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# Predictive Analysis of Learning Digital Transformation Success in Vocational High Schools Based on Digital Leadership, Teachers' Digital Competence, and Organizational Readiness

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**ABSTRACT**

Digital transformation in learning in vocational high schools (SMKs) depends not only on the availability of technology but also on teachers' digital competence, organizational readiness, and digital leadership. This study aims to analyze the effects of digital leadership, teachers' digital competence, and organizational readiness on the success of digital transformation in learning at SMKN 2 Bojonegoro and to identify the variable with the largest path coefficient. The study employed a quantitative approach with a non-experimental, cross-sectional design. The study population consisted of 103 active teachers, selected using a total sampling technique. Data were collected using a four-point Likert-scale questionnaire and analyzed using SmartPLS 3. The results showed that teachers' digital competence had a positive and significant effect on the success of digital transformation in learning, with a path coefficient of 0.780 and a significance value of less than 0.001. Organizational readiness also had a positive and significant effect, with a path coefficient of 0.212 and a significance value of 0.010. In contrast, digital leadership did not have a significant effect, with a path coefficient of −0.089 and a significance value of 0.395. The coefficient of determination ($R^2$) of 0.750 indicates that the three variables in the model explain 75% of the variance in the success of digital transformation in learning, while the remaining 25% is explained by factors outside the model. These findings emphasize the importance of developing teachers' digital competence and strengthening organizational readiness, alongside optimizing the role of digital leadership in supporting the sustainable implementation of digital transformation in learning.

**Keywords:** Digital Transformation In Learning; Digital Leadership; Teachers' Digital Competence; Organizational Readiness; Vocational High Schools.

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## INTRODUCTION

The availability of digital technology in schools does not always translate directly into the successful transformation of learning. Internet access, digital devices, and learning platforms provide schools with opportunities to develop more adaptive, interactive, and sustainable learning processes. However, technology only delivers educational value when it can be integrated into pedagogical practices, supported by human resource competencies, and guided by effective organizational governance. Thus, the fundamental issue in the digital transformation of education is not merely the availability of technology, but rather how schools transform technological potential into tangible changes in the learning process. This perspective is consistent with the view that digital transformation requires the integration of technology, educational practices, and organizational capacity (Pettersson, 2018; Wohlfart & Wagner, 2023;

Zhang et al., 2025). In this process, teachers' digital competence is necessary to optimize the use of technology in learning planning, implementation, and evaluation (Claro et al., 2024; Yang et al., 2023), while school leadership plays a role in formulating a digital vision, coordinating resources, and creating an environment that supports educational innovation (Schmitz et al., 2023; Asriadi & Andriani, 2026).

This issue has become increasingly important in vocational secondary education, which is expected to prepare students with knowledge, practical skills, and competencies relevant to developments in the world of work. In this context, the digital transformation of learning should ideally extend beyond the use of presentation media or learning platforms to encompass the integration of technology into various learning activities, such as the use of digital learning resources, the development of interactive media, technology-assisted assessment, and simulations of work processes relevant to students' fields of specialization. Achieving these conditions requires teachers to be able to integrate technology with pedagogical strategies, as well as organizational support that enables innovation to be implemented consistently. Masnah et al. (2024) examined the digital competence of vocational high school teachers by considering training experience, infrastructure utilization, and school readiness. Meanwhile, Latifah et al. (2025) developed a learning management system to support the improvement of digital competence among vocational school teachers. Yang et al. (2023) also identified various initiatives and challenges in developing teachers' digital competence. These studies indicate that digital transformation in vocational education is associated with educators' capacity, technology utilization, and institutional support; therefore, it cannot be understood solely in terms of facility availability.

The need to understand the integration of these factors is relevant to the conditions at SMKN 2 Bojonegoro. Based on preliminary information, the school has access to dedicated internet connectivity, digital devices, e-learning facilities, and various learning platforms that can support the development of technology-based learning. The availability of these facilities constitutes an important initial resource, but it does not, in itself, demonstrate that the digital transformation of learning has been implemented comprehensively. Infrastructure availability must be distinguished from the intensity of its use in learning activities, teachers' ability to integrate technology with pedagogical objectives, and organizational readiness to support sustainable change. Therefore, the conditions at SMKN 2 Bojonegoro provide a relevant context for examining the factors that contribute to the digital transformation of learning, not merely by assessing the availability of technological facilities, but also by understanding how leadership, teacher competence, and organizational readiness support this transformation process.

Previous studies have demonstrated that technology utilization in learning needs to be examined from different perspectives. Tama and Handayani (2019), through their research on the development of SketchUp-based learning media, showed that information and communication technology facilities were available, but their utilization was not optimal in the learning context examined. Guntoro et al. (2024) investigated the implementation of Quizizz in basic vocational learning as one form of digital platform utilization for assessment. Meanwhile, Kistanti et al. (2024) examined school readiness to face digital change from the perspectives of teachers and student readiness. Taken together, these studies illustrate different aspects of educational digitalization, ranging from facility availability and technology implementation in specific learning activities to readiness for change. However, the availability of technology or the successful implementation of a particular platform in a specific activity does not necessarily explain how the digital transformation of learning develops as a process of change at the school organizational level. These differences in research focus provide a basis for examining the factors that enable technology utilization to evolve into a more integrated digital transformation of learning.

Conceptually, the digital transformation of learning is associated with the integration of digital leadership, teachers' digital competence, and organizational readiness. These three constructs represent distinct but complementary dimensions. Digital leadership provides strategic direction through vision formulation, priority setting, and resource coordination to support digital change. Teachers' digital competence concerns their professional capacity to

select, use, and integrate technology according to learning needs. Meanwhile, organizational readiness reflects the collective preparedness of schools to accept, implement, and sustain change. The relationship between leadership and technology integration has been demonstrated by AlAjmi (2022), who found that principals' digital leadership had a positive effect on teachers' technology integration. Schmitz et al. (2023) showed that leadership is associated with the enabling conditions for technology integration in learning, while Kaya-Kasikci et al. (2023) highlighted the role of leadership in fostering a school climate that supports technology utilization. In addition, Sohilait et al. (2026) examined digital transformation readiness by considering digital leadership and human resource capacity. These findings provide a foundation for investigating the relationships among leadership, teacher capacity, and organizational readiness in the digital transformation of education.

Nevertheless, there remains scope for further research, particularly concerning the distinctions between individual digital competence, technology integration in learning, organizational readiness, and digital transformation at the school level. Pettersson (2018) identified conceptual issues in discussions of digital competence in education, while Heine et al. (2023) demonstrated variations in how digital learning resources are conceptualized. Claro et al. (2024) also found that the measurement of teachers' digital competence continues to vary in terms of operationalization and dimensional coverage. The review conducted by Kim and Hong (2024) further emphasized the importance of a systematic understanding of the concepts and measurement of teachers' digital competence. Meanwhile, the studies by AlAjmi (2022), Schmitz et al. (2023), and Kaya-Kasikci et al. (2023) provide evidence of the relationship between leadership, technology integration, and its enabling conditions, but their focus is not entirely equivalent to the digital transformation of learning as a process of change at the school organizational level. Based on this review, the research gap lies in the need for empirical testing that integrates digital leadership, teachers' digital competence, and organizational readiness within a single model to explain the digital transformation of learning more comprehensively, particularly in the context of vocational education.

Examining these three factors is also important for school policy development. Without empirical evidence regarding the contribution of each factor, digitalization strategies risk placing greater emphasis on facility procurement than on strengthening professional capacity and organizational readiness. Schmitz et al. (2023) demonstrated that technology integration is associated with teachers' skills, beliefs about technology, and infrastructure. Meanwhile, Weiner (2009) explained that organizational readiness for change encompasses shared commitment and collective confidence in the organization's ability to implement change. This perspective is consistent with Marnoko (2025), who examined strategies for developing teachers' professional competence in the era of digital transformation in education, and Kistanti et al. (2024), who investigated school readiness to face digital change. In the context of SMKN 2 Bojonegoro, analyzing digital leadership, teachers' digital competence, and organizational readiness is necessary to explain the relationships between these three constructs and the success of the digital transformation of learning. Evaluation of the measurement model and structural model is required to ensure that the research constructs meet the measurement criteria and to examine the relationships among the constructs based on the conceptual framework developed. The results of this evaluation can also be used to identify the construct with the strongest relative effect on the digital transformation of learning, thereby providing a basis for determining school development priorities.

Based on the foregoing discussion, this study aims to analyze the effects of digital leadership, teachers' digital competence, and organizational readiness on the digital transformation of learning at SMKN 2 Bojonegoro using the Partial Least Squares Structural Equation Modeling (SEM-PLS) approach. The analysis involves evaluating the outer model to assess construct validity and reliability, as well as evaluating the inner model to examine structural relationships among the constructs and identify the construct with the strongest relative effect. This study contributes to expanding the empirical evidence concerning the relationships among digital leadership, teachers' professional capacity, and organizational readiness in supporting the digital transformation of learning in the context of vocational

education. The relevance of teacher competence and organizational readiness to the digital transformation of education is also reflected in the studies by Claro et al. (2024), Asriadi and Andriani (2026), and Sohilait et al. (2026). In practical terms, the findings are expected to provide input for SMKN 2 Bojonegoro in formulating digital transformation strategies through strengthening digital vision and governance, improving teachers' digital pedagogical competence, and developing organizational culture and readiness. Thus, this study is expected to support the development of an integrated, well-directed, and sustainable digital transformation of learning in vocational education.

**METHOD**

This study employed a quantitative approach with a non-experimental, cross-sectional design to analyze the relationships of digital leadership, teachers' digital competence, and organizational readiness with the success of digital transformation in learning (Setia, 2016). The study was conducted at SMKN 2 Bojonegoro, with a population of 103 active teachers selected using a total sampling technique. Data were collected using a closed-ended questionnaire with a four-point Likert scale. The digital leadership variable (X1) was measured across six dimensions: e-communication skills, e-social skills, e-change management skills, e-tech savvy, e-team skills, and e-trustworthiness (Roman et al., 2019). Teachers' digital competence (X2) encompassed professional engagement, digital resources, teaching and learning, assessment, empowering learners, and facilitating learners' digital competence (Cabero-Almenara et al., 2020). Organizational readiness (X3) was measured through change commitment and change efficacy (Shea et al., 2014). Meanwhile, the success of digital transformation in learning (Y) encompassed ICT infrastructure, ICT culture, ICT in learning and teaching, planning, management and leadership, and development of digital competences (Yun & Yoon, 2025). Data were analyzed using SmartPLS 3 through descriptive statistics, measurement model (outer model) evaluation, and structural model (inner model) evaluation. Group difference tests were conducted to identify differences in scores across respondent groups according to the characteristics of the data and the objectives of the analysis. The significance of relationships among constructs was evaluated through bootstrapping, while the model's explanatory power was assessed using the coefficient of determination ($R^2$). The results were interpreted based on statistical relationships without drawing causal conclusions. The research hypotheses were formulated as follows:

H1: Digital leadership (X1) has a significant effect on the success of digital transformation in learning (Y).

H2: Teachers' digital competence (X2) has a significant effect on the success of digital transformation in learning (Y).

H3: Organizational readiness (X3) has a significant effect on the success of digital transformation in learning (Y).

Data analysis was performed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 3, following the procedures described by Ghozali and Latan (2015). PLS-SEM was selected because it does not require multivariate normality, can be applied to relatively small sample sizes (n = 103), and is suitable for models with reflective indicators. The measurement model (outer model) was evaluated using three criteria. First, convergent validity was assessed based on the outer loading values, with values above 0.70 considered ideal and values between 0.50 and 0.60 still considered acceptable in preliminary research, as well as an average variance extracted (AVE) value above 0.50. Second, discriminant validity was assessed using cross-loadings and the Fornell–Larcker criterion, which requires the square root of the AVE for each construct to exceed its correlations with other constructs. This assessment was complemented by the heterotrait–monotrait ratio (HTMT), with a threshold of less than 0.90 (Henseler et al., 2015). Third, construct reliability was assessed using composite reliability and Cronbach's alpha, with a minimum threshold of 0.70.

The structural model (inner model) was evaluated using the inner variance inflation factor (VIF) to assess collinearity among constructs, with values below 5 considered acceptable. The coefficient of determination ($R^2$) was used to assess the explanatory power of the model for

the endogenous variable, with values of 0.67, 0.33, and 0.19 indicating strong, moderate, and weak explanatory power, respectively. The effect size ($f^2$) was assessed using thresholds of 0.02, 0.15, and 0.35, representing small, medium, and large effects, respectively. Predictive relevance ($Q^2$) was also assessed, with values greater than zero indicating predictive relevance. The significance of the path coefficients was tested using the bootstrapping procedure with 500 resamples. The hypotheses were accepted when the t-statistic exceeded 1.96 or the p-value was below 0.05 at the 5% significance level.

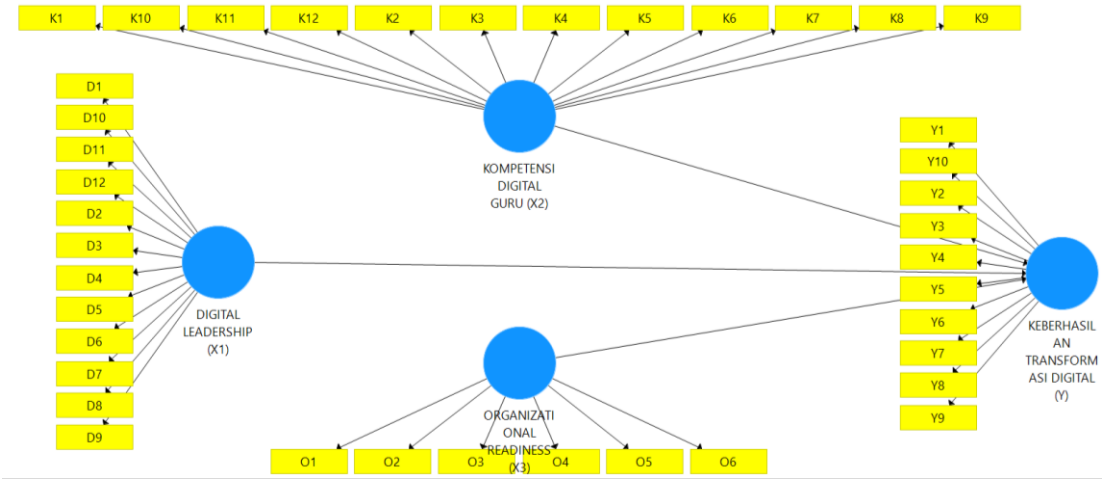



**Figure 1. Conceptual Research Model**

## RESULT AND DISCUSSION

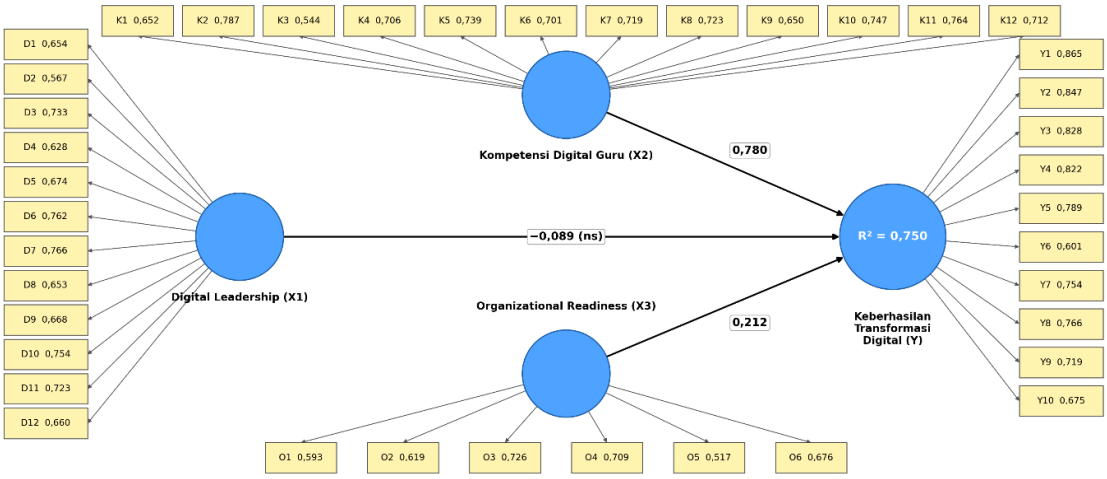



**Figure 2. Inner and Outer Measurement Model**

The figure presents the measurement model (outer model) and the structural model (inner model) obtained from the PLS-SEM analysis, involving the variables of digital leadership (X1), teachers' digital competence (X2), organizational readiness (X3), and the success of digital transformation in learning (Y). The results show that the outer loading values range from 0.567 to 0.766 for digital leadership, 0.544 to 0.787 for teachers' digital competence, 0.517 to 0.726 for organizational readiness, and 0.601 to 0.865 for the success of digital transformation in learning. According to Ghozali and Latan (2015), outer loading values between 0.50 and 0.60 may still be acceptable in preliminary studies, whereas values above 0.70 indicate a stronger ability of indicators to reflect their respective constructs. Therefore, the indicators in this study may be considered for retention, while taking into account the results of convergent validity and construct reliability assessments. The $R^2$ value of 0.750 for the success of digital transformation in learning indicates that 75% of the variance in this variable can be jointly explained by digital

leadership, teachers' digital competence, and organizational readiness, while the remaining 25% is explained by factors outside the model. The results indicate that digital leadership has a path coefficient of −0.089 and does not have a statistically significant effect on the success of digital transformation in learning ($p = 0.395$). In contrast, teachers' digital competence has a positive and significant effect, with a path coefficient of 0.780 ($p < 0.001$), while organizational readiness also has a positive and significant effect, with a path coefficient of 0.212 ($p = 0.010$). Thus, teachers' digital competence is the variable with the largest path coefficient, followed by organizational readiness. Meanwhile, the direct effect of digital leadership on the success of digital transformation in learning was not statistically significant.

The evaluation of the outer model based on the criteria proposed by Ghozali and Latan (2015) indicates that all indicators have outer loading values above 0.50, with the lowest value being 0.517. Therefore, they meet the minimum threshold for preliminary research, although some indicators have not reached 0.70. The AVE values are 0.475 for digital leadership, 0.499 for teachers' digital competence, 0.415 for organizational readiness, and 0.594 for the success of digital transformation in learning. Against the threshold of 0.50, only the success of digital transformation in learning meets the AVE criterion, while the other three constructs fall below the threshold. Consequently, convergent validity at the construct level should be interpreted with caution. The composite reliability values are 0.915 (X1), 0.922 (X2), 0.808 (X3), and 0.935 (Y), while the Cronbach's alpha values are 0.900, 0.908, 0.722, and 0.922, respectively. All values exceed 0.70, indicating that the constructs are reliable (Table 1). According to the Fornell–Larcker criterion, the square roots of the AVE values for the constructs (0.689 for X1, 0.707 for X2, 0.644 for X3, and 0.771 for Y) are lower than their correlations with other constructs in several pairs. For example, the correlation between teachers' digital competence and the success of digital transformation in learning is 0.854. The HTMT value between these two constructs also reaches 0.920, exceeding the threshold of 0.90. Therefore, discriminant validity has not been fully established, indicating that the constructs in the model are closely related and that the inner model findings should be interpreted in light of this limitation.

**Table 1. Summary of the Outer Model Evaluation**

| Construct | Number of indicators | Loading range | AVE | Composite reliability | Cronbach's alpha |
|---|---|---|---|---|---|
| Digital leadership (X1) | 12 | 0.567–0.766 | 0.475 | 0.915 | 0.900 |
| Teachers' digital competence (X2) | 12 | 0.544–0.787 | 0.499 | 0.922 | 0.908 |
| Organizational readiness (X3) | 6 | 0.517–0.726 | 0.415 | 0.808 | 0.722 |
| Success of digital transformation in learning (Y) | 10 | 0.601–0.865 | 0.594 | 0.935 | 0.922 |

In the evaluation of the inner model, the $R^2$ value of 0.750 (adjusted $R^2 = 0.742$) exceeds the threshold of 0.67. Therefore, according to the criteria proposed by Ghozali and Latan (2015), the structural model has strong explanatory power in explaining the success of digital transformation in learning. The inner VIF values are 3.172 for X1, 2.844 for X2, and 2.230 for X3, all below 5. These results indicate no serious multicollinearity, although X1 has the highest VIF value among the three constructs. The effect size results show that teachers' digital competence has a large effect ($f^2 = 0.855$), organizational readiness has a small effect ($f^2 = 0.081$), and digital leadership falls below the threshold for a small effect ($f^2 = 0.010$). The bootstrapping results indicate that H1 is rejected ($\beta = -0.089$; $t = 0.852$; $p = 0.395$), H2 is accepted ($\beta = 0.780$; $t = 7.369$; $p < 0.001$), and H3 is accepted ($\beta = 0.212$; $t = 2.592$; $p = 0.010$). The negative path coefficient for digital leadership, despite its positive correlation with the success of digital transformation in learning (0.679), may indicate that its effect is accounted for by teachers' digital competence and organizational readiness, which are highly correlated with digital leadership (0.789 and 0.720, respectively). The SRMR value of 0.093 is below 0.10, while the $Q^2$ value of 0.381 indicates predictive relevance, as it exceeds zero.

**The Effect of Digital Leadership on the Success of Digital Transformation in Learning**

The analysis results indicate that digital leadership does not have a significant effect on the success of digital transformation in learning at SMKN 2 Bojonegoro, with a path coefficient of −0.089 and a significance value of 0.395. These results indicate that the relationship between digital leadership and the success of digital transformation in learning tends to be negative; however, this relationship is not statistically significant. Therefore, the hypothesis stating that digital leadership has a significant effect on the success of digital transformation in learning is not supported by the research data. Conceptually, digital leadership encompasses six dimensions: e-communication skills, e-social skills, e-change management skills, e-tech savvy, e-team skills, and e-trustworthiness (Roman et al., 2019). However, the presence of these various dimensions of digital leadership does not necessarily directly improve the success of digital transformation if they have not been translated into concrete support for technology implementation in learning. This finding offers a different perspective from studies highlighting the role of leadership in technology integration and teacher capacity development (AlAjmi, 2022; Dexter & Richardson, 2020; Schmitz et al., 2023), as well as research examining the relationship between educators' digital competence and pedagogical practices (Basilotta-Gómez-Pablos et al., 2022; González-Fernández et al., 2022). According to the testing criteria proposed by Ghozali and Latan (2015), H1 is rejected because the p-value of 0.395 exceeds 0.05, while the t-statistic of 0.852 is below 1.96. Furthermore, the effect size of 0.010 indicates a negligible contribution.

In the context of learning implementation at SMKN 2 Bojonegoro, these findings suggest that the role of digital leadership has not been sufficiently reflected in changes to learning practices that can measurably improve the success of digital transformation. Digital leadership involves not only providing guidance on technology use but also the ability to establish effective communication, encourage collaboration among teachers, facilitate the resolution of technological challenges, and ensure that technology utilization is integrated into the learning process. If such support has not been fully realized in practice, the presence of digital leadership does not necessarily result in optimal changes to learning. This condition deserves attention because digital transformation in schools requires teachers' active involvement in sharing experiences, developing digital learning materials, and adapting teaching methods to students' needs. The importance of such collaboration is consistent with research on professional learning communities and teacher collaboration (Vangrieken et al., 2015; Valckx et al., 2020). In addition, differences in digital competence and approaches to technology integration in learning should also be considered when understanding the digital transformation process in educational settings (Heine et al., 2023; Spante et al., 2018). Perspectives on the relationships among leadership, educators' digital capacity, and change in educational environments have also been discussed by Berkovich and Hassan (2023), Zhu et al. (2024), Saltos-Rivas et al. (2023), and Yang et al. (2023).

The contribution of this study lies in examining digital leadership alongside teachers' digital competence and organizational readiness to explain the success of digital transformation in learning in vocational high schools. The findings show that digital leadership has a negative path coefficient of −0.089 and a significance value of 0.395; therefore, its effect on the success of digital transformation in learning is not statistically significant. This finding indicates that digital leadership has not demonstrated a significant direct contribution within the research model, although, conceptually, digital leadership plays a role in directing change and supporting technology integration. Therefore, these results should not be interpreted as indicating that digital leadership is unimportant; rather, they suggest that its direct effect has not been established in the context of this study. The success of digital transformation in learning should still be examined by considering teachers' competence in integrating technology into pedagogical practices and the organizational support that enables its sustainable implementation (Petko et al., 2018; Guggemos & Seufert, 2021). Accordingly, the practical implication of this study is the need to evaluate the implementation of digital leadership at SMKN 2 Bojonegoro, particularly to ensure that guidance, communication, and support for change are effectively translated into learning practices. This recommendation is

consistent with studies on leadership and teacher collaboration in technology integration (Schmitz et al., 2025; Hatlevik & Hatlevik, 2018), although the effectiveness of these strategies requires further empirical investigation.

**The Effect of Teachers' Digital Competence on the Success of Digital Transformation in Learning**

Teachers' digital competence has a positive and significant effect on the success of digital transformation in learning at SMKN 2 Bojonegoro. The test results show a path coefficient of 0.780 and a significance value of less than 0.001, indicating that teachers' digital competence has a strong positive relationship with the success of digital transformation in learning within the research model. This finding confirms that teachers' capacity to use technology pedagogically is an important factor in supporting the implementation of digital transformation in schools. In this study, digital competence refers to the six dimensions of the DigCompEdu framework: professional engagement, digital resources, teaching and learning, assessment, empowering learners, and facilitating learners' digital competence (Cabero-Almenara et al., 2020). This framework positions digital competence not merely as a technical skill in operating devices but also as a professional capacity to integrate technology into learning planning, implementation, and evaluation. This perspective is consistent with the development of digital competence frameworks for educators that emphasize the integration of technological proficiency and pedagogical competence (Caena & Redecker, 2019; Velandia Rodriguez et al., 2022), as well as studies on technology integration in vocational education (Cattaneo et al., 2022; Schmitz et al., 2025). According to the testing criteria proposed by Ghozali and Latan (2015), H2 is accepted because the p-value is less than 0.001 and the t-statistic of 7.369 exceeds 1.96. Furthermore, the path coefficient of 0.780 and the effect size of 0.855, classified as large, indicate that teachers' digital competence makes the largest contribution among the three exogenous constructs.

In the learning context at SMKN 2 Bojonegoro, these findings highlight the importance of teachers' capacity to integrate technology into pedagogical practices, ranging from selecting digital learning resources and developing instructional materials to implementing assessments and facilitating student engagement. Effective technology utilization requires more than the ability to operate devices, as teachers must also consider the suitability of technology for learning objectives, student characteristics, and the competencies to be achieved. Therefore, the digital transformation of learning requires competence development that integrates technical, pedagogical, and professional dimensions. This perspective is consistent with research examining personal and contextual factors in the development of educators' digital competence (Lucas et al., 2021), the application of the DigCompEdu framework (Suzer & Koc, 2024), and the relationship between digital competence, beliefs, and technology-supported teaching practices (Runge et al., 2023). Furthermore, continuous digital competence development is an important component of preparing educators to adapt to changes in technology-based teaching and learning practices (Røkenes & Krumsvik, 2016; ElSayary, 2023).

Within the research model, teachers' digital competence has the largest path coefficient. The analysis also shows that teachers' digital competence has a significant effect on the success of digital transformation in learning, as does organizational readiness, whereas the effect of digital leadership is not significant. These results indicate that teachers' digital competence has the strongest statistical contribution among the independent variables examined, although the success of digital transformation must still be understood in relation to organizational conditions and the context of learning implementation. This finding is consistent with studies emphasizing the importance of educators' professional needs and environmental support in developing digital competence (Chiu et al., 2024; List et al., 2020). In practical terms, the findings suggest that schools should strengthen teachers' professional development through needs-based training, guidance in technology implementation, the development of digital learning resources, and the integration of technology into teaching and assessment. This practice-oriented approach to competence development is relevant to studies on strengthening educators' digital capacity (Karunanayaka et al., 2018; Sathya & Alamelu, 2026).

**The Effect of Organizational Readiness on the Success of Digital Transformation in Learning**

Organizational readiness has a positive and significant effect on the success of digital transformation in learning at SMKN 2 Bojonegoro. The test results indicate a path coefficient of 0.212 with a significance value of 0.010. This finding indicates that organizational readiness is positively associated with the success of digital transformation in learning after teachers' digital competence and digital leadership are accounted for in the research model. Although its path coefficient is lower than that of teachers' digital competence (0.780), organizational readiness remains a relevant factor in supporting the implementation of digital transformation. Conceptually, organizational readiness in this study was measured using the dimensions of change commitment and change efficacy, based on Shea et al. (2014). These two dimensions represent the collective commitment to implementing change and the shared belief in the organization's ability to carry it out (Weiner, 2009). This perspective is consistent with studies emphasizing the importance of organizational members' capacity, support, and readiness in responding to change (Holt et al., 2007; Rafferty et al., 2013), as well as literature that views digital transformation as a strategic and organizational change rather than merely the adoption of technology (Hanelt et al., 2021; Mergel et al., 2019). According to the testing criteria of Ghozali and Latan (2015), H3 is accepted because the p-value of 0.010 is less than 0.05, while the t-statistic of 2.592 exceeds 1.96. The effect size of 0.081 is classified as small.

In the context of implementing digital transformation in learning at SMKN 2 Bojonegoro, organizational readiness is associated with the school's ability to provide institutional support that enables teachers to use technology sustainably. Such support includes clear policies, the availability of technological facilities, coordination among school members, and teacher involvement in planning and implementing change. Digital learning requires not only the availability of devices and infrastructure but also a shared commitment and confidence that change can be implemented in accordance with learning needs. Therefore, organizational readiness needs to be reflected in the alignment of school policies, technical support, and school members' involvement in the digital transformation process. This view is consistent with Weiner's (2009) theory, which distinguishes commitment to change from collective beliefs regarding the ability to implement it, as well as the change-readiness measurement framework developed by Shea et al. (2014). Research on digital transformation readiness in educational institutions by Nguyen et al. (2022) and the study by Kistanti et al. (2024), as cited in the manuscript, can serve as contextual points of comparison. Meanwhile, Albrecht et al. (2020) and Helfrich et al. (2018) provide additional perspectives on the roles of commitment, resources, and support in organizational change processes.

The contribution of this study demonstrates that organizational readiness continues to have a positive and significant effect on the success of digital transformation in learning. The path coefficient of 0.212, with a significance value of 0.010, indicates that organizational readiness makes a statistically significant contribution, although its coefficient is lower than that of teachers' digital competence and should not be interpreted as the factor with the greatest effect in the model. This finding emphasizes that organizational readiness is a supporting factor that needs to be considered when creating an environment conducive to the application of technology in learning. Differences in the strength of relationships among variables should also be understood by considering the institutional context, construct measurement, and the configuration of variables in the research model (Verhoef et al., 2021; Vial, 2019). In practical terms, schools need to strengthen communication regarding the objectives of digital transformation, involve teachers in planning and evaluation, clarify the allocation of responsibilities, and provide adequate technical support. These measures represent practical implications that need to be adapted to schools' needs and evaluated empirically, in line with studies on capability development and organizational transformation roadmaps (Schallmo et al., 2017; Warner & Wäger, 2019).

**CONCLUSION**

This study demonstrates that teachers' digital competence and organizational readiness have positive and significant effects on the success of digital transformation in learning at SMKN 2 Bojonegoro, whereas digital leadership does not have a statistically significant effect. Teachers' digital competence has the largest path coefficient, at 0.780, with a significance value below 0.001, followed by organizational readiness, with a path coefficient of 0.212 and a significance value of 0.010. Meanwhile, digital leadership has a path coefficient of −0.089 and a significance value of 0.395. The research model has a coefficient of determination of 75%, indicating that the three variables explain 75% of the variance in the success of digital transformation in learning, while the remaining 25% is explained by factors outside the model. These findings underscore the importance of improving teachers' digital competence and strengthening organizational readiness through practice-based training, assistance in technology implementation, collaboration among teachers, and sustained institutional support. At the same time, digital leadership needs to be directed toward providing concrete support for the implementation of change so that its role in the success of digital transformation in learning can be optimized.

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