

THE EFFECT OF PSYCHOLOGICAL WELL BEING ON WORK ENGAGEMENT WITH WORK ETHIC AS A MEDIATING VARIABLE

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Article history: received 01 March 2026; revised 15 March 2026; accepted 15 April 2026

DOI: <https://doi.org/10.33751/jhss.v10i01.446>

Abstract. This research is motivated by the low work engagement of teachers in several private elementary schools in Percut Sei Tuan District, which is suspected to be related to psychological well-being and work ethic. The study aims to analyze the influence of psychological well-being on work ethic and work engagement, as well as to test the mediating role of work ethic. The study used a quantitative approach with an explanatory research type. Primary data were obtained through a Likert scale that measures psychological well-being, work ethic, and work engagement in private elementary school teachers, then analyzed using Confirmatory Factor Analysis, path analysis, and the Sobel test. The results showed that psychological well-being significantly influences work ethic and work engagement, and work ethic mediates the relationship. These findings emphasize the importance of psychological well-being in improving teacher professional engagement.

Keywords: Work Engagement, Teachers, Psychological Well-Being, Work Ethic

I. INTRODUCTION

Teacher work engagement is a crucial indicator in determining the quality of the learning process in private elementary schools, particularly within the context of educational human resource management [1], [2]. Empirical realities observed in several private elementary schools in Percut Sei Tuan District reveal symptoms of low teacher work engagement, as indicated by a lack of enthusiasm in teaching, minimal participation in school activities, and a tendency to perform duties merely to fulfill administrative obligations. This condition not only affects instructional effectiveness but also has implications for the quality of teacher-student interaction and students' academic achievement [3], [4]. Teachers who are less psychologically engaged tend to exhibit low work energy, limited dedication, and a diminished sense of professional commitment as educators [5], [6]. This situation warrants serious attention, as teachers are central actors in the education system responsible for shaping the competence and character of younger generations [7], [8]. If work engagement remains suboptimal, educational goals emphasizing the holistic development of students' potential may not be fully achieved [9], [10]. Therefore, the phenomenon of low teacher work engagement in private school environments needs to be systematically examined to identify the underlying psychological factors [11], [12].

Theoretically, work engagement from an organizational psychology perspective is understood as a positive condition

characterized by vigor, dedication, and absorption, influenced by the balance between job demands and job resources as described in the Job Demands-Resources Model [13], [14]. Within this framework, psychological well-being is positioned as a personal resource capable of enhancing individuals' energy and motivation at work. Numerous studies have demonstrated that psychological well-being positively correlates with work engagement, as individuals with self-acceptance, a sense of purpose in life, and healthy social relationships tend to exhibit greater enthusiasm in performing their professional roles [15], [16]. However, most studies still focus on the direct relationship between psychological well-being and work engagement without examining the underlying psychological mechanisms that explain how well-being translates into engaged work behavior. Meanwhile, work ethic, as a system of values and beliefs regarding the meaning of work, is believed to play a role in shaping discipline, responsibility, and task commitment [17], [18]. Nevertheless, studies integrating psychological well-being, work ethic, and work engagement into a single mediation model particularly among private elementary school teachers in Indonesia remain relatively limited. This gap indicates the need for research capable of comprehensively explaining the structural relationships among these variables.

Based on the empirical phenomena and literature gap, this study aims to analyze the causal relationships among psychological well-being, work ethic, and work engagement

among private elementary school teachers in Percut Sei Tuan District. Specifically, the study seeks to examine the influence of psychological well-being on teachers' work ethic as an internal psychological resource that shapes professional attitudes [19], [20]. In addition, this study aims to investigate the effect of work ethic on work engagement to understand how a strong system of work values can enhance enthusiasm, dedication, and involvement in teaching activities. The subsequent objective is to analyze the direct influence of psychological well-being on work engagement in order to determine the contribution of psychological well-being to teachers' work energy and commitment [21]. Furthermore, this study explicitly tests the mediating role of work ethic in the relationship between psychological well-being and work engagement to explain the psychological mechanisms underlying the interaction among these three variables. Through this systematic formulation of objectives, the study is expected to provide a clear empirical overview of the factors influencing teacher work engagement within the context of private primary education.

This study is important because teacher work engagement is influenced not only by external factors such as workload and school policies but also by internal psychological conditions that shape professional attitudes and behaviors [22]. High psychological well-being is believed to enhance teachers' energy, optimism, and mental resilience in dealing with job demands, thereby fostering the development of a stronger work ethic. Subsequently, a robust work ethic will reinforce teachers' commitment and dedication in carrying out educational responsibilities, ultimately improving overall work engagement. Without adequate psychological well-being, teachers are at risk of experiencing emotional exhaustion and decreased motivation, which may weaken their work-related values. Therefore, the hypothesis proposed in this study states that psychological well-being has a significant effect on both work ethic and work engagement, and that work ethic mediates the relationship between psychological well-being and teacher work engagement. This argument is grounded in the assumption that psychological well-being serves as the primary foundation for building a strong work value system and optimal professional engagement.

Psychological Well-Being

Psychological well-being is a central concept in positive psychology that refers to an individual's optimal condition in functioning both psychologically and socially throughout life [23], [24]. This concept does not merely emphasize the absence of mental disorders but rather highlights an individual's ability to function effectively, possess a sense of life meaning, and continuously develop personal potential. From a eudaimonic perspective, psychological well-being is understood as self-realization reflected through self-acceptance, positive relationships with others, autonomy, environmental mastery, purpose in life, and personal growth [25]. For teachers, psychological well-being implies the ability to manage work-related stress, maintain positive emotions, and sustain professional commitment despite facing various administrative and pedagogical demands [26]. Psychological well-being is also closely associated with the quality of individuals' subjective experiences, including life

satisfaction and a sense of meaningfulness in daily activities. Within the context of educational organizations, teachers' psychological well-being serves as a crucial foundation for creating a productive and supportive work environment. Therefore, psychological well-being is understood not only as a stable mental condition but also as a psychological resource that promotes sustainable performance and professional engagement.

The manifestation of psychological well-being can be categorized into several key dimensions that comprehensively represent the quality of an individual's psychological functioning. The first dimension is self-acceptance, reflected in the individual's ability to positively acknowledge personal strengths and weaknesses [27]. The second dimension is positive relationships with others, demonstrated through warm, empathetic, and mutually supportive social interactions. The third dimension is autonomy, defined as the ability to make independent decisions without excessive social pressure. The fourth dimension is environmental mastery, which reflects the individual's capacity to effectively manage surrounding demands and resources [28]. The fifth dimension is purpose in life, indicating direction and meaning in both professional and personal activities. The final dimension is personal growth, which refers to a commitment to continuous learning and development over time. Among elementary school teachers, these six dimensions are manifested through professional attitudes, classroom management skills, resilience in dealing with work-related pressures, and enthusiasm for participating in training and instructional innovations. By understanding this categorization, psychological well-being can be systematically measured and analyzed as a variable contributing to teachers' work behavior.

Work Ethic

Work ethic refers to a set of values, beliefs, and attitudes that shape individuals' perspectives toward their work and influence their professional behavior [29]. This concept emphasizes that work is not merely an activity to obtain material rewards but also a means of self-actualization and social contribution. Work ethic is reflected in commitment, discipline, responsibility, integrity, and an orientation toward the quality of outcomes [30]. In the teaching context, work ethic represents the extent to which individuals perceive the teaching profession as a moral calling and social responsibility in shaping future generations [31]. Teachers with a strong work ethic demonstrate dedication in preparing instructional materials, consistency in adhering to school regulations, and sincerity in supporting students' development. Work ethic is also associated with an internal drive to achieve and contribute optimally, even in the absence of direct supervision. Therefore, work ethic is understood as a psychological force that consistently directs meaningful work behavior. With a strong value foundation, work ethic serves as a driving force for sustainable professional attitudes within the educational environment.

Work ethic can be categorized through several aspects that reflect individuals' behavior and orientation toward their work [32]. The first aspect is discipline and responsibility, demonstrated through adherence to regulations and the timely completion of tasks [33]. The second aspect is integrity and

honesty, referring to consistency between moral values and actual actions in performing work duties. The third aspect is hard work and perseverance, indicated by maximum effort and resilience in overcoming challenges. The fourth aspect is quality orientation, which represents a commitment to achieving high standards of performance. The fifth aspect is service orientation, characterized by a willingness to provide benefits to others through one's work. The sixth aspect is teamwork and collaboration, reflecting the ability to interact productively within a team setting. In the context of elementary school teachers, the manifestation of work ethic is evident in teaching readiness, active participation in school activities, and commitment to students' success. By understanding this categorization, work ethic can be analyzed as a psychological variable that significantly contributes to positive work behavior.

Work Engagement

Work engagement is a positive psychological condition that reflects an individual's full connection with their work [34]. This concept emphasizes the presence of energy, dedication, and deep immersion in professional activities. Work engagement does not merely refer to physical presence in the workplace but also includes cognitive, emotional, and behavioral involvement in task performance. Teachers with high work engagement demonstrate enthusiasm in teaching, full attention to students' needs, and a commitment to continuously improving instructional quality. Work engagement is also associated with intrinsic motivation that enables individuals to feel proud of and inspired by their work. In educational settings, this condition serves as a critical indicator as it influences the quality of teacher-student interactions and the effectiveness of the learning process. Work engagement is considered the opposite of burnout, as engaged individuals tend to possess greater positive energy and mental resilience. Therefore, work engagement is understood as a psychological construct that reflects the overall quality of an individual's relationship with their work.

The manifestation of work engagement can be explained through three primary dimensions that represent the quality of an individual's connection with their work. The first dimension is vigor, which refers to high levels of energy and mental resilience in performing professional tasks. The second dimension is dedication, which reflects a sense of pride, inspiration, and meaningfulness derived from one's work. The third dimension is absorption, defined as a state in which individuals become fully immersed in their work activities to the extent that time seems to pass quickly. Among elementary school teachers, vigor is evident in their daily enthusiasm for teaching, dedication is reflected in their commitment to students' success, and absorption is demonstrated through full concentration during the learning process. These three dimensions are interrelated and collectively form a psychological condition that drives optimal work performance. Work engagement is also characterized by a tendency to perform extra-role behaviors, such as providing additional guidance or voluntarily participating in professional development training. By understanding these manifestations, work engagement can be systematically measured and analyzed as a key indicator of human resource quality within educational organizations.

II. RESEARCH METHODS

This study focuses on the phenomenon of low teacher work engagement in several private elementary schools in Percut Sei Tuan District, as indicated by a lack of enthusiasm in teaching, minimal participation in school activities, and a tendency to perform duties merely to fulfill administrative obligations. This phenomenon serves as the primary object of investigation because teacher work engagement has direct implications for the quality of instruction and the effectiveness of educational processes at the primary level [35]. As key actors in the education system, teachers are expected not only to be physically present in the classroom but also cognitively and emotionally engaged in performing their professional responsibilities. However, field observations indicate that some teachers have yet to demonstrate optimal levels of vigor, dedication, and absorption in their work. This condition suggests that internal psychological factors particularly psychological well-being and work ethic may play a role in shaping work engagement. Therefore, this study examines the relationship among psychological well-being, work ethic, and work engagement as its primary focus in order to understand the mechanisms influencing the quality of teachers' professional engagement within private school environments.

This study employs a quantitative approach with an explanatory research design aimed at examining causal relationships among the investigated variables [36]. The quantitative approach was selected because this study seeks to objectively measure psychological constructs through standardized instruments and analyze structural relationships among variables using inferential statistical techniques. The explanatory research design is utilized to explain the influence of psychological well-being on work engagement, with work ethic serving as a mediating variable within an integrated relational model. The data used in this study consist of both primary and secondary data. Primary data were collected directly from respondents through Likert-scale-based psychological instruments measuring levels of psychological well-being, work ethic, and teacher work engagement. Meanwhile, secondary data were obtained from school documents and relevant academic literature to support the conceptual framework and interpretation of research findings. The combination of these two types of data enables a more comprehensive empirical analysis of the phenomenon of teacher work engagement.

The primary data source in this study consists of private elementary school teachers in Percut Sei Tuan District who serve as research respondents. The study population includes all teachers in private elementary schools within the area, with the sample determined based on specific criteria aligned with the quantitative research design. Respondents were selected because they directly experience the dynamics of professional work within the context of primary education, thereby providing empirical insights into their levels of psychological well-being, work ethic, and work engagement. Data were collected through the distribution of research instruments designed to measure each variable in a specific and structured manner. In addition to the main respondents, supplementary information was obtained from school administrative

documents to enhance understanding of teachers' work contexts. By positioning teachers as the primary data source, this study seeks to capture an accurate and representative depiction of psychological conditions and work behavior within private educational environments.

The research process was conducted through several systematic stages, beginning with the development of research instruments, pilot testing of measurement scales, and subsequent field data collection. The research instruments consisted of Likert-scale-based psychological measures designed to assess three main variables: psychological well-being, work ethic, and work engagement. Prior to broader application, the instruments underwent validity and reliability testing to ensure that each item consistently and accurately measured the intended constructs. Following the pilot testing and instrument revision phase, questionnaires were distributed to the selected respondents. Data collection was conducted directly by providing respondents with an explanation of the research objectives while ensuring the confidentiality of their responses. This stage was intended to obtain objective data reflecting teachers' actual psychological conditions. The entire research process was carried out in a structured manner and in accordance with scientific procedures to maintain the quality and integrity of the collected data.

Data analysis in this study was conducted in a gradual and comprehensive manner to ensure the accuracy of hypothesis testing results. The initial stage involved descriptive statistical analysis to describe data characteristics and the score distribution of each variable. This was followed by a normality test to ensure that the data met the assumptions required for parametric analysis. To test construct validity, Confirmatory Factor Analysis (CFA) was employed to evaluate the measurement model through indicators such as factor loading, composite reliability, and cross-loading. Once the measurement model met the established criteria, the analysis proceeded to the structural model to examine relationships among variables using path coefficients. The R-square value was used to determine the contribution of independent variables to the dependent variable. In addition, the mediating role of work ethic was tested using the Sobel test to confirm the significance of the indirect effect between psychological well-being and work engagement. Through this systematic and integrated analytical approach, the study provides valid empirical insights into the causal relationships among the investigated variables.

III. RESULTS AND DISCUSSION

A. Descriptive Statistical Analysis

Descriptive analysis presents the profile of the research data and the relationships among the variables used in the study. It describes the characteristics or conditions of the respondents, which need to be considered as supplementary information to facilitate the interpretation of the research findings [37]. The data collection method employed in this study involved distributing questionnaires to the respondents. The object of the study was the teaching profession in formal schools, with a total of 182 participants. Subsequently, data

analysis was conducted based on the respondents' perceptions reflected in their answers to the questions or statements presented in the research questionnaire.

The categorization of respondents' answers to questions related to the research variables aims to identify respondents' perceptions associated with the research title, namely: The Effect of Psychological Well-Being on Work Engagement with Work Ethic as a Mediating Variable among Teachers in Percut Sei Tuan. Based on the results of the questionnaire responses, the respondents' assessments of the variables of Psychological Well-Being, Work Engagement, and Work Ethic can be described.

The assessment of the research variables was conducted using descriptive statistics in the form of the arithmetic mean to provide a statistical description of each variable. These descriptive statistics were processed using Microsoft Excel, after which respondents' answers were categorized and classified by first calculating the interval (i) using the following formula:

$$i = \frac{\text{Highest score} - \text{Lowest score}}{\sum \text{category}}$$

$$= \frac{4-1}{3}$$

$$i = 1$$

Based on this formula, 3 categories can be created, namely:

Category	Average value
(I)	(II)
Low	1.00 – 2.33
Medium	2.34 – 3.67
High	3.68 – 4.00

a) Categorization of Respondents' Answers for the Psychological Well Being (X) variable

The Psychological Well-Being variable in this study was measured using six dimensions:

- Self-Acceptance Aspect, with the indicator of the ability to understand oneself. The Self-Acceptance aspect was measured using four questionnaire items, with two statements representing favourable items and two representing unfavourable items.
- Interpersonal Relationships Aspect, with the indicator of interpersonal relationships. This aspect was measured using five questionnaire items, with two statements representing favourable items and three representing unfavourable items.
- Autonomy Aspect, with the indicator of independence, measured using four questionnaire items, with two statements representing favourable items and two representing unfavourable items.
- Environmental Mastery Aspect, with the indicator of adaptability, measured using four questionnaire items, with two statements representing favourable items and two representing unfavourable items.
- Purpose in Life Aspect, with the indicator of achievement, measured using four questionnaire items, with two statements representing favourable items and two representing unfavourable items.

- f) Personal Growth Aspect, with the indicator of positive change, measured using four questionnaire items, with two statements representing favourable items and two representing unfavourable items.

Furthermore, the categorization of respondents' answers or research subjects for the Psychological Well Being variable can be seen in Table 2 below:

Table 2. Categorization of Respondents' Answer Scores for Psychological Well Being

No	Aspects/Dimensions	Average	Category
1.	Self-Acceptance	2,63	Currently
2.	Interpersonal Relationships	3,11	Currently
3.	Autonomy	3,17	Currently
4.	Environmental Mastery	3,29	Currently
5.	Life Purpose	3,36	Currently
6.	Personal Growth	3,60	Currently

Based on Table 2, the categorization of respondents' answers shows that the Personal Growth dimension has the highest mean score of 3.60, followed by the Purpose in Life dimension with a mean score of 3.36. The Environmental Mastery dimension has a mean score of 3.29, while the Autonomy dimension has a mean score of 3.17. This is followed by the Interpersonal Relationships dimension with a mean score of 3.11, and finally the Self-Acceptance dimension with a mean score of 2.63.

The overall mean score of the Psychological Well-Being variable indicates that teachers in Percut Sei Tuan demonstrate a "moderate" level of understanding in responding to the questionnaire items related to the Psychological Well-Being variable examined in this study.

b) Categorization of Respondents' Answers on Work Ethic (M)

The Work Ethic variable in this study was measured using seven aspects/dimensions, namely:

- Discipline and Responsibility Aspect, with indicators including compliance with rules and willingness to accept consequences. This aspect was measured using three questionnaire items, with two statements representing favourable items and one representing an unfavourable item.
- Integrity and Honesty Aspect, with indicators including fairness in assessing students and adherence to professional ethical codes. This aspect was measured using three questionnaire items, with two statements representing favourable items and one representing an unfavourable item.
- Hard Work and Perseverance Aspect, with indicators including not giving up easily and maintaining focus on goals despite obstacles. This aspect was measured using four questionnaire items, with three statements representing favourable items and one representing an unfavourable item.
- Orientation toward Quality Aspect, with the indicator of commitment to delivering the best possible work outcomes. This aspect was measured using three questionnaire items, with two statements representing favourable items and one representing an unfavourable item.
- Service Orientation Aspect, with indicators including dedication in guiding students and providing attention

to their development. This aspect was measured using three questionnaire items, with two statements representing favourable items and one representing an unfavourable item.

- Teamwork and Collaboration Aspect, with the indicator of the ability to work cooperatively with colleagues. This aspect was measured using three questionnaire items, with two statements representing favourable items and one representing an unfavourable item.
- Positive Attitude toward Work Aspect, with indicators including enthusiasm in performing tasks and perceiving work as a calling rather than merely an obligation. This aspect was measured using three questionnaire items, with two statements representing favourable items and one representing an unfavourable item.

The categorization of respondents' or research subjects' answers for the Work Ethic variable can be seen in Table 3 as follows:

Table 3 Categorization of Respondents' Answer Scores for Work Ethic

No	Aspects/Dimensions	Average	Category
1.	Discipline and Responsibility	3,68	High
2.	Integrity and Honesty	3,08	Medium
3.	Hard Work and Perseverance	3,67	Medium
4.	Orientation and Quality	3,26	Medium
5.	Passion for Service	3,08	Medium
6.	Cooperation and Collaboration	3,68	High
7.	Positive Attitude Toward Work	3,08	Medium

Based on Table 4.3, it can be observed that the categorization of respondents' answers shows that the Discipline and Responsibility and Teamwork and Collaboration dimensions have the highest mean score of 3.68. This is followed by the Hard Work and Perseverance dimension with a mean score of 3.67. The Orientation toward Quality dimension has a mean score of 3.26. Furthermore, the Integrity and Honesty, Service Orientation, and Positive Attitude toward Work dimensions each have a mean score of 3.08.

Overall, all aspects of the Work Ethic variable fall within the "moderate" to "high" category. This indicates that the mean scores of the Work Ethic variable suggest that most teachers in Percut Sei Tuan have a good to very good understanding of the statements or questions related to the Work Ethic variable presented in this study.

c) Categorization of Respondents' Answers on the Teacher Work Engagement Variable (Y)

The Teacher Work Engagement variable in this study was measured based on three aspects/dimensions, namely:

- Vigor Aspect, with the indicator of "Not giving up easily," measured using a total of six questionnaire items, consisting of four favourable items and two unfavourable items. In addition, the indicator of "Willingness to make an effort" was measured using a total of five questionnaire items, consisting of three favourable items and two unfavourable items.

Therefore, the overall Vigor aspect was measured using eleven items.

- b) Dedication Aspect, with the indicator of "Pride in work," measured using a total of five questionnaire items, consisting of three favourable items and two unfavourable items. Additionally, the indicator of "Feeling challenged" was measured using a total of four questionnaire items, consisting of two favourable items and two unfavourable items. Thus, the overall Dedication aspect was measured using nine items.
- c) Absorption Aspect, with the indicator of "Focus," measured using a total of five questionnaire items, consisting of three favourable items and two unfavourable items. Furthermore, the indicator of "Being immersed in work" was measured using a total of five questionnaire items, consisting of three favourable items and two unfavourable items. Therefore, the overall Absorption aspect was measured using ten items.

The categorization of respondents' or research subjects' answers for the Teacher Work Involvement variable can be seen in Table 4 as follows:

Table 4. Categorization of Respondents' Answer Scores for Teacher Work Involvement

No	Aspects/Dimensions	Average	Category
1.	Vigor	3,01	Medium
2.	Dedication	2,91	Medium
3.	Absorption	3,06	Medium

Based on Table 4, it can be seen that the categorization of respondents' answers in the "Absorption" dimension has the highest value with an average of 3.06. Followed by the "Vigor" dimension with an average of 3.01. Then the "Dedication" dimension with an average value of 2.91. The results of the descriptive value test on the Teacher Work Involvement variable explain that teachers in Percut Sei Tuan have a good understanding of the questionnaire statements on the Teacher Work Involvement variable proposed in this study.

B. Inferential Analysis

The data analysis technique employed in this study utilized a structural equation modeling approach through Structural Equation Modeling (SEM), which is a multivariate technique that combines aspects of factor analysis and multiple regression. This approach enables researchers to simultaneously test a series of interrelated dependency relationships among measured variables and latent constructs, as well as among the latent constructs themselves [38]. The SEM analysis was conducted using a two-stage approach, namely measurement model analysis and structural equation model analysis. To facilitate the process and ensure the accuracy of the computational results, statistical software was used in conjunction with SmartPLS (SEM-PLS).

Data analysis was performed using the Partial Least Squares (PLS) method with SmartPLS version 3.0 software. PLS is one of the methods for estimating Structural Equation Modeling (SEM) and, in this context, offers advantages

compared to other SEM techniques. SEM provides greater flexibility in research that links theoretical frameworks with empirical data and is capable of conducting path analysis involving latent variables, making it widely used by researchers in the social sciences. Partial Least Squares (PLS) is a robust analytical method as it is not based on numerous assumptions. The data are not required to follow a multivariate normal distribution (indicators with categorical, ordinal, interval, and ratio scales can be incorporated within the same model), and large sample sizes are not mandatory [39].

In addition to confirming theoretical models, Partial Least Squares (PLS) can also be used to explain the presence or absence of relationships among latent variables. Therefore, in prediction-oriented research, PLS is particularly suitable for data analysis as it allows for both theory confirmation and the examination of structural relationships among latent constructs.

Partial Least Squares (PLS) is also capable of simultaneously analyzing constructs formed by reflective and formative indicators, which cannot be achieved by covariance-based SEM as it may result in an unidentified model. The selection of the Partial Least Squares (PLS) method in this study was based on the consideration that three latent variables were formed using reflective indicators and measured through a reflective second-order factor approach.

The reflective model assumes that constructs or latent variables influence their indicators, whereby the causal direction flows from the construct to the indicators or manifest variables [39], thus requiring confirmation of the relationships among latent variables. The approach used to analyze the second-order factor was the repeated indicators approach, also known as the hierarchical component model. Although this approach increases the number of manifest variables or indicators, it offers the advantage that the model can be estimated using the standard PLS algorithm.

a) Data Quality Testing

In this study, data quality was assessed using a data normality test (assessment of normality).

1) Sample Size

The sample size meets the SEM assumption requirements, consisting of 250 data points, which falls within the recommended range of 100–200 observations.

2) Data Normality

In the AMOS output, the normality test was conducted by comparing the C.R (Critical Ratio) value in the assessment of normality with the critical value of ± 2.58 at the 0.01 significance level.

b) Analysis of the Variable Measurement Model (Measurement Model) using the Confirmatory Factor Analysis (CFA) technique

This section describes the research results and data analysis collected through the distribution of questionnaires conducted by the author over three months. The author will analyze the collected data according to the main problem presented at the beginning of the chapter. The results of data processing provide information that

will later indicate whether the formulated hypothesis is acceptable or not. Next is the analysis of respondent data obtained from the research questionnaire. The analysis in this study was conducted using a computer program using the Structural Equation Modeling (SEM) method assisted by Smart-PLS (SEM-PLS) software. In SEM PLS, there are two stages of analysis: the first is the outer model analysis and the second is the inner model analysis. The results of the research analysis are as follows:

1) Instrument Validity Test

a. Convergent Validity

Convergent validity was assessed by examining item reliability (validity indicators) as reflected in the loading factor values. The loading factor represents the correlation between the score of an individual questionnaire item and the score of the construct indicator measuring the respective construct. A loading factor value greater than 0.7 is considered valid. However, according to Hair et al. (1998), in the preliminary examination of the loading factor matrix, values of approximately 0.3 are considered to meet the minimum acceptable level, values of approximately 0.4 are regarded as better, and loading factor values greater than 0.5 are generally considered significant. At this stage of analysis, Confirmatory Factor Analysis (CFA) was conducted for each research variable by evaluating the loading factor (LF) values using the criterion of > 0.5 . The following presents the CFA analysis of the research variables:

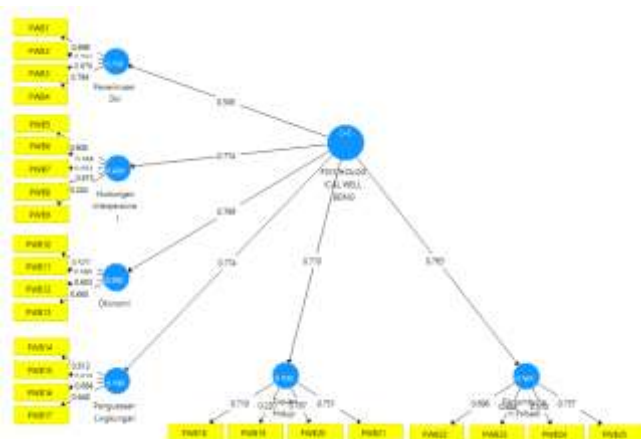


Figure 1. CFA Psychological Well Being Iterasi 1

Based on the output of Figure 1, there were still indicators or instruments that had a factor loading value below < 0.5 , namely; PWB9 and PWB19. Therefore, the indicators with a loading factor value < 0.5 were then dropped and not included or analyzed in the second stage/iteration of the Psychological Well-Being CFA Model.

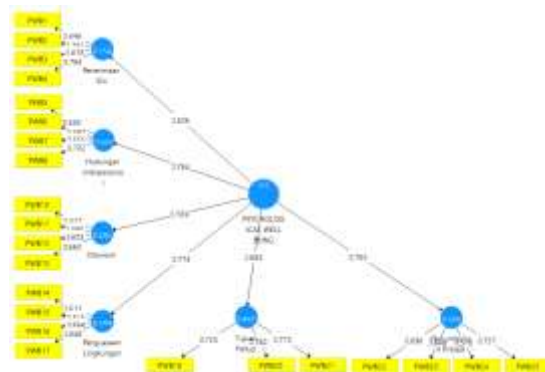


Figure 2. CFA Psychological Well Being Iterasi 2

Based on the output in Figure 2, no indicators or instruments were found with values below < 0.5 . All indicators or instruments had values > 0.5 . Therefore, at this stage, the second iteration of the Psychological Well-Being variable is considered a good/fit model. Therefore, it can be continued with further analysis.

b. CFA Variabel Etos Kerja

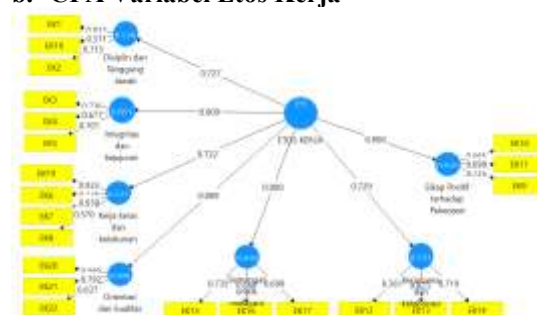


Figure 3. CFA Etos Kerja Iterasi 1

Based on the output of figure 3, there are still indicators or instruments that have a factor loading value below < 0.5 , including indicators; EK12, EK18. Therefore, these indicators are then dropped and not included or analyzed in the next stage/iteration of the Work Ethics CFA Model (second).

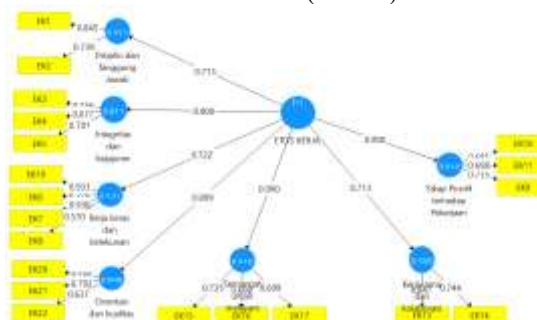


Figure 4. CFA Etos Kerja Iterasi 2

Based on the output of Figure 4, there are still indicators or instruments that have a factor loading value below < 0.5 , including the indicator; EK6. Therefore, this indicator is then dropped and not included or analyzed in the next stage/iteration of the Work Ethics CFA Model (third).

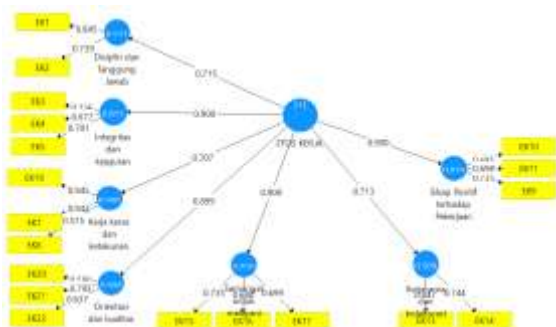


Figure 5. CFA Etos Kerja Iterasi 3

Based on the output of Figure 5, there are still indicators or instruments that have a factor loading value below <0.5 , including indicators; EK19 and EK7. Therefore, indicators with values less than <0.5 are then dropped and not included or analyzed in the CFA Model Work Ethics the next stage/iteration (four).

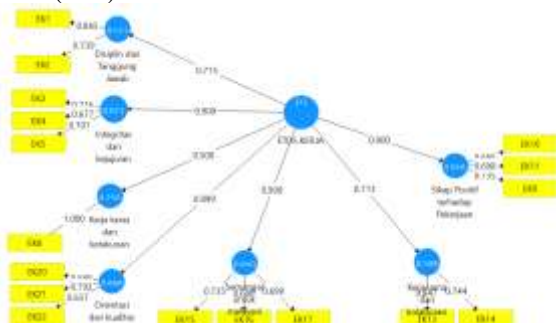


Figure 6. CFA Etos Kerja Iterasi 4

Based on the output in Figure 6, no indicators or instruments have values less than <0.5 . All indicators or instruments have values above >0.5 . Therefore, at this stage, the Work Ethic variable, in the fourth iteration, is considered a good/fit model. Therefore, it can be continued with further analysis.

c. CFA of Teacher Work Engagement Variables

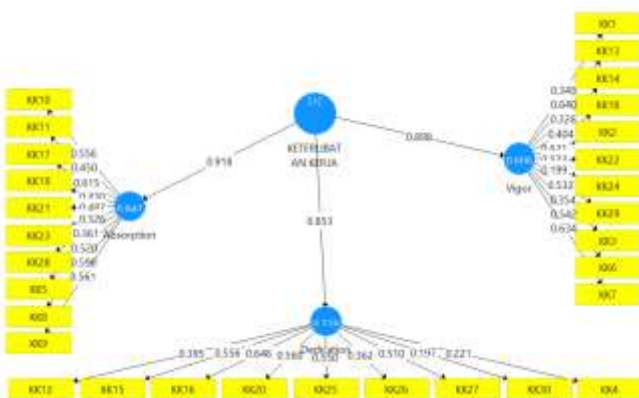


Figure 7. CFA Teacher Job Engagement Iteration 1

Based on the output of Figure 7, there are still indicators or instruments that have a factor loading value smaller than <0.5 . These indicators include; KK1, KK12, KK11, KK14, KK18, KK19, KK21, KK24, KK26, KK28, KK3, KK30, KK4. Therefore,

indicators with a value smaller than <0.5 are then dropped and not included or analyzed in the CFA Model of Teacher Work Engagement in the next stage/iteration.

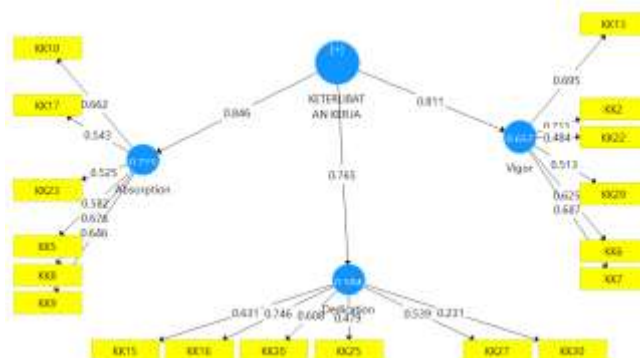


Figure 8. CFA Teacher Job Engagement Iteration 2

Based on the output of Figure 8, there are still indicators or instruments that have a factor loading value smaller than <0.5 . These indicators include; KK22, KK25, and KK30. Therefore, indicators with a value smaller than <0.5 are then dropped and not included or analyzed in the next (third) stage/iteration of the Teacher Work Engagement CFA Model.

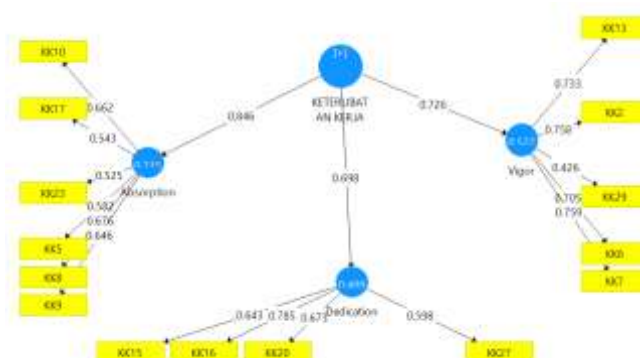


Figure 9. CFA Teacher Job Engagement Iteration 3

Based on the output of Figure 9, there are still indicators or instruments that have a factor loading value of less than <0.5 . These indicators include; KK29. Therefore, the KK29 indicator was then dropped and not included or analyzed in the CFA Model of Teacher Work Engagement in the next stage/iteration (fourth).

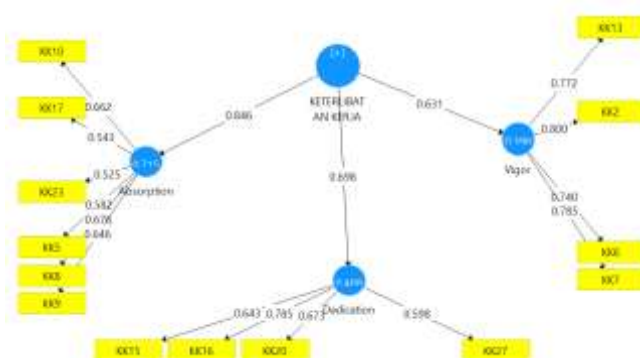


Figure 10. CFA Teacher Job Engagement Iteration 4

Based on the output in Figure 10, no indicators or instruments were found with values less than <0.5 . All indicators or instruments had values >0.5 . Therefore, at this stage, the fourth iteration of the Teacher Work Engagement variable can be said to be a good/fit model. Therefore, it can be continued with further analysis.

c) Discriminant Validity

Discriminant validity is measured by examining the cross-loading values of construct measurements. Cross-loading values indicate the magnitude of the correlation between each construct and its indicators and indicators from other construct blocks. A measurement model has good discriminant validity if the correlation between the construct and its indicators is higher than the correlation with indicators from other construct blocks.

Table 5. Cross Loading Psychological Well Being

	Interpersonal relationships	Autonomy	Self-Acceptance	Environmental Mastery	Personal Growth	Purpose of life
PWB1	0.373	0.143	0.698	0.043	0.175	-0.005
PWB2	0.411	0.053	0.782	0.074	0.119	0.028
PWB3	0.437	0.027	0.878	0.034	0.068	-0.062
PWB4	0.412	0.065	0.784	0.056	0.137	-0.007
PWB10	0.241	0.527	-0.007	0.323	0.181	0.355
PWB11	0.359	0.595	0.015	0.479	0.495	0.350
PWB12	0.311	0.603	0.130	0.399	0.349	0.305
PWB13	0.177	0.660	0.060	0.547	0.412	0.407
PWB14	0.184	0.423	0.124	0.613	0.252	0.370
PWB15	0.251	0.313	0.044	0.515	0.237	0.164
PWB16	0.493	0.565	-0.002	0.684	0.639	0.524
PWB17	0.118	0.483	0.029	0.648	0.458	0.335
PWB18	0.227	0.448	0.093	0.498	0.349	0.725
PWB20	0.440	0.501	-0.057	0.483	0.509	0.782
PWB21	0.282	0.390	-0.076	0.351	0.429	0.773
PWB22	0.286	0.293	0.022	0.330	0.696	0.387
PWB23	0.364	0.577	0.145	0.553	0.648	0.481
PWB24	0.340	0.316	0.021	0.349	0.510	0.230
PWB25	0.481	0.355	0.176	0.476	0.757	0.344
PWB5	0.593	0.109	0.716	0.026	0.104	0.054
PWB6	0.597	0.064	0.643	0.048	0.095	-0.017
PWB7	0.555	0.443	-0.041	0.449	0.521	0.369
PWB8	0.702	0.426	0.079	0.47	0.582	0.522

The cross-loading results in Table 5 show that the correlation value of the construct in the Psychological Well-Being variable with its indicators is greater than the correlation value with other constructs. Thus, all constructs or latent variables of Psychological Well-Being have good discriminant validity, where the indicators in the construct indicator block are better than the indicators in the other blocks.

Table 6. Cross Loading Etos Kerja

	Discipline and Responsibility	Integrity and honesty	Hard work and perseverance	Cooperation and collaboration	Orientation and quality	Passion to serve	Positive Attitude towards Work
EK1	0.845	0.376	0.274	0.847	0.369	0.378	0.377
EK2	0.739	0.250	0.988	0.731	0.583	0.245	0.245

	Discipline and Responsibility	Integrity and honesty	Hard work and perseverance	Cooperation and collaboration	Orientation and quality	Passion to serve	Positive Attitude towards Work
EK10	0.180	0.680	0.040	0.182	0.637	0.682	0.685
EK11	0.317	0.701	0.184	0.315	0.357	0.698	0.698
EK13	0.845	0.376	0.274	0.847	0.369	0.378	0.377
EK14	0.739	0.250	1.000	0.744	0.579	0.252	0.251
EK15	0.346	0.736	0.290	0.342	0.792	0.735	0.732
EK16	0.176	0.677	0.044	0.178	0.633	0.680	0.683
EK17	0.318	0.697	0.184	0.325	0.351	0.699	0.698
EK20	0.740	0.245	0.977	0.732	0.580	0.240	0.238
EK21	0.343	0.738	0.294	0.339	0.792	0.737	0.735
EK22	0.180	0.680	0.040	0.182	0.637	0.682	0.685
EK3	0.346	0.736	0.290	0.342	0.792	0.735	0.732
EK4	0.176	0.677	0.044	0.178	0.633	0.680	0.683
EK5	0.322	0.701	0.180	0.319	0.358	0.698	0.697
EK8	0.739	0.250	1.000	0.744	0.579	0.252	0.251
EK9	0.343	0.735	0.294	0.347	0.787	0.738	0.735

The cross-loading results in Table 6 show that the correlation value of the Work Ethic construct with its indicators is greater than the correlation value with other constructs. Thus, all Work Ethic constructs or latent variables have good discriminant validity, where the indicators in the construct indicator block are better than the indicators in the other blocks.

Table 7 Cross Loading of Teacher Work Engagement

	Absorption	Dedication	Vigor
KK10	0.662	0.109	0.551
KK5	0.582	0.118	0.463
KK8	0.676	0.112	0.614
KK9	0.646	0.102	0.542
KK17	0.543	0.682	0.115
KK23	0.525	0.528	0.178
KK15	0.373	0.643	0.068
KK16	0.410	0.785	0.040
KK27	0.263	0.598	0.243
KK20	0.260	0.673	0.082
KK13	0.517	0.176	0.772
KK2	0.535	0.075	0.800
KK6	0.511	0.056	0.740
KK7	0.467	0.134	0.785

The cross-loading results in Table 7 show that the correlation value of the construct in the Teacher Work Engagement variable with its indicators is greater than the correlation value with other constructs. Thus, all constructs or latent variables of Teacher Work

Engagement have good discriminant validity, where the indicators in the construct indicator block are better than the indicators in other blocks.

d) Reliability Test

1) Evaluasi Composite Reliability (C.R.)

In addition to assessing convergent and discriminant validity, the outer model can also be measured by examining the reliability of the construct or latent variable, as measured by the composite reliability value. A construct is considered reliable if the composite reliability value is >0.7 [39].

The SmartPLS output for the composite reliability value is shown in Tables 8 to 10 below:

Table 8. Composite Reliability Psychological Well Being

	Composite Reliability
Interpersonal Relationships	0.706
Autonomy	0.689
Self-Acceptance	0.867
Environmental Mastery	0.710
Personal Growth	0.751
Life Purpose	0.804

The Smart-PLS output results in Table 8 show that the Composite Reliability values for the dimensions of “Interpersonal Relationships”, “Autonomy”, “Self-Acceptance”, “Environmental Mastery”, “Personal Growth” and “Life Goals” are above 0.70. Based on the Composite Reliability criteria, it can be stated that the six dimensions have good reliability according to the minimum value limit that has been required.

Table 9. Composite Reliability Work Ethic

	Composite Reliability
Discipline and Responsibility	0.773
Integrity and Honesty	0.748
Hard Work and Perseverance	1.000
Cooperation and Collaboration	0.776
Orientation and Quality	0.712
Passion for Service	0.747
Positive Attitude Toward Work	0.749

From the Smart-PLS output results in Table 9, it shows that the Composite Reliability value for the dimensions of "Discipline and Responsibility", "Integrity and Honesty", "Hard Work and Perseverance", "Cooperation and Collaboration", "Orientation and Quality", "Passion to Serve", and "Positive Attitude towards Work" are above the value of > 0.70 . Based on these results, it can be stated that the Work Ethic variable has good reliability in accordance with the minimum value limit that has been required.

Table 10. Composite Reliability of Teacher Work Engagement

	Composite Reliability
Absorption	0.778
Dedication	0.772
Vigor	0.857

The Smart-PLS output in Table 10 shows that the Composite Reliability value for the three dimensions of the Teacher Work Engagement variable is above 0.70. Therefore, the resulting value can be categorized as having good reliability for all dimensions of the Teacher Work Engagement variable, according to the minimum required value limit.

2) Variance Analysis (R^2) or Determination Test

The Variance Analysis (R^2) or Determination Test in this study is to determine the extent of the role or influence of the dimensions on their respective variables or constructs, through the determination values shown in Tables 11 to 13.

Table 11. R-square value of Psychological Well Being

	R Square	R Square Adjusted
Interpersonal Relationships	0.583	0.581
Autonomy	0.592	0.59
Self-Acceptance	0.256	0.252
Environmental Mastery	0.599	0.597
Personal Growth	0.585	0.582
Life Purpose	0.467	0.464

Based on table 11, the r-square value shows that the "Interpersonal Relationship" dimension is able to explain the variability of the Psychological Well Being

construct by 0.583 (58.3%) and the remaining 41.7% can be explained by other constructs not examined in this study. Then the "Autonomy" dimension is able to explain the variability of the Psychological Well Being construct by 0.592 (59.2%) and the remaining 40.8% can be explained by other constructs not examined in this study. The "Self-Acceptance" dimension is able to explain the variability of the Psychological Well Being construct by 0.256 (25.6%) and the remaining 74.4% can be explained by other constructs not examined in this study. The "Environmental Mastery" dimension is able to explain the variability of the Psychological Well Being construct by 0.599 (59.9%) and the remaining 40.1% can be explained by other constructs not examined in this study. The "Personal growth" dimension is able to explain the variability of the Psychological Well Being construct by 0.585 (58.5%), and the remaining 41.5% can be explained by other constructs not examined in this study. And the "Purpose of life" dimension is able to explain the variability of the Psychological Well Being construct by 0.467 (46.7%), and the remaining 53.3% can be explained by other constructs not examined in this study.

Table 12. R-square Value of Work Ethic

	R Square	R Square Adjusted
Discipline and Responsibility	0.511	0.508
Integrity and Honesty	0.811	0.810
Hard Work and Perseverance	0.250	0.246
Cooperation and Collaboration	0.509	0.506
Orientation and Quality	0.808	0.807
Passion for Service	0.810	0.809
Positive Attitude Toward Work	0.810	0.809

Based on the r-square value in Table 12, it shows that the "Discipline & responsibility" dimension is able to explain the variability of the Work Ethic construct by 0.511 (51.1%) and the remaining 48.9% can be explained by other constructs not examined in this study. The "Integrity & honesty" dimension is able to explain the variability of the Work Ethic construct by 0.811 (81.1%) and the remaining 18.9% can be explained by other constructs not examined in this study. The "Hard work & perseverance" dimension is able to explain the variability of the Work Ethic construct by 0.250 (25.0%) and the remaining 75.0% can be explained by other constructs not examined in this study. In the dimension of "Cooperation & collaboration" is able to explain the variability of the Work Ethic construct by 0.509 (50.9%) and the remaining 49.1% can be explained by other constructs not examined in this study. In the dimension of "Orientation & quality" is able to explain the variability of the Work Ethic construct by 0.808 (80.8%) and the remaining 19.2% can be explained by

other constructs not examined in this study. In the dimension of "Passion to serve" is able to explain the variability of the Work Ethic construct by 0.810 (81.0%) and the remaining 19% can be explained by other constructs not examined in this study. And the dimension of "Positive attitude towards work" is able to explain the variability of the Work Ethic construct by 0.810 (81.0%) and the remaining 19% can be explained by other constructs not examined in this study.

Table 13. R-square Value of Teacher Work Engagement

	R Square	R Square Adjusted
Absorption	0.715	0.713
Dedication	0.488	0.485
Vigor	0.398	0.394

Based on the r-square value in Table 13, it shows that the "Absorption" dimension is able to explain the variability of the Teacher Work Engagement construct by 0.715 (71.5%) and the remaining 28.5% can be explained by other constructs not examined in this study. The "Dedication" dimension is able to explain the variability of the Teacher Work Engagement construct by 0.488 (48.8%) and the remaining 51.2% can be explained by other constructs not examined in this study. Then the "Vigor" dimension is able to explain the variability of the Teacher Work Engagement construct by 0.398 (39.8%) and the remaining 60.2% can be explained by other constructs not examined in this study.

3) Model Fit Analysis

For a model to meet the model fit criteria, the SRMR value must be less than 0.05 (Cangur and Ercan, 2015). However, based on the explanation on the SMARTPLS website, the limitations or criteria for model fit include: RMS Theta (Root Mean Square Theta) value <0.102, and SRMR (Standardized Root Mean Square) value <0.10 or <0.08.

The following are the results of the assessment of the Psychological Well Being variable fit model:

Table 14. Model Fit

	Saturated Model	Estimated Model
SRMR	0.042	0.063
d ULS	3.022	5.935

Based on Table 14, the fit model above, the SRMR value is $0.042 < 0.10$, so it can be said that the CFA Psychological Well Being model has met the model fit criteria.

The following are the results of the fit model assessment of the Work Ethic variable:

Table 15. Model Fit

	Saturated Model	Estimated Model
SRMR	0.047	0.069
d ULS	10.455	12.397

Based on Table 15, the fit model above, the SRMR value of $0.047 < 0.10$, indicates that the CFA model of Work Ethic has met the model fit criteria.

The following are the results of the fit model assessment of the Teacher Work Involvement variable:

Table 16. Model Fit

	Saturated Model	Estimated Model
SRMR	0.043	0.060
d ULS	2.454	3.078

Based on Table 16, the fit model above, the SRMR value of $0.043 < 0.10$, indicates that the CFA model of Teacher Work Engagement has met the model fit criteria.

4) Inner Model Testing (Structural Model) or Hypothesis Testing

Hypothesis testing is based on the values found in the structural model analysis. The path coefficient significance level is obtained from the calculated t-value and the standardized path coefficient. The threshold for hypothesis testing is that the calculated t-value for factor loadings is greater than the critical value (≥ 1.96) with a confidence level/level of significance (α) of 0.05.

The following is an image of the results of Smart-PLS processing using bootstrapping analysis on the inner model or structural model of the study (calculated t-value).

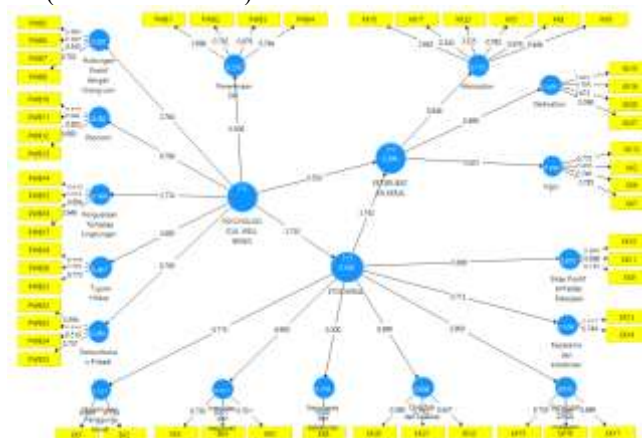


Figure 11. Full Model Combined CFA fit (Running PLS Bootstrapping)

Based on the results of the structural model test shown in Figure 11, it can be concluded that:

a) Hypothesis 1:

There is an influence of psychological well-being on teachers' work ethic. Based on the data analysis, the first hypothesis was accepted. This result is

based on a p-value of $0.000 < 0.05$ and a t-test of $22.86 > 1.96$ (Table 4.28), with an effect size of 0.735 (73.5%).

b) Hypothesis 2:

There is an influence of work ethic on teachers' work engagement. Based on the data analysis, the second hypothesis was accepted. This result is based on a p-value of $0.035 < 0.05$ and a t-test of $2.11 > 1.96$ (Table 4.28), with an effect size of 0.162 (16.2%).

c) Hypothesis 3:

There is an influence of psychological well-being on teachers' work engagement. Based on the data analysis, the third hypothesis was accepted. This result is based on a p-value of $0.000 < 0.05$ and a t-test of $6.74 > 1.96$ (Table 4.28). The effect size is 0.503 (50.3%).

d) Hypothesis 4:

This Sobel test is used to determine the mediating role of the Work Ethic variable in influencing Psychological Well-Being on Teacher Work Engagement. According to Baron and Kenny (1986) in Ghazali (2011), a variable is considered intervening if it influences the relationship between the independent and dependent variables. The Sobel test examines the strength of the indirect effect of the independent variable (X) on the dependent variable (Y2) through the intervening variable (Y1). This is calculated by multiplying the indirect effect of X on Y2 through Y1 by multiplying the path X – Y1 (a) by the path Y1 – Y2 (b) or ab. So the coefficient $ab = (c-c')$ where c is the influence of X on Y2 without connecting Y1, while c' is the coefficient of influence of X on Y2 after connecting Y1.

C. Inferential Analysis

The Effect of Psychological Well-Being on Teachers' Work Ethic

The results of this study support the hypothesis that psychological well-being (PWB) has a positive and significant effect on teachers' work ethic. This finding is consistent with Positive Psychology theory, which suggests that individuals with good psychological well-being tend to have strong internal motivation to grow and work diligently [40]. In the context of teaching, high levels of PWB enable teachers to develop positive attitudes toward their work, experience job satisfaction, and perceive their profession as a means of self-development.

These findings are also supported by previous studies. For instance, research by Creely (2024) indicates that PWB has a positive effect on work ethic, whereby psychologically well individuals tend to be more enthusiastic, persistent, and perceive work as an integral part of their lives [41]. Similarly, found that PWB positively contributes to the development of teachers' work ethic, as teachers who experience psychological well-being are more likely to exhibit strong work motivation, resilience, and integrity in performing their duties.

Practically, these findings imply that efforts to enhance teachers' work ethic can be achieved by improving their psychological well-being. Intervention programs focusing on strengthening self-acceptance, positive relationships with others, autonomy, environmental mastery, purpose in life, and personal growth may serve as effective strategies.

The Effect of Work Ethic on Teachers' Work Engagement

This study also found that work ethic has a positive and significant effect on teachers' work engagement. This finding is consistent with the Job Demands-Resources (JD-R) theory, which suggests that work ethic can be categorized as a personal resource that helps teachers cope with job demands, thereby promoting optimal work engagement [21].

Teachers who possess a strong work ethic tend to be fully engaged in their work because they perceive teaching as a calling rather than merely an administrative obligation [34]. The positive work values and attitudes embedded in work ethic can influence individuals' levels of energy, commitment, and focus in performing their tasks [42].

These findings are supported by Ossai (2023), who demonstrated that work ethic has a significant effect on work engagement, as individuals with a strong work ethic tend to have intrinsic motivation that encourages them to work more diligently and actively participate in their work environment [43]. Similarly, Stamelos (2024) found that work ethic significantly affects elementary school teachers' work engagement, where teachers with a strong work ethic exhibit moral commitment in completing tasks effectively, maintaining punctuality, and striving to achieve optimal performance [44]. The implication of this finding is that schools and policymakers can focus on developing teachers' work ethic as a means to enhance their work engagement. Training and development programs emphasizing values such as discipline, responsibility, hard work, honesty, and dedication may help teachers become more engaged in their professional roles.

The Effect of Psychological Well-Being on Teachers' Work Engagement

The results of this study also confirm that psychological well-being (PWB) has a positive and significant effect on teachers' work engagement. This finding aligns with the JD-R model, which explains that personal resources, such as PWB, can enhance work engagement by providing positive energy, resilience, and intrinsic motivation [40].

Teachers with high levels of PWB tend to feel happy, satisfied, and find meaning in their work, enabling them to become fully engaged in the teaching process [45]. A favorable level of PWB can serve as a psychological resource that encourages teachers to remain focused, enthusiastic, and dedicated to their work [46].

These findings are supported by Sudibjo et al (2023), who demonstrated that PWB significantly influences work engagement, as teachers who experience happiness and meaning in their work tend to participate more actively and demonstrate optimal performance [1]. Also found a positive relationship between PWB and work engagement among elementary school teachers, where teachers with high levels of PWB are able to maintain work enthusiasm despite facing

administrative burdens and other professional challenges [34]. The implication of this finding is that it is essential for schools and policymakers to prioritize teachers' psychological well-being. Programs designed to enhance teachers' PWB such as counseling services, stress management training, and social support initiatives may contribute to improving their work engagement.

The Mediating Role of Work Ethic in the Relationship between Psychological Well-Being and Teachers' Work Engagement

This study found that work ethic serves as a mediating variable in the relationship between psychological well-being (PWB) and teachers' work engagement. This indicates that PWB does not directly influence work engagement but operates through work ethic. Teachers with high levels of PWB tend to internalize work ethic values, which in turn enhance their level of work engagement.

Theoretically, the JD-R framework explains that PWB, as a personal resource, may indirectly influence work engagement by enhancing other resources, one of which is work ethic [47]. In other words, PWB can foster positive work attitudes (work ethic), which subsequently promote greater work engagement.

These findings are supported by Amalia et al (2016), who found that work ethic acts as a significant mediator between PWB and work engagement among elementary school teachers [48]. Similarly, Herman et al (2022) demonstrated that teachers with higher levels of psychological well-being tend to develop stronger work ethics, which in turn make them more emotionally, cognitively, and physically engaged in teaching activities [49]. The implication of this finding is that interventions aimed at enhancing teachers' work engagement should consider the mediating role of work ethic. Programs designed to improve teachers' psychological well-being should also incorporate components that strengthen their work ethic. For instance, training programs emphasizing values such as discipline, responsibility, hard work, honesty, and dedication may help teachers become more actively engaged in their professional duties.

IV. CONCLUSIONS

The most surprising finding of this study is that teachers' work engagement is not solely determined by job demands or external organizational factors, but is significantly shaped by psychological well-being operating through the strengthening of work ethic as an internal mechanism. The analysis indicates that psychological well-being not only has a direct effect on work engagement but also exerts an equally strong indirect effect through the mediating role of work ethic. This finding confirms that the quality of teachers' engagement in teaching is not merely a matter of formal discipline or structural supervision, but is rooted in psychological stability and the internalized system of work values within individuals. These results challenge the conventional perspective that tends to view work engagement as merely a consequence of managerial policies. Instead, this study demonstrates that psychological well-being serves as a fundamental foundation

that systematically shapes work orientation and ultimately determines the level of teachers' professional connectedness to their work. Thus, work engagement emerges as the result of a dynamic interaction between psychological conditions and deeply internalized work values.

This study provides significant contributions both theoretically and practically to the development of industrial and organizational psychology within the educational context. Theoretically, this study enriches the integration of psychological well-being, work ethic, and work engagement into a single empirically tested structural model, thereby expanding the application of the positive psychology framework and personal resource theory in private elementary school environments. The inclusion of work ethic as a mediating variable offers a new perspective in understanding how psychological well-being is translated into observable and measurable work behavior. Practically, the findings of this study serve as a strategic basis for school management in designing more comprehensive human resource development policies by prioritizing psychological well-being. Teacher capacity-building programs should no longer focus solely on technical instructional aspects but also incorporate mental health enhancement and the internalization of professional work values. Therefore, this study not only contributes to the expansion of academic literature but also provides a practical foundation for improving teacher management practices in primary education settings.

Although this study successfully explains the structural relationships among variables, there remains room for further research development. This study was conducted within a specific geographical context and limited to private primary education, thus the generalizability of the findings should be tested in broader contexts such as public schools or secondary education levels. Moreover, the quantitative approach employed provides statistical insights into causal relationships but does not fully capture the depth of teachers' subjective experiences. Future studies may consider mixed-method or qualitative approaches to explore more complex psychological processes underlying the development of work ethic and work engagement. Additional variables such as school leadership, organizational culture, or social support may also serve as moderating factors to enrich the research model. By opening these avenues of exploration, future research is expected to provide a more comprehensive and contextual understanding of teachers' psychological dynamics within the educational system.

REFERENCES

- [1] N. Sudibjo and M. G. D. Riantini, "Factors affecting teachers' work engagement: The case of private school teachers in Jakarta Metropolitan, Indonesia," *REICE. Rev. Iberoam. sobre Calidad, Efic. y Cambio en Educ.*, vol. 21, no. 1, pp. 119–137, 2023.
- [2] S. Ghufro, F. K. Fitriyah, M. Sodikin, N. Saputra, S. M. Amin, and H. A. Muhimmah, "Evaluating the impact of teachers' personal and professional resources in elementary education on school-based human resource management: a case study in

- Indonesia,” *SAGE Open*, vol. 14, no. 1, p. 21582440241231050, 2024.
- [3] H.-L. Sun *et al.*, “The influence of teacher–student interaction on the effects of online learning: Based on a serial mediating model,” *Front. Psychol.*, vol. 13, p. 779217, 2022.
- [4] D. Kurniawati, M. A. Dalimunthe, S. Kholil, A. R. Ritonga, and T. A. Pratama, “Reduction of microplastics through waste management: Evaluation of water quality and health risks in the communication policy of the ministry of environment and forestry,” in *IOP Conference Series: Earth and Environmental Science*, IOP Publishing, 2025, p. 12043.
- [5] K. Shu, “Teachers’ commitment and self-efficacy as predictors of work engagement and well-being,” *Front. Psychol.*, vol. 13, p. 850204, 2022.
- [6] A. M. Purba, N. D. Dirbawanto, and M. A. Dalimunthe, “Urban digitalization through clean energy: policies and communication of Medan City government towards ‘Medan Smart City,’” in *IOP Conference Series: Earth and Environmental Science*, IOP Publishing, 2025, p. 12067.
- [7] J. Harford, R. Bruton, and B. Fleming, “Perspectives on education policy-making in Ireland, 1990–2025,” *Irish Educ. Stud.*, pp. 1–19, 2026.
- [8] M. A. Dalimunthe, A. Suhendar, A. R. Ritonga, F. A. Nasution, L. N. Nasution, and P. E. O. Batubara, “Effectiveness of waste management site reduce, reuse, recycle program in improving ecological citizenship,” in *IOP Conference Series: Earth and Environmental Science*, IOP Publishing, 2024, p. 12040.
- [9] K. Lim, “Assessing beyond grades: unravelling the implications on student learning and engagement in higher education,” *Assess. Eval. High. Educ.*, vol. 49, no. 5, pp. 665–679, 2024.
- [10] M. I. K. Saraan, R. Rambe, A. M. Syam, A. Suhendar, M. A. Dalimunthe, and R. P. K. Sinaga, “The application of fertilizer subsidies in the context of coffee plantations in Pollung Sub-District, Humbang Hasundutan District, North Sumatra Province,” in *IOP Conference Series: Earth and Environmental Science*, IOP Publishing, 2024, p. 12012.
- [11] A. Suhendar and M. Halimi, “The Role of Anti-Bullying Change Agents in Shaping Civic Dispositions to Tackle Bullying Behavior,” in *Proceeding International Conference on Religion, Science and Education*, 2023, pp. 903–913.
- [12] Z. Xing, “English as a foreign language teachers’ work engagement, burnout, and their professional identity,” *Front. Psychol.*, vol. 13, p. 916079, 2022.
- [13] M. D. Galanakis and E. Tsitouri, “Positive psychology in the working environment. Job demands-resources theory, work engagement and burnout: A systematic literature review,” *Front. Psychol.*, vol. 13, p. 1022102, 2022.
- [14] A. R. Ritonga, M. A. Dalimunthe, A. Veronica, and L. D. C. U. Ginting, “The Effectiveness of Social Media As A Promotional Medium Of The University Of Sumatera Utara (USU) Library,” in *Talenta Conference Series: Local Wisdom, Social, and Arts (LWSA)*, 2023, pp. 16–20.
- [15] Poonam and S. S. Sengupta, “The moderating role of workplace spirituality in the relationship between employees’ psychological well-being and job performance,” *J. Manag. Dev.*, vol. 44, no. 5, pp. 664–675, 2025.
- [16] H. Mansouri, D. Y. Pyun, M. Md Husin, S. Gholami Torkesaluye, and A. Rouzfarakh, “The influences of authentic leadership, meaningful work, and perceived organizational support on psychological well-being of employees in sport organizations,” *J. Glob. Sport Manag.*, vol. 9, no. 3, pp. 575–598, 2024.
- [17] A. Aman-Ullah and W. Mehmood, “Role of Islamic work ethics in shaping employees’ behaviour: evidence from the banking sector in Azad Jammu and Kashmir,” *J. Islam. Account. Bus. Res.*, vol. 14, no. 7, pp. 1033–1047, 2023.
- [18] A. R. Ritonga, A. Veronica, L. Ginting, M. A. Dalimunthe, and L. H. Nasution, “Library promotion in the development of the Universitas Sumatera Utara towards a world-class university,” *J. Infrastructure, Policy Dev.*, vol. 8, no. 6, p. 4149, 2024.
- [19] Q. Tong, “Exploring the Interplay Between Teachers’ Emotions, Personal Traits, Environmental Factors and Psychological Well-Being,” *Eur. J. Educ.*, vol. 60, no. 1, p. e12903, 2025.
- [20] M. Paul and L. K. Jena, “Workplace spirituality, teachers’ professional well-being and mediating role of positive psychological capital: An empirical validation in the Indian context,” *Int. J. Ethics Syst.*, vol. 38, no. 4, pp. 633–660, 2022.
- [21] X. Yu, X. Lin, D. Xue, and H. Zhou, “Impact of work engagement on teachers’ workplace well-being: A serial mediation model of perceived organizational support and psychological empowerment,” *Sage Open*, vol. 14, no. 4, p. 21582440241291344, 2024.
- [22] Y. Cai, L. Wang, Y. Bi, and R. Tang, “How can the professional community influence teachers’ work engagement? The mediating role of teacher self-efficacy,” *Sustainability*, vol. 14, no. 16, p. 10029, 2022.
- [23] K. Chaurasia, “Psychological Well-being: Meaning, Characteristics,” *Educ. well-being*, p. 51, 2024.
- [24] A. Abbas, D. Ekowati, F. Suhariadi, and S. A. R. Hamid, “Negative vs. positive psychology: A review of science of well-being,” *Integr. Psychol. Behav. Sci.*, vol. 58, no. 4, pp. 1091–1122, 2024.
- [25] L. Cilar Budler, “Well-Being Unveiled: A Concept Analysis of Mental, Psychological, and Subjective Well-Being,” *Heal. Sci. Reports*, vol. 8, no. 9, p. e71149, 2025.
- [26] M. Li, F. Liu, and C. Yang, “Teachers’ emotional intelligence and organizational commitment: A moderated mediation model of teachers’ psychological well-being and principal transformational leadership,” *Behav. Sci. (Basel)*, vol. 14, no. 4, p. 345, 2024.
- [27] Q. Lu, B. Wang, R. Zhang, J. Wang, F. Sun, and G.

- Zou, "Relationship between emotional intelligence, self-acceptance, and positive coping styles among Chinese psychiatric nurses in Shandong," *Front. Psychol.*, vol. 13, p. 837917, 2022.
- [28] D. Kumar, Y. Upadhyay, R. Yadav, and A. K. Goyal, "Psychological capital and innovative work behaviour: The role of mastery orientation and creative self-efficacy," *Int. J. Hosp. Manag.*, vol. 102, p. 103157, 2022.
- [29] S. Taghavi and M. Segalla, "Is work an act of worship? The impact of implicit religious beliefs on work ethic in secular vs. religious cultures," *J. Bus. Ethics*, vol. 188, no. 3, pp. 509–531, 2023.
- [30] E. P. Hasibuan and A. Azmy, "Improving employee performance affected by leadership style, organizational culture, and work ethics in technology service company," *Calitate*, vol. 23, no. 189, pp. 56–66, 2022.
- [31] N. Alfirević, M. Arslanagić-Kalajdžić, and Ž. Lep, "The role of higher education and civic involvement in converting young adults' social responsibility to prosocial behavior," *Sci. Rep.*, vol. 13, no. 1, p. 2559, 2023.
- [32] A. Tadesse Bogale and K. L. Debela, "Organizational culture: a systematic review," *Cogent Bus. Manag.*, vol. 11, no. 1, p. 2340129, 2024.
- [33] F. Kunzl and M. Messner, "Temporal Structuring as Self-Discipline: Managing time in the budgeting process," *Organ. Stud.*, vol. 44, no. 9, pp. 1439–1464, 2023.
- [34] S. Y. B. Huang, C.-H. Huang, and T.-W. Chang, "A new concept of work engagement theory in cognitive engagement, emotional engagement, and physical engagement," *Front. Psychol.*, vol. 12, p. 663440, 2022.
- [35] Ismaiza Busti, Rusydi, and R. Saputra, "The Axiological Foundations of Knowledge: A Comparison of Western and Islamic Perspectives and Their Integration in Supporting the Achievement of SDGs," *Profetika J. Stud. Islam*, vol. 25, no. 02, pp. 421–432, Jan. 2025, doi: 10.23917/profetika.v25i02.8528.
- [36] J. W. Creswell, *A concise introduction to mixed methods research*. SAGE publications, 2021.
- [37] A. Farida, S. Karimi, and F. P. Putra, "The Role of Digitalization on Sustainable Development: An Empirical Study of Indonesia," *Daengku J. Humanit. Soc. Sci. Innov.*, vol. 3, no. 6, pp. 1089–1099, Dec. 2023, doi: 10.35877/454RI.daengku2201.
- [38] A. Betti, P. Biderbost, and A. García Domonte, "Can active learning techniques simultaneously develop students' hard and soft skills? Evidence from an international relations class," *PLoS One*, vol. 17, no. 4, p. e0265408, 2022.
- [39] I. Ghazali, "Aplikasi analisis multivariete dengan program IBM SPSS 23," 2018.
- [40] S. Supriyono and T. Susmonowati, "The role of extrinsic and intrinsic motivation to maintain employee performance productivity during work from home (WFH): a case study of a private university in Jakarta," *Tech. Soc. Sci. J.*, vol. 27, pp. 606–619, 2022.
- [41] E. Creely, "Exploring the Role of Generative AI in Enhancing Language Learning: Opportunities and Challenges," *Int. J. Chang. Educ.*, Apr. 2024, doi: 10.47852/bonviewIJCE42022495.
- [42] V. Singh, S. Verma, and S. Chaurasia, "Intellectual structure of multigenerational workforce and contextualizing work values across generations: a multistage analysis," *Int. J. Manpow.*, vol. 42, no. 3, pp. 470–487, 2021.
- [43] A. G. OSSAI, "Citizenship Education in Nigeria as an Alternative to National Unity," *JIE (Journal Islam. Educ.)*, vol. 8, no. 2, pp. 124–137, Jun. 2023, doi: 10.52615/jie.v8i2.297.
- [44] C. Stamelos, *Philosophy of Law, Theories, Examples and Human Rights*. Ethics International Press, 2024.
- [45] J. C. González-Salamanca, O. L. Agudelo, and J. Salinas, "Key Competences, Education for Sustainable Development and Strategies for the Development of 21st Century Skills. A Systematic Literature Review," *Sustainability*, vol. 12, no. 24, p. 10366, Dec. 2020, doi: 10.3390/su122410366.
- [46] B. Paulini, "Stoic Attitude as a Psychological Resource. An Integrative Model of Stoic Cognition, Emotion and Action in the Light of Modern Self-Regulation," *An Integr. Model Stoic Cogn. Emot. Action Light Mod. Self-Regulation (November 22, 2025)*, 2025.
- [47] M. Estellés and G. E. Fischman, "Who Needs Global Citizenship Education? A Review of the Literature on Teacher Education," *J. Teach. Educ.*, vol. 72, no. 2, pp. 223–236, Mar. 2021, doi: 10.1177/0022487120920254.
- [48] L. Amalia, O. P. Endro, and R. M. Damanik, "PREFERENSI DAN FREKUENSI KONSUMSI MAKANAN JAJANAN PADA ANAK SEKOLAH DASAR DI KECAMATAN CIJERUK, KABUPATEN BOGOR," *J. Gizi dan Pangan*, vol. 7, no. 2, p. 119, Jun. 2016, doi: 10.25182/jgp.2012.7.2.119-126.
- [49] K. C. Herman, W. M. Reinke, N. Dong, and C. P. Bradshaw, "Can effective classroom behavior management increase student achievement in middle school? Findings from a group randomized trial," *J. Educ. Psychol.*, vol. 114, no. 1, p. 144, 2022.