MODEL KONSEPTUAL REDESAIN KURIKULUM SMK YANG MERESPON TUNTUTAN INDUSTRI 4.0

TESIS

diajukan untuk memenuhi sebagian syarat untuk memperoleh gelar Magister
Pendidikan Teknologi dan Kejuruan

Oleh

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Sebuah Tesis yang diajukan untuk memenuhi salah satu syarat memperoleh gelar Magister Pendidikan (M.Pd.) pada Program Studi Pendidikan Teknologi dan Kejuruan

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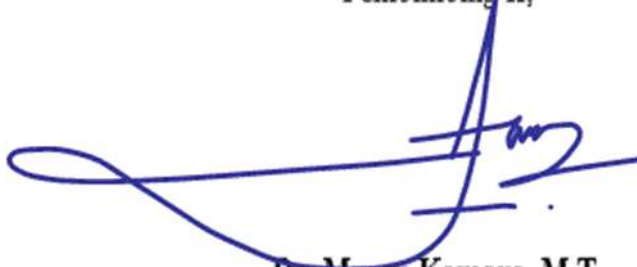MODEL KONSEPTUAL REDESAIN KURIKULUM SMK YANG MERESPON
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Model Konseptual Redesain Kurikulum SMK yang Merespon Tuntutan Industri 4.0

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ABTSRAK

Teknologi otomotif di era revolusi industri 4.0 terus berkembang dengan pesat. Perkembangan teknologi ini telah mempengaruhi terhadap pasar tenaga kerja dan keterampilan yang dibutuhkan oleh tenaga kerja. Pendidikan vokasi, khususnya Sekolah Menengah Kejuruan (SMK) sangat berperan penting dalam mewujudkan lulusannya sebagai calon tenaga kerja yang terampil dan mampu merespon tuntutan industri 4.0 pada sektor otomotif. Tujuan penelitian ini yaitu untuk memberikan gambaran tren perkembangan teknologi otomotif roda empat, tuntutan kompetensi atau skill, dan model konseptual redesain kurikulum SMK TKRO yang merespon industri 4.0 yang difokuskan pada isi kompetensi. Metode penelitian ini menggunakan pendekatan kualitatif, dengan teknik pengambilan data melalui *literature review* dari berbagai artikel ilmiah yang terbit pada tahun 2017-2021, dan interview secara virtual dengan lima orang informan dari berbagai industri otomotif. Data yang didapat dari hasil interview ditranskrif secara manual dan membuat coding dengan menggunakan *Software NVivo 12 Plus*. Hasil penelitian menunjukan bahwa teknologi otomotif kendaraan roda empat saat ini telah menerapkan teknologi industri 4.0 untuk meningkatkan kenyamanan, keamanan, dan lebih ramah lingkungan, dengan munculnya teknologi *Advance Drive Assistance System* (ADAS), hybrid, *electric*, dan *autonomus vehicle*. Dalam merespon perkembangan teknologi tersebut, calon teknisi lulusan SMK perlu memiliki kompetensi *technical skills* sesuai komptensi keahliannya, kemampuan ICT, dan kemampuan bahasa inggris. Selain *technical skills*, lulusan SMK TKRO perlu memilki *soft skill*, yang meliputi 3 kompetensi utama yaitu kompetensi metodologis, sosial, dan kepribadian. Tuntutan tersebut telah disusun dalam bentuk *mapping* dan matrik kompetensi sebagai model konseptual redesain kurikulum yang diharapkan dapat memberikan rekomendasi terhadap pengembangan kurikulum di masa yang akan datang.

Kata Kunci: *Pendidikan vokasi, Technical Skills, Soft Skill, Teknologi Otomotif,* Industri 4.0, Kurikulum Teknik Otomotif.

Conceptual Model of the Redesign Vocational High School Curriculum that Responds to the Demands of Industry 4.0

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ABSTRACT

Automotive technology in the era of the industrial revolution 4.0 continues to grow rapidly. The development of this technology has affected the labor market and the skills needed by the workforce. Vocational education, especially Vocational High Schools (SMK) plays an important role in realizing graduates as candidates for skilled workers who are able to respond to the demands of industry 4.0 in the automotive sector. The purpose of this study is to provide an overview of the trends in the development of four-wheeled automotive technology, the demands of competence or skills, and a conceptual model for the redesign of the TKRO Vocational High School curriculum that responds to industry 4.0 which is focused on the content of competencies. This research method uses a qualitative approach, with data collection techniques through literature reviews from various scientific articles published in 2017-2021, and virtual interviews with five informants from various automotive industries. The data obtained from the interviews were transcribed manually and made coding using the NVivo 12 Plus Software. The results of the study show that the current four-wheeled vehicle automotive technology has implemented industrial technology 4.0 to improve comfort, safety, and be more environmentally friendly, with the advent of Advance Drive Assistance System (ADAS), hybrid, electric, and autonomous vehicle technology. In responding to these technological developments, prospective technicians who graduate from Vocational Schools need to have technical skills competencies according to their expertise, ICT skills, and English language skills. In addition to technical skills, SMK TKRO graduates need to have soft skills, which include 3 main competencies, namely methodological, social, and personality competencies. These demands have been compiled in the form of mapping and competency matrices as a conceptual model for curriculum redesign which is expected to provide recommendations for curriculum development in the future.

Keywords: Vocational education, Technical Skills, Soft Skills, Automotive Technology, Industry 4.0, Automotive Engineering Curriculum.

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BAB IV TEMUAN DAN PEMBAHASAN

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