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Achieving Outstanding Schools through Value-Based Digital Leadership to Enhance High Tech and High Touch

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Abstract: This study aims to examine Value-Based Digital Leadership for Achieving Outstanding Schools (High Tech & High Touch) in elementary and junior high schools in Garut Regency. The research employs a mixed-method approach with a sequential explanatory design and utilizes SEM analysis through AMOS software. The study involves supervisors, principals, and teachers as respondents. The results indicate that Value-Based Digital Leadership significantly impacts High Touch, both directly and indirectly, particularly at the junior high school level. Additionally, digital competencies and skills significantly contribute to High Tech. The results demonstrate that Value-Based Digital Leadership significantly contributes to the effectiveness of both High Tech and High Touch components in schools. Specifically, Digital Leader Values, Competence, and Skills were found to have a substantial impact on the implementation of High Technology in schools, with Digital Leader Values showing the strongest influence. The study reveals that the combined effect of these leadership aspects contributes 74.2% to the implementation of High Technology in schools. Moreover, the implementation of High Technology was found to have a direct and significant effect on High Touch, contributing 49.7% to the enhancement of social interaction and emotional support within the educational environment. Recommendations are provided for the Department of Education, supervisors, principals, teachers, and school committees to strengthen digital leadership values and skills and enhance digital infrastructure. This model is expected to create a more interactive and efficient learning environment, keeping pace with modern developments.

Keywords: Digital Leadership; Values; Outstanding School; High Tech; High Touch

INTRODUCTION

In the era of globalization and the Fourth Industrial Revolution, digital transformation has become an urgent necessity across various sectors, including education. Technology, culture, and social perspectives continue to evolve, leading to changes in the needs and demands placed on students. Therefore, future schools must adapt to these changes and provide relevant and beneficial learning experiences for students. Future schools need to prepare students to face challenges such as globalization, technology, and increasing global competition (Tossy, 2024).

The need for this research is underscored by the growing recognition that successful school leadership in the digital age cannot rely solely on technological competence. Leaders must also be able to integrate technology with core values such as honesty, integrity, fairness, and social responsibility. This is particularly important in the context of schools, where the cultivation of student character and the preservation of local values are as critical as academic achievement.

Initial observations in schools within Garut Regency reveal a significant variation in how digital tools are used, with some schools excelling in technology integration but struggling to uphold local values, and others maintaining strong values but lacking in digital competence. These findings underscore the need for a leadership model that can effectively balance both High Tech and High Touch elements. By investigating the impact of Value-Based Digital Leadership, this research aims to propose a model that enhances technological capabilities while ensuring that these advancements are ethically grounded and culturally relevant, ultimately contributing to the development of outstanding schools that prepare students for both academic success and responsible citizenship in a digital world.

Previous research has shown that future schools need to address current issues, such as overcrowded curricula, monotonous teaching styles, and lack of student engagement and motivation (Rosita & Iskandar, 2022). Future schools can tackle these problems by offering more flexible, personalized, and relevant learning experiences. To achieve these goals, future schools need to consider factors such as technology, innovation, quality improvement in education, and community collaboration and involvement (Drigas, Papanastasiou, & Skianis, 2023).

However, despite extensive research on the importance of technology in education, there is still a gap in the literature regarding how value-based digital leadership can be effectively implemented to create excellent schools. Value-based digital leadership refers to leaders who can integrate technology with core

values such as honesty, integrity, fairness, and social responsibility (Sandhu, 2019). This research aims to fill this gap by examining value-based digital leadership in the context of schools in Garut Regency.

Value-based digital leadership can be a crucial factor in building successful future schools. This leadership not only integrates technology into the teaching and learning process but also maintains important local values in shaping student character and school culture. Successful future schools need strong value-based digital leadership, where leaders lead with values and use technology ethically (Prasetya, Zaakiyyah, & Suherlan, 2024).

This study offers novelty by proposing a value-based digital leadership model for excellent schools. This model is expected to optimize the use of technology in teaching, school management, and communication while maintaining local values. The study also provides practical recommendations for strengthening digital leadership values and skills and enhancing digital infrastructure in schools in Garut Regency (Sheninger, 2014).

From the identification of these issues, the main research question of this study is: How is the implementation of value-based digital leadership for excellent schools in elementary and junior high schools in Garut Regency? This study aims to analyze the influence of value-based digital leadership on school effectiveness, focusing on the use of technology and core values in school management in Garut Regency. The results of this research are expected to provide both theoretical and practical contributions to the development of value-based digital leadership. Theoretically, this study enriches the literature on digital leadership and education. Practically, it provides guidelines for school leaders, teachers, and policymakers on effectively and ethically implementing technology in schools (Paschal & Melly, 2023).

Value-based digital leadership refers to leaders who can integrate technology with core values such as honesty, integrity, fairness, and social responsibility. In this way, leaders can create a strong and ethical organizational culture in the use of technology and help students and teachers develop a better understanding of important values in the digital era (Baydar, 2022). Value-based leadership is a leadership strategy based on strong ethical principles and values. Leaders who apply value-based leadership will use ethical values in decisionmaking and communication with subordinates and inspire people to act in accordance with these values (Purnomo, Siminto, & Ausat, 2024).

Some ethical values commonly used in value-based leadership include integrity, honesty, responsibility, fairness, empathy, and a strong work ethic (Knights, 2022). Leaders who identify with these values will make better moral and timely decisions and motivate employees to act according to the same

Future excellent schools must be supported by leadership that can integrate technology and ethical values into every aspect of their management. Value-based digital leadership is not just about the use of technology but also about how technology is used ethically to achieve higher educational goals (Stout, 2023). This approach also emphasizes the importance of collaboration and participation from the entire school community. Inclusive leaders will involve teachers, students, parents, and the community in the decision-making process, ensuring that every voice is heard and valued (Leithwood, Harris, & Hopkins, 2020).

Liu (2023) provides the perspective that future education (schools) built on technology aims to equip students to apply what they have learned in school by increasing student engagement, using project-based learning, integrating technology into the classroom, and promoting student-centered learning. Future school models that support the development of these skills include concepts such as flipped classrooms, online learning, student-driven curricula, and selforganized approaches (Kovachevich, 2018; Tomashevska, 2024; Redes & Bocos, 2022; Oliiar & Fomin, 2022). While the literature emphasizes the importance of integrating technology into the classroom, many schools in Garut Regency still struggle with inadequate access to basic technological infrastructure. Issues such as limited availability of computers, unreliable internet connections, and lack of digital resources are common, especially in rural areas. The shift towards student-centered learning and the use of technology requires teachers to have specific skills and knowledge. However, many teachers in Garut Regency have not received adequate training to effectively implement these new teaching strategies. The gap in professional development opportunities can slow down the adoption of innovative educational practices.

To realize excellent schools, value-based digital leadership plays a very important role. Leaders who can integrate technology with moral and ethical values will create a learning environment that supports both academic and character growth. Through this approach, schools can produce graduates who excel academically and have integrity and social responsibility (Badawy, Ali, Khan, Dashti, & Katheeri, 2024). Successful future schools need strong value-based digital leadership, where leaders lead with values and use technology ethically.

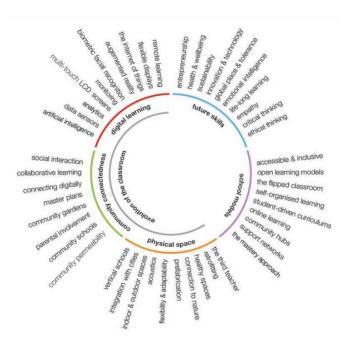


Figure 1. Future of School (Kovachevich., 2018)

In conclusion, this study emphasizes the importance of value-based digital leadership as a key to achieving excellent schools. By combining technology and moral values, school leaders can create a learning environment that supports not only academic achievement but also character and ethical development of students. This research also highlights the importance of collaboration and participation from the entire school community in the digitalization process and the need for clear and responsible policies in the use of technology. Through this approach, it is hoped that schools can become better places for learning and development and produce graduates who are ready to face future challenges with integrity and responsibility (Leithwood et al., 2020).

Based on the literature review above, there are two hypotheses to be tested:

(H1) Value-based digital leadership significantly influences high-tech and hightouch.

RESEARCH METHODOLOGY

This study employs a mixed-method approach using a sequential explanatory design to examine the impact of Value-Based Digital Leadership on the effectiveness of schools, particularly focusing on the High Tech and High Touch elements. In the first phase, quantitative data is collected and analyzed to

assess the relationships between digital leadership and school effectiveness, specifically measuring how leadership influences technological integration (High Tech) and the enhancement of social interaction and emotional support (High Touch) within schools.

Following the quantitative phase, qualitative data is gathered through interviews, focus groups, and observations to provide deeper insights into the findings. This qualitative phase aims to explain and contextualize the quantitative results, exploring how school leaders implement digital leadership practices and how these practices translate into tangible outcomes in real-world school settings. By integrating both quantitative and qualitative data, the study provides a comprehensive understanding of the impact of Value-Based Digital Leadership, offering both statistical evidence and rich, contextual narratives that highlight the lived experiences of educators and administrators in Garut Regency. This mixed-method approach ensures that the research captures the complexity of digital leadership in schools and provides actionable recommendations for improving school effectiveness through leadership and technology.

The quantitative research approach used in this study to examine the impact of Value-Based Digital Leadership on the effectiveness of schools, particularly focusing on the High Tech and High Touch elements. The research method follows a structured process typical of quantitative research, beginning with the formulation of specific hypotheses related to the influence of Value-Based Digital Leadership on school effectiveness (Kittur, 2023). This research uses Structural Equation Model (SEM) analysis with AMOS software. The study consists of five latent variables, divided into three latent variables of Value-Based Digital Leadership: digital leader values, digital competence, and digital skills; and two latent variables of Excellent Schools: high-tech and high-touch as shown in Table 1. Each latent variable has several manifest variables measured through a questionnaire.

Table 1. Latent Variables

Variable	_	
	digital leader values	
Value-Based Digital Leadership	digital competence	
	digital skills	
Excellent Schools	high-tech	
Executions	high-touch	

The study was conducted in elementary (SD) and junior high (SMP) schools in Garut Regency, West Java Province. Garut Regency has 1,873 elementary schools and 739 junior high schools. The population of this study consists of all the elementary and junior high schools within this region, representing a diverse range of educational environments. In quantitative research, the population refers to the entire group that the researcher is interested in, and the sample is a subset of this population that is selected for the actual study (Kelsey Beck, 2024)

The research sample was taken from five schools selected based on specific considerations. These considerations include the school's status (public or private), accreditation status, principal's profile, and the availability of digital facilities and infrastructure. This purposive sampling method is used to ensure that the schools chosen for the study are representative of different types of educational institutions within the population (Marzoratti & Evans, 2024). By focusing on schools that meet specific criteria, the research aims to gather data that is both relevant and reflective of the broader educational context in Garut Regency.

The selection of these schools aims to ensure that the Value-Based Digital Leadership Model for Excellent Schools can be well implemented and relevant to the research location. The sample size, while limited to five schools, is justified in quantitative research when the goal is to explore specific variables in depth rather than to generalize findings across the entire population. This approach allows for a detailed examination of how value-based digital leadership can be effectively applied in diverse school settings, providing insights that can inform broader educational strategies in the region. The value-based digital leadership variable consists of three main components: digital leadership values, digital leadership competence, and digital leadership skills. Measurements were conducted using a five-point Likert scale developed based on relevant literature (Graen & Uhl-Bien, 1995; Liden & Maslyn, 1998; Kusmaryono & Wijayanti, 2022; Bradford, Moriyike Akinosun, Morris, & Rosenberg, 2020). Respondents, who are teachers, were asked to respond to statements describing the values, competencies, and digital skills of their principals. Example statements include "The principal facilitates teachers with workshops on using learning platforms" and "The principal provides technical encouragement to teachers to integrate digital technology into the learning process." The Likert scale ranges from 1 (very suboptimal) to 5 (very optimal).

The Excellent Schools variable is measured through two main components: high-tech and high-touch. Measurements were conducted using a five-point Likert scale based on instruments developed by Tierney et al. (1999). Respondents, including teachers, principals, and supervisors, were asked to

RESULTS AND DISCUSSION

Indicators are considered valid if the variance extracted value is ≥ 0.50 (Ghozali, 2014). The results of the validity tests for all variables show values above 0.5, indicating that all indicators developed in this study are valid.

The reliability test uses Construct Reliability (CR), with the criterion that a variable is considered reliable if the CR value is > 0.6. The test results for the variables in this study show CR values > 0.6, consistent with Ghozali (2014). Thus, the variables and indicators developed in this study are considered reliable.

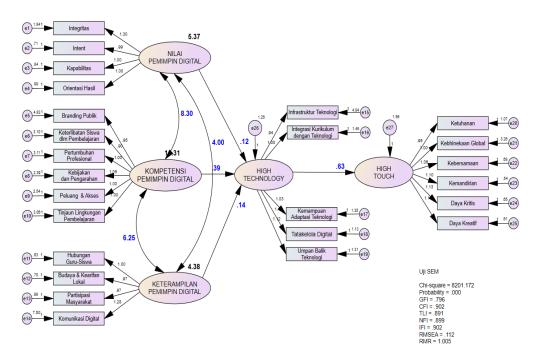


Figure 2. SEM Testing Results

The results of the value-based digital leadership test for excellent schools in Garut Regency are presented in Table 2.

	Х3	X2	X1	Y	Z
Y	.051	0.363	0.466	-	-
Z	-	-	-	0.970	-

Table 2. The Influence of Value-Based Digital Leadership on Excellent Schools

The value-based digital leadership test results for excellent schools in Garut Regency reveal several influences: the influence of Digital Leader Values on High Technology is 0.456, the influence of Digital Leader Competence on High Technology is 0.363, the influence of Digital Leader Skills on High Technology is 0.051, and the influence of High Technology on High Touch is 0.970.

Square Multiple Correlation (SMC) indicates that the estimate value for High Technology is 0.742, showing that the contribution of Digital Leader Values, Digital Leader Competence, and Digital Leader Skills to High Technology is 74.2%, with the remaining 24.8% influenced by other factors. The SMC test results for the structural model are shown in Table 3.

Table 3. SMC Hypothesis Testing Results

	Estimate
Y	0.742
Z	0.497

An estimate value of 0.497 for High Touch indicates that the contribution of Digital Leader Values, Digital Leader Competence, Digital Leader Skills, and High Technology to High Touch is 49.7%, with the remaining 50.3% influenced by other factors.

Value-based digital leadership refers to a leadership model that integrates digital technology into organizational functions and improvements (Karaköse & Tulubas, 2023). Principals proficient in digital technologies use these tools to facilitate effective communication, collaboration, and decision-making. They are skilled in using both software and hardware digital devices and can inspire and guide others (Abbasi & Arouri, 2024; (Durak & Özüdoğru, 2023). Digital competence is not limited to the young but also encompasses a balanced positive attitude (Laouni, 2023).

Schools excelling in high technology possess the infrastructure to support the learning process. Mobile devices are increasingly popular, providing students with more learning opportunities (Nuphanudin et al., 2023). The Schools excelling with a high touch approach develop characteristic values into continuous school programs and activities. The school's vision and mission serve as a guide in developing various daily student programs. Natural and human resources play a crucial role in supporting the school's excellence (Hamzah et al., 2023). Teachers' digital literacy competence also contributes to the development of effective and efficient learning management (Marnita, Suryana, & Hidayat, 2023; Dekawati & Trisno, 2023).

Thus, integrating digital technology and the characteristic values of schools in value-based digital leadership for excellent schools in Garut Regency can create a modern, dynamic learning environment that supports the optimal development of student potential. These findings are consistent with previous research. Khemtong, Promchom, Thumsen, & Wechayalak (2024) emphasized that effective digital leadership is essential for fostering organizational efficiency and innovation in educational institutions. Integrating digital technology into the strategic vision of educational organizations can therefore contribute to sustainable success and the achievement of goals. However, it is important to note that Khemtong's study does not specifically address value-based digital leadership. Ming & Mansor (2024) also noted that by investing in the development of digital leadership skills among school leaders, educational institutions can promote positive change, enhance teaching practices, and strengthen organizational management in the digital era.

Although this study presents certain findings, the research conducted by Subade (2024) indicates a different outcome. The relationship between digital leadership and school outcomes appears to be complex. While the digital leadership of school principals shows no significant correlation with school outcomes, teachers' technological proficiency has a notable impact, particularly in enhancing community engagement.

CONCLUSION

From the structural model analysis, it was found that value-based digital leadership variables significantly influence the application of high technology in schools, which subsequently impacts the enhancement of social interaction and emotional support (High Touch) in the educational environment. An estimate value of 0.742 for High Technology indicates that the contribution of Digital Leader Values, Digital Leader Competence, and Digital Leader Skills to High

Technology is 74.2%. Additionally, an estimate value of 0.497 for High Touch suggests that the contribution of these variables, including High Technology, to High Touch is 49.7%. The structural model fit tests also yielded satisfactory results. Several indices such as GFI, AGFI, TLI, CFI, and IFI showed values close to or exceeding the cut-off value of 0.90, indicating a good model fit. However, indices such as Chi-square and CMIN/DF showed less satisfactory results, indicating areas in the model that need improvement.

Overall, this research underscores the importance of value-based digital leadership in enhancing educational quality through the application of high technology and improved social interaction. Principals who can effectively integrate technology and maintain a positive attitude can create a dynamic, inclusive, and globally adaptive learning environment. With adequate technological infrastructure and good governance, schools can implement various innovative learning methods that support the optimal development of student potential. This research makes a significant contribution to the development of theory and practice in digital leadership in education. The practical implications of these findings indicate that developing the digital competence and positive attitude of school leaders is key to creating excellent schools that not only master technology but also use it to enhance interaction and emotional support within the educational environment. Consequently, schools can achieve more effective and modern educational goals, preparing students better to face future challenges.

Future research should focus on refining the structural models used in this study to address areas needing improvement, as identified in the model fit indices. Additionally, further exploration into the long-term sustainability of digital leadership practices in various educational contexts would contribute to the ongoing development of this field, ensuring that schools continue to evolve and meet the challenges of a rapidly changing global landscape.

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