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# The Influence of Institutional Support and Digital Self Efficacy on Teacher Motivation and Work Engagement at SMKN 1 Muaro Jambi

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**Abstract**
This study examines how institutional support and digital self-efficacy influence teachers' motivation and work engagement, using SMKN 1 Muaro Jambi as the research site. Amid the rapid integration of digital technologies into education, it is essential to understand how both organizational factors and individual capabilities affect teaching dynamics. Adopting a quantitative approach, data were gathered from 53 teachers using structured questionnaires and analysed through the Partial Least Squares Structural Equation Modelling (PLS-SEM) technique. The findings reveal that both institutional support and digital self-efficacy significantly enhance teacher motivation. Additionally, teacher motivation is found to be a strong predictor of work engagement, while institutional support also shows a direct positive relationship with engagement levels. Interestingly, digital self-efficacy does not directly influence engagement, suggesting its role is mediated through motivation. The originality of this research lies in its comprehensive model that integrates both institutional and personal resources to explain teacher engagement in a vocational education context during ongoing digital transformation. The insights from this study offer valuable input for educational stakeholders in developing strategies to strengthen teacher support systems and digital competencies.

Keywords: Digital Self Efficacy; Institutional Support; Teacher Motivation; Work Engagement



## INTRODUCTION

In recent years, education has undergone notable changes due to technological advancements and increased recognition of the importance of teacher well-being. These developments require teachers to adapt to evolving expectations and acquire new competencies aligned with digital transformation. While prior studies have consistently demonstrated the positive influence of institutional support on teacher motivation and job satisfaction (Dewi et al., 2021), and others have highlighted the importance of digital competence for teacher performance (Moreira-Fontán et al., 2019), research that combines these two factors in a unified framework remains limited particularly in the context of vocational education.

Many previous studies have examined institutional or individual influences in isolation. For example, (Xanthopoulou et al., 2009) explored the role of job and personal resources in relation to engagement, while (Zhang et al., 2021) focused on teacher motivation in professional development. However, the extent to which institutional support and digital self-efficacy interact to shape both motivation and engagement, especially among vocational teachers in Indonesia, remains underexplored. This research aims to fill that gap.

The purpose of this study is to investigate the direct and indirect relationships between institutional support, digital self-efficacy, teacher motivation, and work engagement at SMKN 1 Muaro Jambi. Specifically, it seeks to: (1) determine the influence of institutional support and digital self-efficacy on teacher motivation; (2) examine the mediating role of motivation in the relationship between those predictors and work engagement; and (3) assess whether digital self-efficacy contributes directly to engagement beyond its motivational effects. All constructs are measured through validated instruments and analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM), offering an empirically grounded contribution to the field of educational research.

The novelty of this study lies in its integrated model that bridges both institutional and individual psychological resources, applied in the context of vocational education a sector often overlooked in Indonesian educational research. This approach not only extends the findings of (Briones et al., 2023), who emphasized digital competence in engagement, but also highlights the institutional environment as a critical factor. The results offer valuable insights for policymakers and school leaders seeking to improve teacher engagement through strategic support and capacity building in the digital era.

## RESEARCH METHODS

To explore the influence of institutional support and digital self-efficacy on teacher motivation and work engagement at SMKN 1 Muaro Jambi, a framework is proposed as shown in Figure 1. The framework is proposed with five hypotheses. First, the influence of institutional support on teacher motivation. According to research (Aulia et al., 2024) support and recognition from the principal, as well as clear communication about goals and expectations, can increase teacher motivation and job satisfaction. In line with research (Zhang et al., 2021) institutional support and the school environment affect teacher motivation to participate in continuing professional development. A significant relationship was found between institutional support and increased teacher intrinsic motivation (Matthew, 2025). Therefore, it is predicted that institutional support has a positive effect on teacher motivation (H1).

In addition to institutional support, there are other variables that are predicted to influence teacher motivation, namely digital self-efficacy (Debbag & Fidan, 2022). (Wicoro, 2018) there is a very significant positive relationship between teacher self-confidence and teaching motivation. The higher the teacher's self-confidence, the higher the teacher's teaching motivation. (Fauziyyah et al., 2023) Important factors that support teacher performance include family support, stress management, and intrinsic motivation. Teachers who believe in their ability to use technology are more open to adopting new teaching methods. Therefore, digital self-efficacy is predicted to have an impact on teacher motivation (H2).

The study or research on the next variable is regarding the influence of teacher motivation on teacher work engagement. Research conducted by (Mustika & Syamsuddin, 2021) Work motivation affects teacher performance, meaning that the higher the work motivation, the higher the teacher's performance. Likewise, with teacher job satisfaction. If job satisfaction is high, it will make performance high, so that the achievement of goals is maximized, namely to improve the quality of education (Fütterer et al., 2024). (Cao et al., 2022) stated that teachers' intrinsic and extrinsic motivations contribute to their level of work engagement, with more motivated teachers showing greater resilience and commitment to their work. Based on this description, the hypothesis proposed is that teacher motivation has a positive effect on work engagement (H3).

In addition to teacher motivation, institutional support is also predicted to affect work engagement. Based on research (Lamastro, 1999) perceived organizational support is very important to improve teacher commitment and performance. This support not only increases work engagement

but also strengthens teachers' emotional ties to their educational institutions. Therefore, it is important for school management to create a supportive environment so that teachers feel appreciated and motivated.

Based on the description, the hypothesis proposed is that institutional support has an effect on work engagement (H4). The next hypothesis is that the variable digital self-efficacy is predicted to affect work engagement (H5). Based on research (Briones et al., 2023). the relationship between self-efficacy in the context of digital work, digital competence, and work engagement among secondary school teachers. The results of the study showed that increasing self-efficacy in the use of technology and digital competence contributed to increasing teacher work engagement.

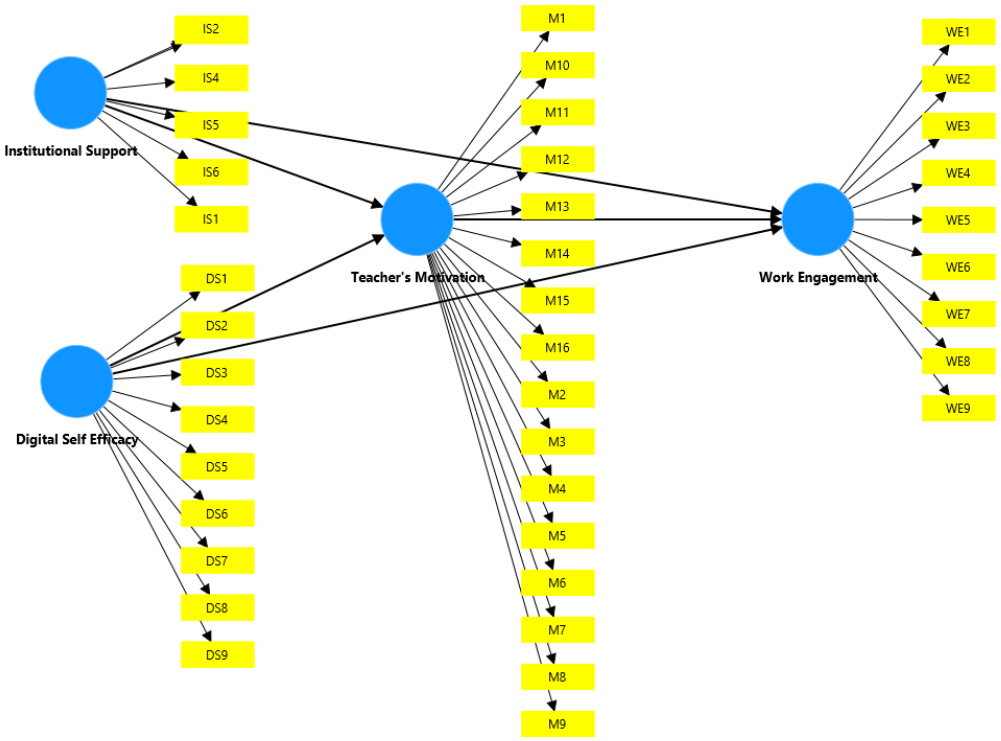


Figure 1. Proposed Model

This study uses a quantitative survey method which was carried out from 21-30 September 2024 through a google form distributed to educators at SMKN 1 Muaro Jambi. This method is the collection and analysis of numerical data to answer questions scientifically (Ghanad, 2023). Measurement and assessment of the model are carried out through data computation on Smart-PLS 3.2 which is guided by the Partial Least Squares Structural Equation Modelling (PLS SEM) procedure to be able to evaluate the relationship between variables in the conceptual model.

Forty online survey items were adapted from previous studies. Institutional support was measured using 6 items adopted from (Cao et al., 2022), Digital Self Efficacy was measured using 9 items adopted from (Nordén et al., 2017). While motivation was measured with 16 items adopted from (Darmawan, 2016), and finally work engagement was measured with 9 items based on (Klassen et al., 2012). Data were collected using a 5-level Likert scale consisting of level 1 (Strongly Disagree) to level 5 (Strongly Agree) (Table 1). The items presented are impartial, reliable, and valid and provide comprehensive data that reflect the perspectives of teachers at SMKN 1 Muaro Jambi.

Table 1. Main variable, source and construct

| Construct | Adapted From | Construct (40 item) |
|---|---|---|
| Institutional Support | Teo & Zhou (2014) | Institutional Support (IS1, IS2, IS3, IS4, IS5, IS6) |
| Digital Self-Efficacy | Norden, *et al* (2017) | Digital Self Efficacy (DS1, DS2, DS3, DS4, DS5, DS6, DS7, DS8, DS9) |
| Motivation | Gagne, *et al* (2010) | Motivation (M1, M2, M3, M4, M5, M6, M7, M8, M9, M10, M11, M12, M13, M14, M15, M16) |
| Work engagement | Klassen, *et al* (2012) | Work Engagement (WE1, WE2, WE3, WE4, WE5, WE6, WE7, WE8, WE9) |

This study used a random sampling technique, which is a method of taking samples randomly for a population consisting of members who have similar characteristics (Noor et al., 2022). The use of this technique ensures that the sample represents the population as a whole and minimizes potential bias that may arise (Makwana et al., 2023). In this study, all 53 teachers at SMKN 1 Muaro Jambi were selected to fill out the survey. Data were collected from 53 teachers who participated in this study. In terms of demographic composition, there were 71.7% female teachers, totalling 38 people, and 28.3% male teachers, totalling 15 people. Respondents consisted of various fields of study and different levels of teaching experience, with an average teaching experience of more than 10 years. This survey was conducted online via Google Form and regular monitoring was carried out during the data collection period to ensure that there was no inconsistency or missing data. Thus, all respondents provided valid and reliable contributions to the analysis to be carried out in this study.

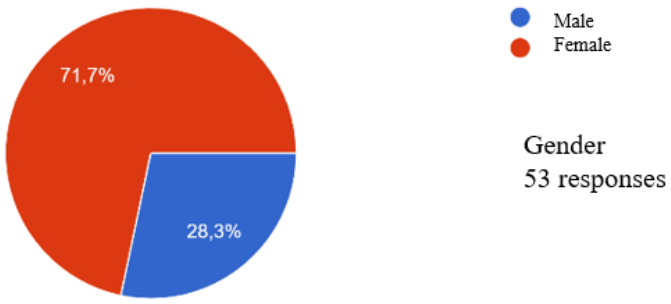


Figure 2. Frequency distribution of respondents based on gender

## RESULTS AND DISCUSSION

Below the author displays a demographic description of the participants.

Table 2. Demographics characteristics of respondents (N = 53)

| Variabel | Demographic | Frequency (N-1719) | Percentage |
|---|---|---|---|
| Age | < 40 (1) | 34 | 64.2 |
| | > 40 (2) | 19 | 35.8 |
| | Total | 53 | 100.0 |
| Gender | Male (1) | 15 | 28.3 |
| | Female (2) | 38 | 71.7 |
| | Total | 53 | 100.0 |

Table 2 is the result of descriptive statistics, where based on the demographics it can be seen that teachers at SMKN1 Muaro Jambi are divided based on age, namely <40 years (64.2%) and >40 years. (35.8%). Respondents are also divided based on gender, namely male (28.3%) and female (71.7%).

Measurement refers to the evaluation procedure to test reliability and validity. Reliability testing is carried out to see the consistency of the findings. Validity testing is used to show the truth of a finding or is a measure of how well a measuring instrument performs its function (Sürücü & Maslakçi, 2020). To test reliability, Cronbach Alpha and Composite Reliability are used. Meanwhile, to test validity, parameters such as loading factors and AVE are used to assess the average variance captured by a construct (Heale & Twycross, 2015). Measurement of the severity of multicollinearity in the regression model is carried out using the VIF (Variance Inflation Factor) test. To determine the relationship between variables, measurements are needed using the Path coefficient and to measure discriminant validity by looking at the HTMT data.

In this study, a reliability test was conducted with the aim of determining whether the items being tested would be consistent if repeated with the same measuring instrument (Emegwa, n.d.). The reliability tests carried out were composite reliability (CR) and Cronbach's Alpha (α). According to (Hair et al., 2020) the composite reliability test can be accepted if the results obtained must be higher than 0.70 (in exploratory research the range of 0.60 to 0.70 is considered acceptable). Based on table 2, the CR results were obtained > 0.70 for all variables. Therefore, the results of this composite reliability meet the requirements so that the variables can be tested to the next stage. According to (Hair et al., 2020) the internal consistency reliability value must be presented in the form of Cronbach's Alpha. Cronbach's Alpha was developed by Lee Cronbach to provide a measure of the internal consistency of a test or scale. This internal consistency describes the extent to which all items in the test. This internal consistency must be determined before the item can be used for validity testing (Tavakol & Dennick, 2011). Generally, the requirement for Cronbach's Alpha value is equal to 0.7 or above 0.7. Based on the data that has been obtained, it can be seen that the Cronbach's Alpha value is >0.7 so it can be accepted and categorized as reliable.

The first step to see if the data is valid is to look at the loading factor. An indicator can be declared valid if it has an outer loading value above 0.70. If the outer loading value of an indicator is below it, then an indicator must be removed because it does not meet the requirements or can be said to be invalid (Hair et al., 2020). Based on the loading factor test carried out, the results showed that all indicators got a value >0.70 so that they could be categorized as valid and met the requirements. Therefore, as many as 25 valid items could be continued for further testing in the PLS-SEM analysis. After the loading factor test was carried out, the AVE test was then carried out to assess the average for each variable. To calculate AVE, researchers must square the loading of each indicator on a construct and calculate its mean value (Purwanto & Sudargini, n.d.). According to (Hair et al., 2020) a value can be said to be valid if the AVE test is above 0.50. Based on the data that has been obtained, it can be seen that the variable gets a value above 0.50 so that the variable can be categorized as valid.

VIF is used to measure the standard criteria for detecting multicollinearity in linear regression involving two independent variables. Multicollinearity refers to a situation where there is a correlation between independent variables between independent variables that are not mutually independent (Akinwande et al., 2015). A VIF value >10 identifies that there is a serious multicollinearity problem between the variables. Based on table 3, it is found that all items get a value <10 so that it is certain that the data obtained does not have a multicollinearity problem.

Table 3. Description variable, loading factor, Cronbach's, CR, AVE, dan VIF

| Variable | Item | Loading | A | CR | AVE | VIF |
|---|---|---|---|---|---|---|
| Institutional support | IS1 | 0.821 | 0.907 | 0.916 | 0.687 | 4.365 |
| | IS2 | 0.900 | | | | 7.568 |
| | IS3 | 0.911 | | | | 5.751 |
| | IS4 | 0.761 | | | | 2.138 |
| | IS5 | 0.729 | | | | 2.421 |
| | IS6 | 0.834 | | | | 2.977 |

| Variable | Item | Loading | A | CR | AVE | VIF |
|---|---|---|---|---|---|---|
| Digital Self Efficacy | DS1 | 0.871 | 0.955 | 0.958 | 0.737 | 4.906 |
| | DS2 | 0.879 | | | | 5.897 |
| | DS3 | 0.906 | | | | 9.185 |
| | DS4 | 0.865 | | | | 4.727 |
| | DS5 | 0.889 | | | | 6.182 |
| | DS6 | 0.844 | | | | 4.408 |
| | DS7 | 0.921 | | | | 5.849 |
| | DS8 | 0.809 | | | | 3.035 |
| | DS9 | 0.727 | | | | 2.577 |
| Motivation | M1 | 0.734 | 0.913 | 0.925 | 0.438 | 4.225 |
| | M2 | 0.726 | | | | 5.774 |
| | M3 | 0.653 | | | | 3.882 |
| | M4 | 0.455 | | | | 3.645 |
| | M5 | 0.634 | | | | 3.853 |
| | M6 | 0.508 | | | | 2.681 |
| | M7 | 0.777 | | | | 3.382 |
| | M8 | 0.741 | | | | 3.694 |
| | M9 | 0.531 | | | | 2.963 |
| | M10 | 0.492 | | | | 2.492 |
| | M11 | 0.672 | | | | 2.384 |
| | M12 | 0.648 | | | | 3.876 |
| | M13 | 0.786 | | | | 3.364 |
| | M14 | 0.697 | | | | 4.155 |
| | M15 | 0.653 | | | | 4.420 |
| | M16 | 0.757 | | | | 5.550 |
| Work Engagement | WE1 | 0.865 | 0.904 | 0.926 | 0.580 | 3.631 |
| | WE2 | 0.867 | | | | 3.648 |
| | WE3 | 0.909 | | | | 5.283 |
| | WE4 | 0.816 | | | | 2.731 |
| | WE5 | 0.725 | | | | 1.906 |
| | WE6 | 0.829 | | | | 2.813 |
| | WE7 | 0.693 | | | | 1.986 |
| | WE8 | 0.548 | | | | 1.973 |
| | WE9 | 0.481 | | | | 1.700 |

Path coefficient shows the magnitude of the direct influence of a variable on another variable, if other related influences have been taken into account (Kwong & Wong, 2013).

Table 4. Path coefficient

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | Digital Self Efficacy → Teacher's Motivation | 0.581 | 0.577 | 0.106 | 5.472 | p < .01 | Yes |
| 2 | Digital Self Efficacy → Work Engagement | 0.102 | 0.074 | 0.167 | 0.608 | p >.01 | No |
| 3 | Institutional Support → Teacher's Motivation | 0.269 | 0.293 | 0.111 | 2.432 | p < .01 | Yes |
| 4 | Institutional Support → Work Engagement | 0.294 | 0.279 | 0.140 | 2.106 | p < .01 | Yes |
| 5 | Teacher's Motivation → Work Engagement | 0.502 | 0.547 | 0.145 | 3.464 | p < 0.1 | Yes |

The table shows that only the digital self-efficacy value on work engagement gets P > 0.1. This means that only the digital self-efficacy variable is not significantly positively related to the work engagement variable. HTMT is a measurement used to assess discriminant validity (Rasoolimanesh, 2022). The accepted HTMT limit value is <0.9 (Roemer et al., 2021). Based on table 4, it can be seen that the HTMT value obtained ranges from 0.807 - 0.893 (<0.9) so that HTMT is acceptable.

Table 5. Ratio of Heterotrait-Monotrait (HTMT)

| | Digital Self Efficacy | Institutional Support | Motivation | Work Engagement |
|---|---|---|---|---|
| Digital Self Efficacy | | | | |
| Institutional Support | 0.780 | | | |
| Motivation | 0.809 | 0.735 | | |
| Work Engagement | 0.754 | 0.774 | 0.815 | |

R Square is a value that explains how much influence the independent variable (exogenous) has on the dependent variable (endogenous). The value of the effect or influence ranges from 0 to 1. Values of 0.75, 0.50, and 0.25 each describe a substantial, moderate or weak level of accuracy (Hair et al., 2020). In this study, it is known that motivation and work engagement act as dependent variables. Based on the data, the results of the R Square motivation of 0.638 or 63.8% of the motivation variable can be explained by the institutional support and digital self-efficacy variables. While the R Square work engagement of 0.677 or 65.7% of the work engagement variable can be explained by the institutional support, digital self-efficacy, and motivation variables. These results are included in the large/substantial category.

Table 6. R square ($R^2$)

| | R Square | R Square Adjusted |
|---|---|---|
| Motivation | 0.638 | 0.623 |
| Work Engagement | 0.677 | 0.657 |

The F Square value is used to measure the change in the R Square value if one of the variables is removed from the model in order to determine whether the removed variable has a substantive impact on the dependent variable (endogenous). The F Square value of 0.02 includes a small effect, 0.15 includes a medium effect, and 0.35 includes a large effect (Hair et al., 2020). Based on table 7, it is known that the ability of the digital self-efficacy variable to explain the motivation variable (F2 = 0.440) and work engagement (F2 = 0.010) is relatively small. The ability of institutional support to explain motivation is relatively small (F2 = 0.094) while institutional support is able to influence work engagement (F2 = 0.115). The last is the ability of the motivation variable to explain work engagement which is relatively moderate with an F2 value of 0.282.

Table 7. F square ($F^2$)

| | Digital Self Efficacy | Institutional Support | Motivation | Work Engagement |
|---|---|---|---|---|
| Digital Self Efficacy | | | 0.440 | 0.010 |
| Institutional Support | | | 0.094 | 0.115 |
| Motivation | | | | 0.282 |
| Work Engagement | | | | |

The analysis demonstrates that digital self-efficacy exerts a substantial and statistically significant influence on teacher motivation (β = 0.581, T = 5.472, p < 0.01). This suggests that teachers who feel confident in their digital competencies are more likely to experience intrinsic drive and professional enthusiasm in carrying out their duties. This result resonates with (Scherer et al., 2021), who observed that technological confidence enhances teachers' motivation by fostering autonomy and enabling effective use of digital tools in instructional contexts. Similarly, (Zupančič, 2022) emphasized the need for continuous digital training as a strategic effort to build this form of efficacy. Consequently, strengthening digital self-efficacy should be regarded not merely as a response to technological demands, but as a key factor in maintaining motivational energy among educators.

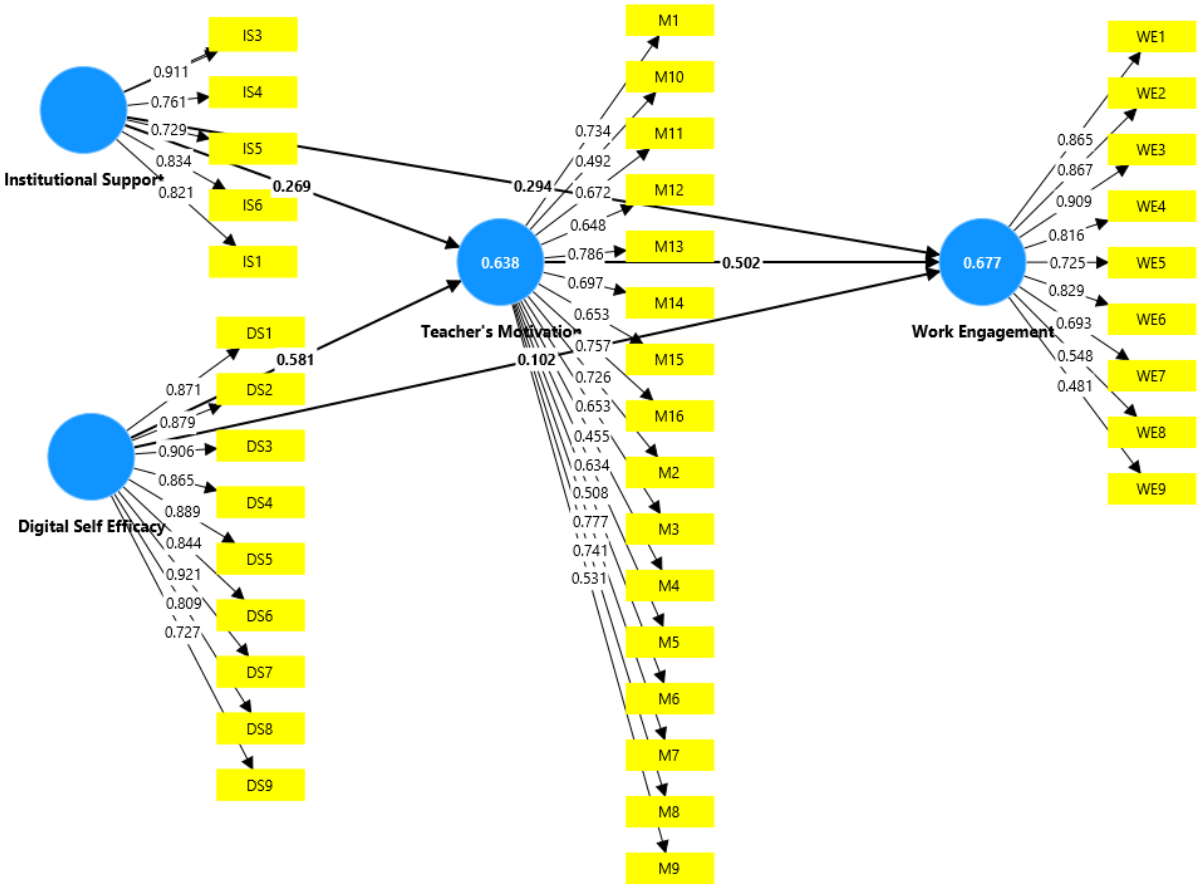


Figure 3. Evaluation of Structure Model

Despite this, digital self-efficacy did not significantly predict work engagement (β = 0.102, T = 0.608, p > 0.01), indicating that proficiency with digital tools does not automatically translate to a deeper sense of involvement or dedication to work. This finding aligns with (Xanthopoulou et al., 2009), who posited that engagement is more directly affected by job resources, institutional climate, and emotional support rather than by personal capabilities alone. Therefore, efforts to improve teacher engagement must be systemic, addressing broader organizational factors alongside individual competencies.

In contrast, institutional support showed a positive and significant relationship with teacher motivation (β = 0.269, T = 2.432, p < 0.01). This reinforces the notion that when educational institutions actively provide encouragement, access to teaching resources, and a supportive atmosphere, teachers develop a stronger sense of value and purpose in their professional roles. This result echoes the findings of (Fütterer et al., 2024; Skaalvik & Skaalvik, 2010), who asserted that institutional appreciation fosters motivational resilience and psychological safety in the workplace.

Further, institutional support also significantly influenced work engagement ($\beta = 0.294$, $T = 2.106$, $p < 0.01$), affirming the role of organizational support as a driver of teacher commitment, energy, and focus. Teachers who perceive strong backing from their institutions are more likely to invest in their teaching tasks with vigour and sustained dedication. This is in line with the findings of (Chinomona & Moloi, 2014; Wang & Shakibaei, 2025), who emphasized the role of institutional environments in reinforcing engagement, particularly in contexts characterized by rapid educational and technological shifts.

In addition, the study found that teacher motivation plays a significant role in enhancing work engagement ($\beta = 0.502$, $T = 3.464$, $p < 0.1$). Teachers who are intrinsically motivated tend to be more enthusiastic, goal-oriented, and emotionally invested in student learning processes. The theoretical foundation provided by (Ryan & Deci, 1985) supports this, suggesting that intrinsic motivation is a prerequisite for authentic engagement, enabled through autonomy, competence, and meaningful recognition. These findings suggest the importance of motivational interventions such as constructive feedback, collaborative leadership, and goal clarity to foster sustained teacher engagement in practice (Qin et al., 2025; Sun et al., 2020).

The outcomes of this study may be carefully generalized to similar vocational education settings, particularly those facing comparable challenges in institutional capacity and digital integration. The novelty of this research lies in its conceptual framework, which unites both internal (digital self-efficacy) and external (institutional support) predictors in explaining teacher motivation and engagement an approach that has not been extensively explored within the Indonesian vocational education context. By highlighting the dual pathways through which motivation and engagement are shaped, this study offers a more comprehensive understanding of how educators' professional experiences can be supported and sustained.

Nonetheless, this study is subject to certain limitations. First, data collection was confined to a single institution (SMKN 1 Muaro Jambi), limiting the extent to which findings can be generalized across broader populations. Second, reliance on self-reported measures introduces the risk of social desirability bias, which may affect the authenticity of responses. Third, the study did not incorporate potential moderating variables such as age, length of teaching experience, or subject specialization that could influence the dynamics between constructs. Future research is encouraged to address these limitations by including a more diverse sample, employing mixed-methods designs, and adopting longitudinal approaches to examine changes in motivation and engagement over time.

## CONCLUSION

This study provides evidence that digital self-efficacy, institutional support, and teacher motivation are influential components in determining the level of teacher engagement, particularly within vocational education settings. The analysis indicates that digital self-efficacy has a notable impact on enhancing teacher motivation, although it does not directly lead to higher engagement. This suggests that motivation functions as an intermediary variable that channels the influence of personal competence into professional commitment. Meanwhile, institutional support demonstrates a dual role by fostering both motivation and engagement, underscoring the necessity of a supportive and resource-enriched organizational climate. Motivation itself proves to be a critical factor that sustains teacher engagement, reinforcing the importance of nurturing internal drive through opportunities for professional growth, autonomy, and acknowledgment.

Building on these findings, the study contributes a conceptual proposition that integrates personal and institutional elements through motivational pathways. This framework offers a new perspective for interpreting how engagement develops in technologically evolving educational environments. As a practical implication, educational stakeholders are encouraged to prioritize structured digital competency programs, establish consistent institutional support systems, and embed motivational principles into school leadership practices. Future research should consider applying this model across varied institutional types and investigate additional contextual or demographic variables that may influence its effectiveness.

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