

**PENERAPAN IDEAL *PROBLEM SOLVING* BERBASIS *COMPUTER*
SUPPORTED FOR COLLABORATIVE LEARNING UNTUK
MENINGKATKAN KOGNITIF SISWA SMK**

SKRIPSI

Diajukan untuk Memenuhi sebagian dari syarat untuk memperoleh gelar Sarjana
Program Studi Pendidikan Ilmu Komputer



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**PROGRAM STUDI PENDIDIKAN ILMU KOMPUTER
FAKULTAS PENDIDIKAN MATEMATIKA DAN ILMU PENGETAHUAN
ALAM
UNIVERSITAS PENDIDIKAN INDONESIA
2023**

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Sebuah skripsi diajukan untuk memenuhi sebagian syarat memperoleh gelar
Sarjana Pendidikan pada Program Studi Pendidikan Ilmu Komputer

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ABSTRAK

Sejalan dengan tujuan dari pendidikan abad 21 yang terkenal dengan keterampilan 4C (*Communication, Collaboration, Critical Thinking And Problem Solving, dan Creativity And Innovation*), Siswa dituntut untuk memiliki keterampilan dalam memecahkan masalah dan dapat berkolaborasi dalam proses pembelajaran. Berdasarkan hasil studi lapangan di SMK Pasundan 2 Bandung keterampilan abad-21 yang sulit diterapkan yaitu keterampilan memecahkan masalah serta proses kolaborasi dalam pembelajaran yang menyebabkan hasil belajar siswa menjadi kurang optimal dalam mencapai ketuntasan belajar. Penelitian ini bertujuan untuk menerapkan model pembelajaran IDEAL *problem solving* berbasis *Computer Supported for Collaborative Learning (CSCL)* dengan menggunakan *learning management system (LMS)* sebagai media pembelajarannya untuk meningkatkan hasil belajar pada domain kognitif dengan materi *subnetting. Smart Learning Environment Establishment Guideline (SLEEG)* digunakan sebagai metodologi penelitian dan desain penelitian menggunakan *one group pretest-posttest*. Dari hasil penelitian yang telah dilakukan, terdapat kenaikan nilai yang cukup signifikan dengan nilai rerata awal 33,95 menjadi rerata 77,11. Berdasarkan data tersebut dapat disimpulkan bahwa kemampuan kognitif siswa mengalami peningkatan rerata sebesar 43,16. Siswa memberikan respon tanggapan terhadap media pembelajaran yang digunakan dengan nilai persentase sebesar 85,6% termasuk dalam kategori “Sangat Baik”. Dapat disimpulkan bahwa penerapan model IDEAL *problem solving* berbasis berbasis CSCL dapat meningkatkan kognitif siswa.

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Kata Kunci: IDEAL model, *Computer Supported for Collaborative Learning*, *subnetting*, *Smart Learning Environment Establishment Guideline*.

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The implementation of IDEAL Problem Solving based on Computer Supported for Collaborative Learning to enhance students' cognitive abilities.

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ABSTRACT

In line with the goals of 21st-century education, which is well-known for the 4C skills (Communication, Collaboration, Critical Thinking and Problem Solving, and Creativity and Innovation), students are required to have skills in problem-solving and collaboration in the learning process. Based on a field study conducted at Pasundan 2 Vocational High School in Bandung, the challenging 21st-century skills to be implemented are problem-solving skills and collaborative processes in learning, which lead to suboptimal student learning outcomes in achieving learning mastery. This study aims to apply the IDEAL problem-solving learning model based on Computer Supported for Collaborative Learning (CSCL), using a learning management system (LMS) as the learning media, to improve learning outcomes in the cognitive domain with subnetting as the subject matter. The Smart Learning Environment Establishment Guideline (SLEEG) is used as the research methodology, and the research design utilizes the one-group pretest-posttest. From the conducted research, there was a significant increase in scores, with an initial average score of 33.95 rising to an average of 77.11. Based on the data, it can be concluded that students' cognitive abilities experienced an average increase of 43.16. Students responded positively to the learning media used, with a percentage rating of 85.6% falling into the "Very Good" category. It can be concluded that the implementation of the IDEAL problem-solving model based on C can enhance students' cognitive abilities.

Keywords: *IDEAL problem solving, Computer Support for Collaborative Learning, Cognitive Abilities, Smart Learning Environment Establishment Guideline.*

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DAFTAR ISI

LEMBAR PERNYATAAN	2
KATA PENGANTAR	3
UCAPAN TERIMA KASIH.....	4
ABSTRAK	6
DAFTAR ISI.....	9
DAFTAR GAMBAR	12
DAFTAR TABEL.....	14
DAFTAR LAMPIRAN.....	14
BAB I PENDAHULUAN.....	16
1.1 Latar Belakang	17
1.2 Rumusan Masalah	22
1.3 Tujuan Penelitian.....	22
1.4 Batasan Masalah.....	23
1.5 Manfaat Penelitian.....	23
1.6 Struktur Organisasi Skripsi	24
BAB II KAJIAN PUSTAKA	26
2.1 Peta Literatur	26
2.2 Model IDEAL <i>Problem Solving</i>	27
2.3 Pembelajaran Kolaboratif.....	30
2.3.1 Definisi <i>Computer Support of Collaborative Learning</i>	32
2.3.2 Teknologi pada <i>Computer Support of Collaborative Learning</i>	33
2.3.3 Model Pedagogis pada <i>Computer Support of Collaborative Learning</i>	34
2.4 Taksonomi Bloom Ranah Kognitif	34
2.4.1 Kemampuan Berpikir tingkat tinggi	39

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PENERAPAN IDEAL *PROBLEM SOLVING* BERBASIS *COMPUTER SUPPORTED FOR COLLABORATIVE LEARNING* UNTUK MENINGKATKAN KOGNITIF SISWA SMK

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2.4.2 Kemampuan tingkat tinggi sebagai <i>problem solving</i>	39
2.5 <i>Smart Learning Environment Establishment Guideline</i> (SLEEG).....	40
2.6 <i>Technology Acceptance Model</i> (TAM)	42
2.7 <i>State of the Art</i>	43
BAB III METODOLOGI PENELITIAN.....	46
3.1 Metode Penelitian.....	46
3.2 Desain Penelitian	46
3.3 Prosedur Penelitian.....	47
3.3.1 Tahap <i>Analyze</i>	48
3.3.2 Tahap <i>Design</i>	50
3.3.3 Tahap <i>Development</i>	51
3.3.4 Tahap <i>Impementation</i>	52
3.3.5 Tahap <i>Evaluate</i>	53
3.4 Populasi dan Sampel	54
3.5 Instrumen Penelitian.....	55
3.5.1 Instrumen Studi Lapangan	55
3.5.2 Instrumen Validasi Ahli Media dan Ahli Materi	55
3.5.3 Instrumen Soal	57
3.5.4 Instrumen Penilaian Terhadap Model Pembelajaran <i>IDEAL Problem Solving</i>	57
3.5.5 Instrumen Tanggapan Siswa.....	58
3.6 Teknik Analisis Data	60
3.6.1 Analisis Data Instrumen Soal	60
3.6.2 Analisis Data Instrumen Validasi Ahli	63
3.6.3 Analisis Data Instrumen Tes Hasil Belajar Siswa	64
3.6.4 Analisis Data Instrumen Tanggapan Siswa	66

BAB IV HASIL PENELITIAN DAN PEMBAHASAN.....	68
4.1 Tahap <i>Analyze</i>	68
4.2 Tahap <i>Design</i>	72
4.2.1 Perancangan Pembelajaran	73
4.2.2 Perancangan Materi	73
4.2.3 Perancangan Instrumen Soal.....	76
4.3.4 Perancangan Pengembangan Aplikasi.....	83
4.3 Tahap <i>Development</i>	96
4.4 Tahap <i>Implementation</i>	109
4.5 Tahap <i>Evaluate</i>	111
BAB V KESIMPULAN DAN SARAN.....	121
5.1 Kesimpulan.....	121
5.2 Saran	123
DAFTAR PUSTAKA	124
LAMPIRAN.....	129

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