

Dewi Kusuma Wardani. 2026. *Pengaruh Model Inquiry Training Berbantuan Cisco Terhadap Hasil Belajar Siswa pada Materi Troubleshooting Jaringan VLAN*. Skripsi, Program Studi Pendidikan Informatika, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Trunodjoyo Madura. Pembimbing: Muchamad Arif, S.Pd., M.Pd.

ABSTRAK

Penelitian ini dilatarbelakangi oleh rendahnya kemampuan siswa dalam menganalisis dan menyelesaikan permasalahan pada materi *Troubleshooting Jaringan VLAN* serta masih adanya hasil belajar siswa yang berada di bawah Kriteria Ketuntasan Minimal (KKM). Penelitian ini bertujuan untuk mengetahui pengaruh model pembelajaran *Inquiry Training* berbantuan *Cisco Packet Tracer* terhadap hasil belajar siswa, mengetahui keterlaksanaan pembelajaran, dan mengetahui respons siswa terhadap pembelajaran yang diterapkan.

Penelitian ini menggunakan metode kuasi eksperimen (*quasi experimental design*) dengan desain *Nonequivalent Control Group Design*. Populasi penelitian adalah seluruh siswa kelas XI TKJ SMKN 1 Kamal yang berjumlah 41 siswa. Sampel penelitian terdiri atas 21 siswa kelas XI TKJ 1 sebagai kelas eksperimen dan 20 siswa kelas XI TKJ 2 sebagai kelas kontrol. Teknik pengumpulan data menggunakan tes hasil belajar, lembar observasi aktivitas guru dan siswa, serta angket respons siswa. Analisis data dilakukan melalui uji normalitas, uji homogenitas, uji linieritas, uji signifikansi (uji-t), dan uji N-Gain.

Hasil penelitian menunjukkan bahwa keterlaksanaan pembelajaran menggunakan model *Inquiry Training* berbantuan *Cisco Packet Tracer* berada pada kategori sangat baik, dengan rata-rata aktivitas guru sebesar 81,2% dan aktivitas siswa sebesar 81,87%. Respons siswa terhadap pembelajaran memperoleh persentase sebesar 85,71% dengan kategori kuat. Hasil uji signifikansi menunjukkan bahwa nilai t_{hitung} sebesar 2,961 lebih besar daripada t_{tabel} sebesar 2,093 pada taraf signifikansi 5%, sehingga H_0 ditolak dan H_a diterima. Selain itu, rata-rata nilai *pretest* siswa meningkat dari 38,33 menjadi 80,24 pada *posttest*. Hasil uji N-Gain memperoleh rata-rata sebesar 0,698 yang termasuk kategori cukup efektif. Dengan demikian, dapat disimpulkan bahwa model pembelajaran *Inquiry Training* berbantuan *Cisco Packet Tracer* berpengaruh signifikan terhadap hasil belajar siswa pada materi *Troubleshooting Jaringan VLAN* di SMKN 1 Kamal.

Kata kunci: *Inquiry Training*, *Cisco Packet Tracer*, hasil belajar, troubleshooting jaringan VLAN, jaringan komputer.

Dewi Kusuma Wardani. 2026. The Effect of the Inquiry Training Model Assisted by Cisco on Students' Learning Outcomes in VLAN Network Troubleshooting Material. Undergraduate Thesis, Informatics Education Study Program, Faculty of Teacher Training and Education, Universitas Trunodjoyo Madura. Advisor: Muchamad Arif, S.Pd., M.Pd.

ABSTRACT

Abstract: This research was motivated by students' low ability to analyze and solve problems related to VLAN Network Troubleshooting and the fact that many students' learning outcomes were still below the Minimum Mastery Criterion (MMC). The study aimed to determine the effect of the Inquiry Training learning model assisted by Cisco Packet Tracer on students' learning outcomes, to analyze the implementation of the learning process, and to identify students' responses to the applied learning model.

This study employed a quasi-experimental method using the Nonequivalent Control Group Design. The population consisted of all eleventh-grade students of the Computer and Network Engineering program at SMKN 1 Kamal, totaling 41 students. The sample included 21 students from class XI TKJ 1 as the experimental group and 20 students from class XI TKJ 2 as the control group. Data were collected through learning achievement tests, teacher and student activity observation sheets, and student response questionnaires. The data were analyzed using normality, homogeneity, linearity, significance (t-test), and N-Gain tests.

The results showed that the implementation of the Inquiry Training model assisted by Cisco Packet Tracer was categorized as very good, with an average teacher activity score of 81.2% and student activity score of 81.87%. Students' responses to the learning process reached 85.73%, which was categorized as strong. The significance test revealed that the calculated t-value (2.961) was higher than the t-table value (2.093) at the 5% significance level, indicating that H_0 was rejected and H_a was accepted. Furthermore, the average pretest score increased from 38.33 to 80.24 on the posttest. The N-Gain analysis yielded an average score of 0.698, which falls into the moderately effective category. Therefore, it can be concluded that the Inquiry Training learning model assisted by Cisco Packet Tracer has a significant effect on students' learning outcomes in VLAN Network Troubleshooting material at SMKN 1 Kamal.

Keywords: *Inquiry Training, Cisco Packet Tracer, learning outcomes, VLAN network troubleshooting, computer networking.*