

**ANALISIS KOMPETENSI SMK TEKNIK PEMESINAN DALAM
MENGHADAPI REVOLUSI INDUSTRI 4.0**

Tesis

**Sebagai bagian dari persyaratan untuk mendapatkan gelar
Magister Pendidikan Program Studi Pendidikan Teknologi dan Kejuruan**



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Sebuah Tesis yang Diajukan untuk Memenuhi Salah Satu Syarat
Memperoleh Gelar Magister Pendidikan pada Program Studi
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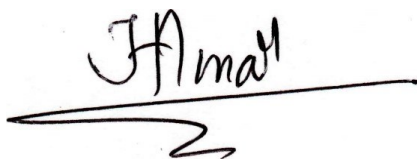
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Analisis Kompetensi SMK Teknik Pemesinan dalam Menghadapi Revolusi Industri 4.0

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Abstrak

Indonesia akan mendorong 10 prioritas nasional dalam inisiatif “*Making Indonesia 4.0*”. Salah satunya adalah peningkatan kualitas Sumber Daya Manusia, melalui penyelarasan kurikulum pendidikan nasional dengan kebutuhan industri di masa depan. Peningkatan kualitas SDM perlu dilakukan guna menghadapi dampak penerapan teknologi baru dalam implementasi industri 4.0, teknologi jaringan untuk sistem produksi yang sangat otomatis. Permasalahan saat ini ada kesenjangan kompetensi yang dipelajari di sekolah dengan kompetensi yang diinginkan dunia kerja. Kesenjangan pendidikan membuat pengangguran meningkat. Menurut data BPS pada bulan Februari 2021 Tingkat Pengangguran Terbuka jika dilihat dari tingkat pendidikan, TPT Sekolah Menengah Kejuruan (SMK) masih yang paling tinggi diantara tingkat pendidikan lain, yaitu sebesar 11,13% persen. Tujuan dasar dari penelitian ini adalah mengidentifikasi kompetensi yang diperlukan, oleh siswa SMK teknik pemesinan dalam menghadapi revolusi industri 4.0. Lulusan SMK teknik pemesinan dalam menghadapi revolusi industri 4.0 perlu menguasai kompetensi klasik pemesinan dan kompetensi digitalisasi, agar mampu bersaing di era industri 4.0. Penelitian ini menggunakan metode kualitatif dengan dua teknik pengumpulan data yaitu pertama adalah analisis konten dari 27 artikel yang terbit di jurnal internasional, yang memuat tentang perkembangan teknologi pemesinan di era industri 4.0 dan kompetensi yang diperlukan guna menjalankan teknologi tersebut. Kedua adalah hasil analisis deskriptif dari pendapat 44 responden, yang diperoleh dengan instrumen kuisioner terbuka, tentang lingkup pekerjaan lulusan SMK teknik pemesinan, kinerja karyawan lulusan SMK teknik pemesinan, pertimbangan merekrut lulusan SMK teknik pemesinan serta keterampilan, pengetahuan dan sikap yang harus dimiliki agar dapat bersaing di era industri 4.0. Teridentifikasi 36 kompetensi SMK teknik pemesinan dalam menghadapi revolusi industri 4.0, terdiri dari 27 kompetensi teknis, satu kompetensi metodologis, lima kompetensi sosial dan tiga kompetensi pribadi yang perlu dimiliki lulusan SMK teknik pemesinan, untuk menunjang pekerjaannya agar siap menjadi Operator 4.0.

Kata kunci: Analisis kompetensi, Industri 4.0, SMK teknik pemesinan

*Competency Analysis of Mechanical Engineering Vocational Schools in
Facing the Industrial Revolution 4.0*

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Abstract

Indonesia will push for 10 national priorities in the “Making Indonesia 4.0” initiative. One of them is improving the quality of Human Resources, through aligning the national education curriculum with the needs of the industry in the future. Improving the quality of human resources needs to be done to deal with the impact of implementing new technologies in the implementation of industry 4.0, network technology for highly automated production systems. The current problem is that there is a mismatch of competencies learned in school with the competencies desired by the world of work. The education gap makes unemployment increase. According to BPS data for February 2021, the Open Unemployment Rate when viewed from the level of education, the TPT for Vocational High Schools (VHS) is still the highest among other education levels, which is 11.13% percent. The basic objective of this research is to identify the competencies needed by mechanical engineering vocational students in facing the industrial revolution 4.0. Mechanical engineering Vocational High School graduates in facing the industrial revolution 4.0 need to master classical machining competencies and digitalization competencies, in order to be able to compete in the industrial era 4.0. This study uses a qualitative method with two data collection techniques, the first is content analysis of 27 articles published in international journals, which contain the development of machining technology in the industrial era 4.0 and the competencies needed to run the technology. The second is the result of a descriptive analysis of the opinions of 44 respondents, which was obtained using an open questionnaire, regarding the scope of work for Mechanical Engineering Vocational High School graduates, employee performance of Mechanical Engineering Vocational High School graduates, considerations for recruiting Mechanical Engineering Vocational High School graduates as well as skills, knowledge and attitudes that must be possessed in order to compete, in the industrial era 4.0. Identified 36 competencies of Mechanical Engineering Vocational Schools in facing the Industrial Revolution 4.0, consisting of 27 technical competencies, one methodological competency, five social competencies and three personal competencies that mechanical engineering graduates need to have, to support their work so that they are ready to become Operator 4.0.

Keywords: Competency analysis, Industry 4.0, Mechanical engineering vocational school

Daftar Isi

Kata Pengantar	i
Abstrak	iii
Daftar Isi	v
Daftar Tabel	vii
Daftar Gambar	viii
Daftar Lampiran.....	ix
BAB I PENDAHULUAN	1
A. Latar Belakang Masalah	1
B. Rumusan Masalah	7
C. Tujuan Penelitian	8
D. Manfaat Penelitian	8
BAB II KAJIAN PUSTAKA	9
A. Era Industri 4.0.....	9
B. Kompetensi SMK Teknik Pemesinan	11
C. Kompetensi Industri 4.0	14
D. Kurikulum 2013 SMK Teknik Pemesinan.....	17
E. Bidang Pekerjaan Lulusan.....	20
BAB III METODE PENELITIAN	25
A. Paradigma Penelitian	25
B. Desain Penelitian.....	26
C. Prosedur Penelitian.....	27
D. Subjek Penelitian	29
E. Instrumen Penelitian.....	30
F. Teknik Pengumpulan dan Analisis Data.....	30
BAB IV TEMUAN DAN PEMBAHASAN	35
A. Temuan Penelitian	35
B. Pembahasan.....	42

BAB V KESIMPULAN DAN REKOMENDASI	64
A. Kesimpulan	64
B. Rekomendasi	66
Daftar Pustaka	68
Lampiran	75

Daftar Tabel

Tabel 2.1. Rincian unit kompetensi	13
Tabel 2.2. Struktur Kurikulum SMK 2013 Teknik Pemesinan.....	18
Tabel 2.3. Area pekerjaan di industri mesin dan pengolahan	20
Tabel 3.1. <i>Inclusion</i> dan <i>Exclusion Criteria</i>	32
Tabel 4.1. Perolehan artikel	35
Tabel 4.2. Jenis teknologi Industri 4.0	36
Tabel 4.3. Karakteristik responden	38
Tabel 4.4. Ruang lingkup pekerjaan lulusan SMK teknik pemesinan	39
Tabel 4.5. Kompetensi Industri 4.0.....	41
Tabel 4.6. Perbandingan kompetensi era industri 4.0 dan kurikulum 2013	57

Daftar Gambar

Gambar 1.1. Miss match pendidikan dan pekerjaan (Rahadian, 2019)	3
Gambar 1.2. Matrik kurikulum untuk revolusi industri (Ellahi et al., 2019)	5
Gambar 2.1. Komponen Industri 4.0 (Sharma et al., 2021)	9
Gambar 2.2. Capaian pembelajaran (Dikti, 2011)	12
Gambar 2.3. Model kompetensi Industri 4.0	14
Gambar 2.4. Kerangka Kualifikasi Nasional Indonesia.....	22
Gambar 3.1. Paradigma penelitian.....	25
Gambar 3.2. Desain penelitian.....	26
Gambar 3.3. Prosedur penelitian.....	27
Gambar 3.4. Langkah konten analisis	31
Gambar 4.1. Perancangan dan pengembangan produk	36
Gambar 4.2. Proses manufaktur.....	37
Gambar 4.3. Perawatan	37
Gambar 4.4. Delapan aspek keterampilan (BNSP, 2020).....	48
Gambar 4.5. Manajemen operasi pemesinan (Ritou et al., 2019)	53

Daftar Lampiran

Lampiran 1. Instrumen Kuisisioner	75
Lampiran 2. Hasil Kuisisioner	77
Lampiran 3. Kompetensi Inti dan Kompetensi Dasar	90

Daftar Pustaka

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