PENENTUAN TINGKAT PRIORITAS KOMPETENSI DIGITAL GURU SEKOLAH MENENGAH KEJURUAN MENGGUNAKAN *FUZZY ANALYTICAL HIERARCHY PROCESS*

TESIS

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

oleh:

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S.Pd UPI Bandung, 2018

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

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ABSTRAK

Kompetensi digital merupakan kemampuan yang harus dimiliki guru agar dapat mudah beradaptasi dengan era transformasi digital saat ini. Studi ini mencoba mengetahui persepsi para guru SMK di Indonesia terkait dengan kompetensi informasi, komunikasi, kreasi konten, keamanan digital, dan pemecahan masalah. Metode pemecahan masalah multi kriteria *Analytical Hierarcy Process (AHP)* digunakan untuk membuat peringkat prioritas kompetensi digital yang paling dikuasi oleh para responden, kemudian kinerjanya di validasi oleh metode berbasis kecerdasan buatan Fuzzy AHP. Dua tool analysis Fuzzy AHP yaitu *Algoritma Chang's Extent* dan *Geometric Mean* digunakan untuk memvalidasi hasil perangkingan bobot prioritas metode AHP. Jajak pendapat dilakukan terhadap 392 responden, dengan instrument penelitian mengadopsi platform pengukuran kompetensi digital dari DigComp. Hasil penelitian memberikan bukti bahwa penggunaan metode klasik AHP telah tervalidasi oleh metode Fuzzy AHP sebagai metode multikriteria penentuan prioritas kompetensi digital guru SMK yang sangat handal. Kedua metode memberikan hasil yang hampir identik dalam menentukan urutan prioritas kompetensi digital guru SMK. Hasil survey memberikan bukti bahwa guru SMK di Indonesia harus segera mengembangkan keterampilannya dalam hal kreasi konten digital dan keamanan digital. Para guru, organisasi profesi guru dan para pengambil keputusan diharapkan dapat menggunakan temuan penelitian ini sebagai referensi dalam melaksanakan pelatihan-pelatihan peningkatan kompetensi digital guru SMK.

Kata Kunci: *Analytical Hierarcy Process; DigComp; Kompetensi digital; Guru SMK; tingkat prioritas; Fuzzy AHP*.

ABSTRACT

Digital competence is an ability that teachers must have in order to easily adapt to the current era of digital transformation. This study tries to find out the perceptions of vocational school teachers in Indonesia regarding the competence of information, communication, content creation, digital security, and problem solving. The multi-criteria Analytical Hierarchy Process (AHP) problem-solving method is used to rank the priority digital competencies that are most mastered by the respondents, then their performance is validated by the Fuzzy AHP artificial intelligence-based method. Two Fuzzy AHP analysis tools, namely Chang's Extent Algorithm and Geometric Mean are used to validate the results of the priority weight ranking of the AHP method. The poll was conducted on 392 respondents, with the research instrument adopting the digital competency measurement platform from DigComp. The results of the study provide evidence that the use of the classical AHP method has been validated by the Fuzzy AHP method as a very reliable multi-criteria method for determining the digital competence of SMK teachers. The two methods provide almost identical results in determining the priority order of digital competence for vocational teachers. The survey results provide evidence that SMK teachers in Indonesia must immediately develop their skills in terms of digital content creation and digital security. Teachers, teacher professional organizations and decision makers are expected to be able to use the findings of this study as a reference in implementing trainings to improve the digital competence of SMK teachers.

Keywords: *Analytical Hierarcy Process; DigComp; Digital Competency; Vocational Teacher; priority level' Fuzzy AHP.*

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