SD=4,81$) lebih besar dari kelompok *Direct Interaction* Berbantuan *Liveworksheets* ($M=68,84$; $SD=4,60$).

Kata Kunci: *project based learning*, *direct interaction*, *liveworksheets*, Kemampuan Berpikir Kreatif, Hasil Belajar IPA

ABSTRACT

Parwatha, Pande Made. 2024. The Effect of Project Based Learning and Direct Interaction Models Assisted by Liveworksheets on the Creative Thinking Ability and Science Learning Outcomes of Class X Students at SMK Negeri 1 Abang. Thesis, Educational Technology, Postgraduate Program, Ganesha Education University.

This thesis has been approved and examined by: the first advisor: Dr. I Komang Sudarma, S.Pd., M.Pd and the second advisor: Dr.I Wayan Sukra Warpala, S.Pd., M.Sc

The purpose of this study was to analyze the effect of the Project Based Learning Model Assisted by Liveworksheets on Creative Thinking Skills and Science Learning Outcomes. To achieve these objectives, a quasi-experimental study was conducted at SMK Negeri 1 Abang in the 2023/2024 academic year. The population of the study was all 11 classes of class X at SMK Negeri 1 Abang. The sample was selected using a simple random sampling technique. Based on the random results, class X AKL 1 (25 people) was obtained as the experimental group and class X AKL 2 (25 people) as the control group. The data collected in this study were data on creative thinking skills and student learning outcomes. Thinking ability data and learning outcome data were collected using a test method. The collected data were then analyzed using multivariate statistics. Before testing the research hypothesis, a data assumption test was first carried out consisting of a normality test, homogeneity test, linearity test, collinearity test, and homogeneity test of the variance covariance matrix. After the assumption test was fulfilled, a hypothesis test was carried out using multivariate statistics. Based on the results of the hypothesis testing, it can be concluded that: 1) There is a difference in creative thinking ability and learning outcomes simultaneously between students who study with the Project Based Learning Model and Direct Interaction Assisted by Liveworksheets. This is evidenced by the results of the multivariate statistics Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root on the learning model having a significance value of 0.001 which is smaller than the significance level set at 0.05; 2) There is a difference in creative thinking ability between students who study with Project Based Learning and Direct Interaction Assisted by Liveworksheets. The average creative thinking ability of the Project Based Learning group assisted by Liveworksheets ($M = 73.20$; $SD = 4.84$) is greater than Direct Interaction Assisted by Liveworksheets ($M = 69.92$; $SD = 4.67$); and 3) There is a difference in science learning outcomes between students who study with Project Based Learning and Direct Interaction Assisted by Liveworksheets. The average learning outcomes of the Project Based Learning group assisted by Liveworksheets ($M=70.60$; $SD=4.81$) were greater than those of the Direct Interaction group assisted by Liveworksheets ($M=68.84$; $SD=4.60$).

Keywords: project-based learning, direct interaction, live worksheets, creative thinking skills, science learning outcomes