

**KEMATANGAN DIGITAL DI SEKOLAH MENENGAH
KEJURUAN (SMK) DAN INDUSTRI BATIK**



DISERTASI

Diajukan untuk memenuhi sebagian syarat untuk memperoleh gelar
Doktor Pendidikan Teknologi dan Kejuruan

Oleh:

Edhy Sri Yarmanto

NIM: 2113166

**PROGRAM STUDI
PENDIDIKAN TEKNOLOGI DAN KEJURUAN
SEKOLAH PASCASARJANA
UNIVERSITAS PENDIDIKAN INDONESIA
2025**

KEMATANGAN DIGITAL DI SEKOLAH MENENGAH KEJURUAN (SMK) DAN INDUSTRI BATIK

Oleh
Edhy Sri Yarmanto

Ir. Institut Teknologi Bandung, 1984
M.T. Institut Teknologi Bandung, 1995

Sebuah disertasi yang diajukan untuk memenuhi salah satu syarat memperoleh gelar Doktor Pendidikan Teknologi dan Kejuruan pada Program Studi Pendidikan Teknologi dan Kejuruan Sekolah Pascasarjana

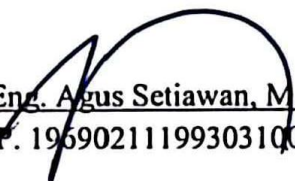
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KEJURUAN (SMK) DAN INDUSTRI BATIK

disetujui dan disahkan oleh panitia disertasi

Promotor


Dr-Eng. Agus Setiawan, M.Si.
NIP. 196902111993031001

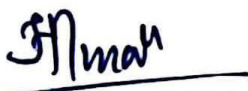
Ko-promotor


Iwan Kustiawan, S.Pd., M.T., Ph.D.
NIP. 19770908203121002

Penguji Dalam


Dr. Sudjani, M.Pd.
NIP. 196306281988031002

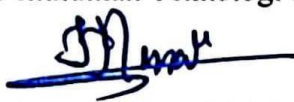
Penguji Dalam


Prof. Dr. Isma Widiaty, M.Pd.
NIP. 197106072001122001

Penguji Luar


Dr. Deny Tri Ardianto, S.Sn., Dipl. Art.
NIP. 197905212002121002

Mengetahui,
Ketua Program Studi Pendidikan Teknologi dan Kejuruan


Prof. Dr. Isma Widiaty, M.Pd.
NIP. 197106072001122001

PERNYATAAN BEBAS PLAGIARISME

Saya yang bertanda tangan di bawah ini:

Nama : Edhy Sri Yarmanto

NIM : 2113166

Program Studi : Pendidikan Teknologi dan Kejuruan

Judul Karya : Kematangan Digital di Sekolah Menengah Kejuruan (SMK) dan Industri Batik

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UCAPAN TERIMA KASIH

Segala puji dan syukur penulis panjatkan kepada Allah SWT karena berkat rahmat dan karunia-Nya penulis dapat menyelesaikan disertasi dengan judul “Kematangan Digital di Sekolah Menengah Kejuruan (SMK) dan Industri Batik” sebagai salah satu persyaratan akademik untuk memperoleh gelar Doktor Pendidikan Teknologi dan Kejuruan.

Selama proses penulisan disertasi ini, begitu banyak bantuan dan dukungan yang diterima penulis dari berbagai pihak. Untuk itu, dalam kesempatan ini penulis mengucapkan terima kasih yang sebesar-besarnya kepada:

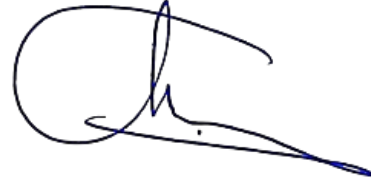
1. Dr-Eng. Agus Setiawan, M.Si selaku promotor yang telah memberikan arahan, motivasi dan bimbingan dalam proses penelitian dan penulisan disertasi ini.
2. Iwan Kustiawan, S.Pd.,M.T.,Ph.D selaku kopromotor yang telah memberikan bimbingan dan masukan demi kesempurnaan disertasi ini.
3. Prof. Dr. Isma Widiaty, M.Pd selaku Ketua Program Studi PTK
4. Istriku Dipl. Ing. Cynthia dan kedua puteri tercinta Jenny dan Ariane, terima kasih atas doa dan dukungannya yang tiada henti.
5. Adik adik dan saudara, atas doa dan dukungannya.
6. Bapak – Ibu Dosen Program Pendidikan Teknologi dan Kejuruan Sekolah Pasca Sarjana Universitas Pendidikan Indonesia (UPI) yang telah memberikan spirit dan dorongan agar disertasi ini segera terselesaikan.
7. Teman-teman seperjuangan yang senantiasa memberikan semangat, ide dan dukungan positif.

Juga semua pihak yang tidak dapat penulis sebutkan satu persatu.

Penulis menyadari sepenuhnya bahwa disertasi ini masih belum sempurna. Oleh karena itu, dengan segala kerendahan hati, penulis menyampaikan permohonan maaf apabila terdapat kekurangan atau kesalahan dalam penulisan disertasi ini. Kritik dan saran yang membangun sangat diharapkan untuk perbaikan di masa mendatang.

Akhir kata, penulis berharap agar disertasi ini dapat memberikan kontribusi positif dan menjadi bahan rujukan yang bermanfaat bagi pembaca dan penelitian selanjutnya.

Bandung, Januari 2025

A handwritten signature in blue ink, consisting of a large, stylized 'E' followed by a series of loops and a long horizontal stroke extending to the right.

Ir. Edhy Sri Yarmanto, M.T.

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ABSTRAK

KEMATANGAN DIGITAL DI SEKOLAH MENENGAH KEJURUAN (SMK) DAN INDUSTRI BATIK

Penelitian kematangan digital di SMK dan industri batik dilihat dari cakupan institusi/organisasi selama ini belum banyak dikembangkan atau dibuat, khususnya industri batik yang memiliki karakteristik tersendiri (hanya dimiliki Indonesia). Tujuan penelitian ini adalah untuk mengetahui dimensi kematangan digital, tingkat kematangan digital, mengembangkan instrumen pengukuran kematangan digital, dan melakukan pengukuran kematangan digital di SMK dan industri batik. Pendekatan penelitian yang dipakai adalah metode gabungan (*mixed-methods*). Telah berhasil dikembangkan dimensi-dimensi dan instrumen kematangan digital untuk SMK dan industri batik. Instrumen telah memenuhi uji validitas dan reliabilitas dan dapat dipakai untuk penelitian kuantitatif pengukuran kematangan digital. Dimensi kematangan digital meliputi: manajemen dan organisasi, orang dan budaya, produk dan layanan, teknologi, dan operasi organisasi. Sedangkan tingkat kematangan terdiri dari 5 tingkat: belum siap, kesiapan awal, kesiapan menengah, kesiapan matang, dan sudah menerapkan. Hasil pengukuran menunjukkan SMK yang menjadi subyek penelitian berada pada kesiapan matang. Sedangkan industri batik berada pada kesiapan menengah. Sebagai tindak lanjut dari penelitian kuantitatif dilakukan penelitian kualitatif untuk mendapatkan tanggapan, konfirmasi dan masukan dari para praktisi dan akademisi. Pengumpulan data kualitatif dilaksanakan dengan metoda *Focus Group Discussion (FGD)*. Hasil *FGD* menunjukkan keselarasan dengan penelitian kuantitatif. Hal ini disampaikan oleh para narasumber, bahwa SMK telah melakukan penyiapan dan perbaikan dimensi kematangan digital, sedangkan industri batik Laweyan lemah dalam pencatatan basis data, kegiatan bisnis masih beroperasi manual, dan kesulitan dalam pendidikan dan pelatihan. Penelitian ini menyimpulkan bahwa transformasi digital di SMK dan industri batik merupakan suatu keniscayaan. Model dan instrumen penilaian yang dihasilkan bisa dipakai untuk pengukuran kematangan digital pada sekolah SMK dan industri batik. Perlu strategi kolaborasi antara SMK dengan industri batik dengan semangat saling mengisi kekurangan dan saling menguntungkan. Dimensi manajemen organisasi kepemimpinan, dimensi orang dan budaya adalah dimensi yang sangat penting pada poses transformasi digital, dan ditindaklanjuti dimensi lainnya. Penelitian ini dilakukan di SMK dan industri batik, yang membuka ruang untuk penelitian ke depan. Bentuk penelitian bisa memperdalam dimensi kematangan digital, ataupun penelitian untuk sekolah menengah umum dan industri kecil lainnya.

Kata kunci: Transformasi Digital, Kematangan Digital, Sekolah Menengah Kejuruan, Industri Kecil Menengah, Industri Batik

ABSTRACT

DIGITAL MATURITY IN VOCATIONAL HIGH SCHOOLS (SMK) AND BATIK INDUSTRY

Research on digital maturity in vocational schools and the batik industry is seen from the scope of institutions/organizations that have not been widely developed or made so far, especially the batik industry which has its own characteristics (only owned by Indonesia). The purpose of this research is to find out the dimensions of digital maturity, the level of digital maturity, develop digital maturity measurement instruments, and measure digital maturity in vocational schools and the batik industry. The research approach used is a *mixed-methods* method. Digital maturity dimensions and instruments have been successfully developed for vocational schools and the batik industry. The instrument has met the validity and reliability test and can be used for quantitative research on digital maturity measurement. The dimensions of digital maturity include: management and organization, people and culture, products and services, technology, and organizational operations. Meanwhile, the maturity level consists of 5 levels: not ready, initial readiness, intermediate readiness, mature readiness, and already implemented. The measurement results showed that the vocational school that was the subject of the research was in mature readiness. Meanwhile, the batik industry is at medium readiness. As a follow-up to quantitative research, qualitative research is carried out to get responses, confirmations and inputs from practitioners and academics. Qualitative data collection was carried out by the Focus Group Discussion (FGD) method. The results of the FGD show alignment with quantitative research. This was conveyed by the speakers, that SMK has prepared and improved the digital maturity dimension, while the Laweyan batik industry is weak in database recording, business activities are still operating manually, and difficulties in education and training. This research concludes that digital transformation in vocational schools and the batik industry is a necessity. The resulting assessment models and instruments can be used to measure digital maturity in vocational schools and the batik industry. It is necessary to have a collaboration strategy between vocational schools and the batik industry with the spirit of filling each other's shortcomings and mutual benefits. The management dimension of leadership organization, the dimension of people and culture are very important dimensions in the pose of digital transformation, and are followed up with other dimensions. This research was carried out in vocational schools and the batik industry, which opened up space for future research. The form of research can deepen the dimension of digital maturity, or research for public high schools and other small industries.

Keywords: Digital Transformation, Digital Maturity, Vocational High Schools, Small and Medium Industries, Batik Industry

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