*International Journal of Instruction* *October 2023 ● Vol.16, No.4*
*e-ISSN: 1308-1470 ● www.e-iji.net* *p-ISSN: 1694-609X*
*pp. 189-208*

Article submission code: 20221025155728
Received: 25/10/2022 Revision: 18/03/2023
Accepted: 10/04/2023 OnlineFirst: 10/07/2023

# Correlation of Work Discipline and Pedagogical Competence to Teaching Performance in Elementary Teacher

**Muhamad Afandi**
Universitas Islam Sultan Agung Semarang, Indonesia, *mafandi@unissula.ac.id.*

**Sri Wahyuningsih**
Institut Agama Islam Negeri Kudus, Indonesia, *wahyuningsih@iainkudus.ac.id*

**Sari Yustiana**
Universitas Islam Sultan Agung Semarang, Indonesia, *sari.yustiana@unissula.ac.id*.

**Rida Fironika Kusumadewi**
Universitas Islam Sultan Agung Semarang, Indonesia, *ridafkd@unissula.ac.id.*

**Reza Rachmadtullah**
Universitas PGRI Adi Buana Surabaya, Surabaya, Indonesia, *rezarachmadtullaheza@gmail.com*

Teachers are the leading actor in concept development in elementary school students, especially in this globalization era. They need strong self-discipline and pedagogical competence to perform meaningful learning suitable for their student age. Therefore, this study analyzes the correlation between elementary teachers' discipline and pedagogical competence in teaching performance. This study involved 157 civic servant teachers from public elementary schools in Banyumanik Subdistrict as respondents. The research method involved observation and self-assessment using 1st-order structural equation modeling (SEM) for data analysis. The results show that the teachers' discipline, pedagogical competence, and performance (as the latent variables) achieved high scores. Then, the latent variables are significantly reflected by their observed indicators. Even though work discipline and pedagogical competence are not considerably affected teacher performance. The coefficient of determination (R2) reached only -5.1% in work discipline and 6.8% in pedagogical competence to teacher performance (p-value > 0.500). While in simultaneously, pedagogical competence and discipline only affected about 3% of teacher performance. It needs further investigation and confirmational studies through problem mapping and how the workload may prohibit teacher performance from the public elementary school in Banyumanik Sub-district.

Keywords: civic servant teacher, classroom management, pedagogical knowledge, primary school, self-discipline, teacher competence

**Citation:** Afandi, M., Wahyuningsih, S., Yustiana, S., Kusumadewi, R. F., & Rachmadtullah, R. (2023). Correlation of work discipline and pedagogical competence to teaching performance in elementary teacher. *International Journal of Instruction*, *16*(4), 189-208. https://doi.org/10.29333/iji.2023.16412a

## INTRODUCTION

Elementary school is a primary education designed to build a strong foundation for the student's essential cognitive and social characteristics. In elementary school, the academic activities should follow a meaningful learning process based on the local potential, socio-culture, and surrounding phenomena to prepare students for the next academic level (Istianah, 2022). In 2021, at least 148 thousand elementary schools were accredited in Indonesia, with 88.11% of public schools (Agustina et al., 2021). This number makes elementary schools the most prominent academic unit in Indonesia. Therefore, teacher resources are needed to organize credible primary education (Fauth et al., 2019).

Primary education needs professional and qualified teachers to conduct the learning process. It explains why teaching requires inclusive competencies, including material knowledge, pedagogy, social, and behavioral skills (Sebalo & Teslenko, 2020). However, according to the Ministry of Education and Culture of the Republic of Indonesia (Kementerian Pendidikan dan Kebudayaan [Kemendikbud]), the average score of teacher performance in 2021 only reached 52.01% effectiveness. This result aligns with the teacher pedagogic score of 54.52% and 50.43% for professional competence, below the expected standard of 70.00% (Kemendikbud, 2021). It means the average primary school teacher can only meet half of the required teaching standards, which may contribute to the low ability of student acceptance.

Teachers are the leading actor in educational program implementation in schools that require high pedagogical competence to realize national educational goals (Judge, 2015; Siri et al., 2020; Sumual & Ali, 2017). In addition, teachers are also required to have solid personal quality standards, including work discipline in complying with institutional regulations consistently. It is relevant to the teacher's duty to discipline their student in school, especially during learning activities (Kheruniah, 2013). Current studies also explain that pedagogical competence and discipline are strongly related to learning management, which helps students understand the concept (Fauth et al., 2019; Istianah, 2022). Meanwhile, teacher performance defines teaching ability in planning, implementing, and evaluating the learning process (Kusumaningrum et al., 2019).

In brief, teacher performance may depict how they handle the class (pedagogy) and how they give a role model to their student through their discipline. Teacher discipline is essential for teaching effectiveness and student learning and may differ between school characteristics and teacher personality, including public elementary teachers in Banyumanik, Indonesia. Understanding their performance and variables may increase literature to improve Indonesian teacher capacity by helping them understand the prerequisite relationships of their content knowledge and general pedagogy. Even though pedagogical competence and discipline affect teacher performance still need to be further mapped from various sites and situations. Therefore, this study analyzes how discipline and pedagogical competence correlate to elementary school teachers' performance. This study helps to provide a holistic understanding of the teacher performance that may be needed for formulating action plans to improve teacher capacity.

## Literature Review

### Teacher Performance

Teachers' professionalism reflects teacher performance in achieving the school's goals and performing scientific-pedagogical domain. Teachers must raise students' awareness about the importance of learning (Almeida, 2017). The teacher's performance heavily depends on self-capacity developed through informal training or formal education. In this context, the teacher should improve their teaching competence to improve their performance in learning quality (Dewi et al., 2016), supported by a conducive school environment (Onuma, 2015). It can be concluded that teacher performance is an action and behavior in the learning process, including planning, teaching, and evaluating according to the areas of their expertise.

In Indonesia, teacher performance is regulated in the Teachers and Lecturers Law No: 4, the year 2005 (Ramdhani, 2017), which explains that in carrying out professional duties, the teachers are obliged to 1) develop a learning plan, carry out meaningful learning processes, and evaluate learning outcomes; 2) improving and developing academic qualifications and competencies on an ongoing basis in line with the development of science, technology, and art; 3) acting objectively and non-discriminatorily on the gender, religion, ethnicity, race, and specific physical conditions, family background, or socioeconomic status; 4) upholding laws and regulations, and profession ethics code, as well as religious and ethical values; and 5) maintaining and fostering national unity (Pribudhiana et al., 2021).

Various factors influence teacher performance, including pedagogical competence, interpersonal relationships, material concept enrichment, and evaluation skill (Gómez & Valdés, 2019). Furthermore, internal factors such as discipline, motivation, and other non-cognitive abilities may also influence teacher performance. A previous study performs that teacher's performance of public elementary school teachers in Rambutan District, Banyuasin Regency, South Sumatera, is significantly influenced by work discipline and leadership (Wulandari et al., 2021). On the other hand, external factors may also involve teacher performance, including organizational environment, job position, future careers, authorities, and work targets (Bastian et al., 2018). In their research, Marsen et al. (2021) explained that the pedagogical competency variable and a conducive work environment affected the performance of public Elementary Schools in Singingi Hilir District teachers by 30.1% ($R^2$ = 0.301). Even so, the precise relationship between teacher performance and its supporting variables is still not consistent, so it is necessary to have a relevant study for a comprehensive point of view.

### Pedagogical Competence

Pedagogical competence relates to teacher pedagogical content knowledge (PCK), which is knowledge about mastering learning material and how to teach. The PCK forms a teacher's knowledge of how a topic, problem, or issue is organized and represented according to the learner's capacity (Shulman, 1987). Then pedagogical competence includes all skills needed to conduct the teaching and learning process, manage the class, and implement learning strategies and methods (Suciu & Mâţă,

2011). Pedagogical competence is regarded as the class managerial, namely 1) teaching, including techniques and methods in transforming knowledge content through stimulating, supervising, and facilitating students to achieve effective learning outcomes (Tynjälä et al., 2016); 2) learning, which is the process of developing students independence and initiative in acquiring and improving their knowledge and skills; 3) teaching and learning, including learning guidance activities, and encouraging self-efficacy in students; and 4) learning guidance related to student's psychological maintenance in all age stages.

Pedagogical competence is closely related to the three main pillars of education: efficiency or success in education, professional development, and social change (Klaassen, 2002), the ability to think creatively, and the ability to plan lifelong education. Pedagogical competence is mandatory for teachers to transfer knowledge to the student through specific topics (Segall, 2004). Pedagogic competence becomes a conceptual foundation for teachers to provide facilities for meaningful learning by using cooperative approaches, such as problem-based learning (Savery, 2019) and learning by situations (Suciu & Mâţă, 2011). Based on the previous explanation, it can be concluded that pedagogical competence is formed based on the teacher's PCK, which directly relates to teaching performance in the learning process.

**Work Discipline**

As an employee, a teacher is positioned as a worker who must comply with the institution's rules. This obedience is applied in teaching activities and provides a robust role model for their student (El Hamydy & Brigui, 2022). The work discipline for the teacher is not only performed by timeliness but also by how they manage students in the classroom and give feedback on student tasks (Lian et al., 2020). Based on this statement, work discipline is a fundamental aspect that should be a concern for teachers to help them gain their teaching performance.

Several studies explain that work discipline in teachers is directly related to teacher performance (Susilowati et al., 2021; El Hamydy & Brigui, 2022). Furthermore, teacher discipline influences teacher performance in efficient learning (Deslihanida et al., 2021). On the other hand, low discipline is associated with teachers' misbehavior in teaching. This behavior is positively related to students' assessment of teachers' personalities, potentially affecting student performance and enthusiasm for learning (Aldrup et al., 2018). Hence, in this study, teachers' work discipline is defined as the teacher's obedience in carrying out school rules commendable manner and organizing the teaching process properly.

**METHOD**

This study was quantitative research to describe the relationship among pedagogical competence, work discipline, and teaching performance in elementary school teachers. The research population was elementary school teachers who joined the seven branches of the teacher forum (*Musyawarah Guru Mata Pelajaran* [MGMP]) in Banyumanik District, Semarang City, Indonesia. Respondents were selected based on inclusive criteria, 1) teachers are civic servants; 2) have completed a minimum education level of

a Bachelor's degree; and 3) charged as the class supervisor. Based on these criteria, as many as 157 teachers were involved as respondents. Data collection of work discipline and pedagogical competence using a closed questionnaire instrument with a Likert scale (Table 1), developed and modified from Awang et al., (2015, 2016) using only four scores instead of five criteria. The work discipline and pedagogical competence variables were measured using a self-assessment questionnaire filled out independently by the respondent based on their habits and perspectives. While the teacher performance variable was measured using an observation questionnaire that independent observers scored. Questionnaire interpretation and scoring technique were matched among independent observers to avoid objectivity bias and misunderstanding of the question.

Table 1
Questionnaire assessment score criteria

| Answer criteria | Assessment score |
|---|---|
| Always/ Strongly Agreed/ Very Good | 4 |
| Often/ Agree/ Good | 3 |
| Sometimes/ Disagree/ Not good | 2 |
| Never/ Strongly Disagree/ Not Good | 1 |

Description: the assessment rubric is adjusted to the statement

**Instrument Drafting**

The work discipline variable consists of four indicators and 11 sub-indicators. In comparison, the pedagogy questionnaire consists of five variables and 13 sub-indicators, and teacher performance is observed from five variables and 18 indicators. The details of the variables and indicators are presented in Table 2.

Table 2
Structural definition of variables-indicators to construct equation modeling

| Latent Variable | Observed Variable (Indicator) | Sub Indicators |
|---|---|---|
| Work Discipline ($\xi_1$) | Enter work and comply with the provisions of working hours (WD1) | Time discipline in carrying out duties |
| | | Use the working time for productive activities |
| | | Complete tasks on time |
| | Achieving set teacher work goals (WD2) | Obey school rules for employees |
| | | Prepare learning completeness |
| | | Carry out the main task of teaching |
| | Building a positive work environment (WD3). | Build a conducive and collaborative work atmosphere |
| | | Build a solid teamwork |
| | Community service (WD4). | Facilitate students in developing their potential |
| | | Communicate with parents/guardians of students |
| | | Actively contribute to society |
| Pedagogical competence ($\xi_2$) | Recognizing the characteristics and needs of learners (PC1) | Understand the aspects of the student learning model. |
| | | Identify learners' initial abilities and learning difficulties. |
| | Mastering learning theory and principles of cooperative learning (PC2) | Understand the various learning theories and principles of learning. |
| | | Mastering various approaches, strategies, methods, and learning techniques. |
| | Mastering curriculum development and learning (PC3) | Understand and develop the curriculum (Syllabus and learning moderation plan). |
| | | Understand apperception and motivational activities |
| | | Delivery of competencies and activity plans |
| | | Applicate several learning approaches |
| | Mastering information and communication technology (PC4) | Utilize the media and learning resources. |
| | | Utilize information and communication technology in learning. |
| | Mastering learning assessment and evaluation (PC5) | Reflect and follow up on the learning outcomes |
| | | Understand the implementation of assessment and evaluation |
| | | Give feedback in the learning process based on the assessment and evaluation results. |
| Teacher Performance ($\eta$) | Implementation of quality learning (TP1). | Conduct affirmation activities to prepare students for learning |
| | | Generate student learning motivation |
| | | Conduct participatory and interactive learning |
| | | Conduct learning according to national standards |
| | | Conduct learning according to the competence of students |
| | | Conduct a systematic and holistic structured evaluation |
| | Conducive classroom management (TP2). | Create a fun classroom atmosphere |
| | | Create an environment that supports students to discuss actively |
| | Mastery of learning materials (TP3). | Confirm the learning process |
| | | Able to manage learning materials as needed |
| | Learning administration products and feasibility (TP4). | Review the latest information and research results as learning materials |
| | | Compile the Syllabus-RPP appropriately and according to the bill |
| | | Meticulous in compiling learning instruments |
| | Social role and self-actualization (TP5). | Skilled in using learning tools |
| | | Produce learning products (models, modules, evaluation journals, etc.) |
| | | Act as a facilitator for students in developing their potential |
| | | Instill critical traits and empathy |
| | | Demonstrate a humanist and democratic attitude in response to opinions |

The results from the questionnaire were then analyzed descriptively to see the percentage of score achievement on each indicator and categorized using criteria as presented in Table 3.

Table 3
Indicator achievement score criteria

| Score range | Percentage (%) | Criteria |
|---|---|---|
| ≥ 3 | ≥ 75.00 | High |
| 2.00 ≤ s < 3.00 | 50.00 ≤ *n* < 75.00 | Moderate |
| < 2 | < 50.00 | Low |

**Instrument Calibration**

Instrument validation was carried out through two stages, using validators evaluation and Pearson's Correlation Product Moment Tests analysis to evaluate the shortcomings of the questionnaire. In the first step, questionnaires validity was assessed by 12 validators, and there were three linguists, including 1) a lecturer of the Indonesian Language and Literature Education Study Program Sultan Agung University, 2) a lecturer of Indonesian Language and Literature Education Study Program, Universitas Pekalongan, and 3) lecturer in Elementary School Teacher Education Study Program in Universitas Sebelas Maret, Indonesia. The subject of substantial validation in elementary schools was carried out by nine validators consisting of three assessors from the Department of Education of Semarang City, three elementary school principals, and three elementary school teachers in Semarang City. After that, the questionnaire instrument was adjusted according to the validator evaluation. The final instrument was tested on 30 elementary school teachers outside the research area to determine instrument reliability. The reliability analysis was conducted using Cronbach's Alpha with a confidence level at 95%. Based on the analysis, the obtained a reliability (*r*) value = 0.742 > 0.700 or stated as a reliable instrument ready to use. All validity and reliability calculations were performed using the SPSS-v26 application for windows

**Data Analysis**

Latent variables in structural question modeling (SEM) analysis consist of work discipline (WD) and pedagogical competence (PC) as exogenous variables and teacher performance (TP) as endogenous variables. These latent variables were formed or measured by observational variables (indicators). The collected data was tabulated and reduced using Ms. Excel and imported into AMOS for CB-SEM analysis using the maximum likelihood method. Furthermore, the output results were analyzed, which consists of 3 stages: 1) construct validity and reliability analysis (measuring the representation score of the observational variables toward its latent variables) on the standardized output; 2) the goodness of fit (GOF) model match test; and 3) overall model evaluation (causality significance test and coefficient-determination test between endogenous with exogenous latent variables) on the output estimate.

*1. Construct Validity and Reliability Analysis*

The validity test for the 1st-order model is observed from the standard factor load on the observational and latent variables. The valid construct stated if the standardized loading

factor (Standardized Loading Factor [λ]) score ≥ 0.5. Then, the reliability in SEM is divided into Composite Reliability Measures (CRM). The composite reliability was calculated following the formula below:

$$Construct\ Reliability\ (CR) = \frac{(\Sigma std.loading)^2}{(\Sigma std.loading)^2 + \Sigma e_j}$$

Where the std. loading was directly obtained from the AMOS output, and $e_j$ is the measurement error. The construct is categorized as reliable if its CR value is ≥ 0.70.

*2. The goodness of fit (GOF)*

the 1st-order SEM is categorized as a good construct when it follows T of GOF, as mentioned in Table 4.

Table 4
Criteria of the GOF

| Goodness of Fit Indices | Cut–off Value |
|---|---|
| Chi-Square ($X^2$) | Diharapkan Kecil |
| Likelihood ratio | ≥ 0.05 |
| Chi-square value (CMIN/DF) | ≤ 2.00 |
| Root Mean Square Error of Approximation (RMSEA) | 0.05 < RMSEA ≤ 0.08 (good fit),<br>0.08 < RMSEA ≤ 1 (marginal fit) |
| Goodness of Fit Index (GFI) | GFI ≥ 0.9 (good fit),<br>0.8≤GFI<0.9 (marginal fit) |
| Adjusted Goodness of Fit Index (AGFI) | AGFI ≥ 0.9 (good fit),<br>0.8 ≤ AGFI<0.9 (marginal fit) |
| Tucker-Lewis's coefficient (TLI)/ Beetle-Browed non-normed fit index (NNFI) | ≥ 0.95 |
| Comparative Fit Index (CFI) | ≥ 0.95 |

*3. Evaluation of the entire model*

Three criteria were used to determine the suitability of the structural model in this study, including:

a. The direction of the variables' correlation. It is used to identify the positive or negative relationship among variables.
b. Estimated significance of the observed variables to their latent variables. The regression weights showed the correlation among latent variables. It was indicated by a critical ratio (c.r) score ≥ 1.967 and a significance value < 0.05, with a significance level of 5%.
c. The coefficient of determination ($R^2$). The structural equation indicates the number of variants in the endogenous latent variables that can be explained simultaneously by the independent latent variables. The higher the $R^2$ value, the more significant independent variables can define the endogenous variables, meaning that the structural equation is qualified.

## FINDINGS

### Descriptive statistical composition of respondents and achievement of indicators

The 157 respondents in this study were class supervisors for students in grades I to VI. Demographical characteristic shows that 80% of the respondent are female, with the

most academic qualification being a bachelor in education. We found that the majority of the respondent had a long teaching experience. However, the high workload in the learning process, lack of opportunities in academic careers, and educational administration discourage them from pursuing further studies. The average teaching experience period for elementary school teachers in Banyumanik Sub-district is approximately 13 years for male and female teachers, indicating a relatively high learning experience. Teaching experience and skill may contribute to the high score in all variable values. The demographic factor cannot be used as a moderation variable based on the collected data because of the unbalanced composition; then, it is considered to describe the population as a whole (Memon et al., 2019).

**Construct Validity and Reliability Analysis**

Validity and reliability analysis in the 1st-order confirmatory factor analysis (CFA) construct model intends to investigate the existence of the indirect effect of covariances and describe the variables' representative indicators (Mustafa et al., 2020; Orcan, 2018). In this research, the observed variables were used to describe the correlation among work discipline, pedagogical competence, and teacher performance variables, as performed in Figure 1.

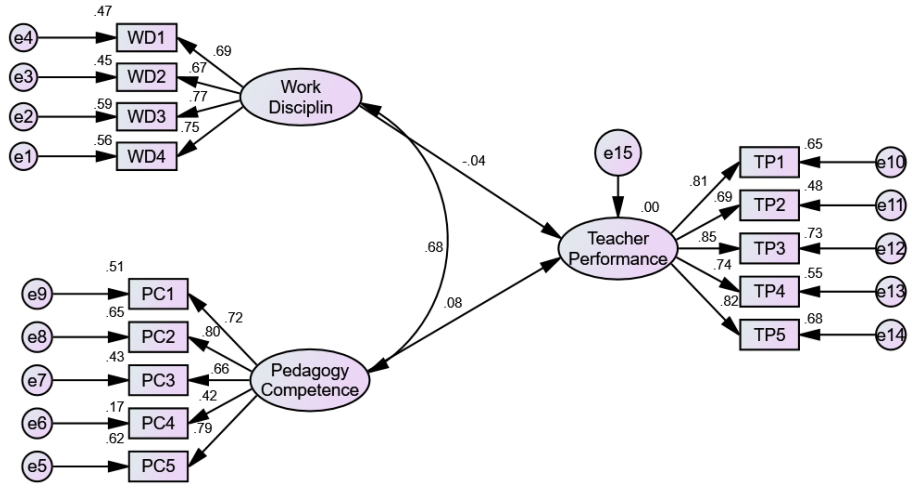


Figure 1
Structural models of standardized estimates

The 1st-order CFA model is evaluated through convergent validity and reliability analysis. The representative score of the indicators against latent variables confirms the construct's validity and reliability. Based on the study, all work discipline and teacher performance indicators have standardized loading factor values> 0.50 except PC4. On the other hand, as a whole construct, the PC4 indicator affects the model's reliability (Table 5). Based on these conditions, it can be analyzed that the used indicators are relevant and represent latent variables. Furthermore, the construct meets fundamental

assumptions and can be continued to generate path analysis to determine the relationship between the exogenous latent variables (ξ) and the endogenous latent variable (η).

Table 5
Validity and reliability result of the 1st-order CFA model construct

| Latent Variables | Indicators | Std. Loading | Error Var. | CR Reliability | Note | |
|---|---|---|---|---|---|---|
| | | | | | Validity | Reliability |
| Work Discipline ($\xi_1$) | WD1 | 0.688 | 0.47 | 0.800 | valid | reliable |
| | WD2 | 0.669 | 0.45 | | valid | |
| | WD3 | 0.766 | 0.59 | | valid | |
| | WD4 | 0.752 | 0.56 | | valid | |
| Pedagogical competence ($\xi_2$) | PC1 | 0.716 | 0.51 | 0.828 | valid | reliable |
| | PC2 | 0.804 | 0.65 | | valid | |
| | PC3 | 0.656 | 0.43 | | valid | |
| | PC4 | 0.417 | 0.17 | | invalid | |
| | PC5 | 0.787 | 0.62 | | valid | |
| Teacher Performance (η) | TP1 | 0.809 | 0.65 | 0.832 | valid | reliable |
| | TP2 | 0.690 | 0.48 | | valid | |
| | TP3 | 0.853 | 0.73 | | valid | |
| | TP4 | 0.740 | 0.55 | | valid | |
| | TP5 | 0.824 | 0.68 | | valid | |

Note: the constructed model is valid if the value of the standard (Std.) loading is ≥ 0.50 and reliable if the construct reliability (CR) value is ≥ 0.70.

Based on the analysis, mastering information and communication technology (PC4) is an invalid standardized loading factor value ($\lambda$ ) < 0.5. It indicates that the activity related to indicator PC4 may not reflect pedagogical competence variables even though it is relevant to the construct. The CR value reinforces this in each latent variable construct, which reaches ≥ 0.70. Therefore, indicators of information and communication technology are still considered to be used for establishing pedagogical competence variables.

**Full Model Matching Analysis**

The full model matching analysis is intended to generally evaluate the matching degree using the goodness of fit (GOF) between data and the model, as explained in Table 6.

Table 6
Goodness of fit (GOF) indices score of the constructed models

| Parameters | Cut–off Value | Score | Criteria |
|---|---|---|---|
| Chi-Square ($X^2$) | ≤ 3.00 | 149,986.000 | marginal fit |
| Likelihood ratio | ≥ 0.05 | 0.000 | good less |
| Chi-square value (CMIN/DF) | ≤ 3.00 | 2.027 | good fit |
| Root Mean Square Error of Approximation (RMSEA) | ≤ 0.08 | 0.080 | good fit |
| Goodness of Fit Index (GFI) | ≥ 0.90 | 0.885 | marginal fit |
| Adjusted Goodness of Fit Index (AGFI) | ≥ 0.90 | 0.837 | marginal fit |
| Tucker-Lewis's coefficient (TLI)/ Beetle-Browed non-normed fit index (NNFI) | ≥ 0.95 | 0.908 | marginal fit |
| Comparative Fit Index (CFI) | ≥ 0.95 | 0.925 | marginal fit |

Based on the analysis, only the likelihood ratio has good less criteria, then two GOFs indices are good fit, and five others indicate marginal fit criteria. Based on these criteria, it can be concluded that the factor correlation in the model among work discipline, pedagogical competence, and teacher performance is acceptably matched. In other words, the sample covariance matrix differs significantly from the estimation covariance matrix. This result indicates that the constructed model of the SEM analysis is acceptable (Thakkar, 2020). Furthermore, the work discipline and pedagogical competence from the observed variables may contribute to shaping teacher performance in elementary teachers in Banyumanik Sub-district.

**Full Model Evaluation (Hybrid Model)**

The influence of work discipline and pedagogical competence on teacher performance is estimated using a hybrid (full) model. It was conducted by combining the three latent variables of work discipline, pedagogical competence, and teacher performance. The results of the hybrid model analysis are shown in Figure 2.

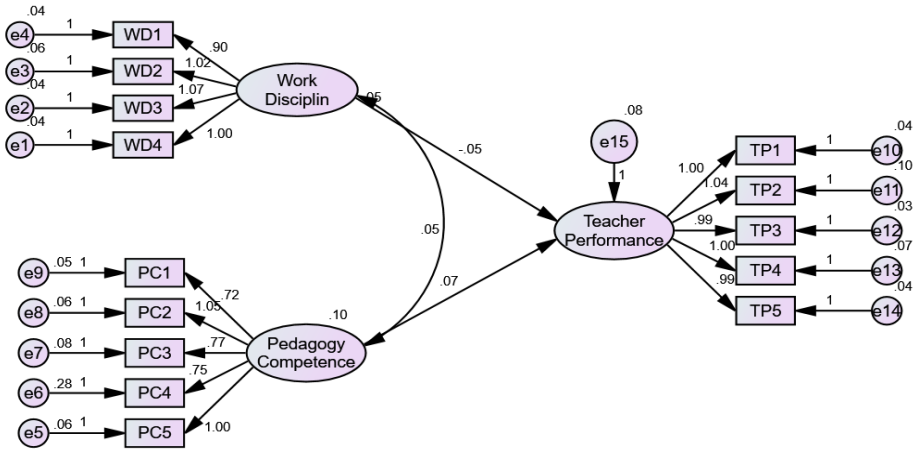


Figure 2
Full model estimation results

Evaluation of the structural model includes examining the estimated coefficients' significance. The indicators evaluated in the compatibility of the structural models include c.r values, p-values, coefficients of structural equations, and overall coefficient of determination ($R^2$). The relationship between the constructs in the hypothesis is indicated by the value of regression weights indicated by the critical ratio (c.r) ≥ 1.967 or with a significance value of < 0.05. In addition to the c.r value and significance, the evaluation is also carried out on the beta coefficient, where all beta coefficients have the same variance, where the maximum value is 1. The results of the estimation of structural equations are shown in Figure 2, and the signification result is presented in Table 7

Table 7
Significance test and coefficient of structural equations

| Path | Estimate | Error Var. | C.R. | $R^2$ Simultaneous (%) | P-value | Category |
|---|---|---|---|---|---|---|
| Work Discipline→ Teacher Performance | -0.051 | 0,08 | -0,269 | 3% | 0.788 | insignificant |
| Pedagogical competence→ Teacher Performance | 0.068 | | 0,547 | | 0.584 | insignificant |

Note: the C.R. value indicates the significance value. ≥ 1.96 7 and sig. < 0.05

The SEM modeling shows that the indicators and their latent variables are valid and reliable reflective relationships. It can be used to interpret the relationship among work discipline, pedagogical competence, and teacher performance. Then, the causative effect of the work discipline and pedagogical competence on teacher performance is simultaneous, even though the $R^2$ value = 3% indicates insignificant influence. In this study, work discipline and pedagogy competence indicate that the average performance of elementary school teachers in the Banyumanik District, Semarang City, is no longer influenced by work discipline and pedagogical competence. This may cause by other factors that may affect teacher performance significantly. This condition is illustrated by the high average achievement of score values for all indicators and variables (Table 8).

Table 8
Descriptive statistics and frequency distribution of respondents based on indicator value categories and latent variables

| Latent Variables | Indicators | Score (mean ± SD) | Category | Low | | Moderate | | High | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | ∑ | % | ∑ | % | ∑ | % |
| Work Discipline | WD1 | 91.32 ± 7.05 | high | - | - | 8 | 4.94 | 154 | 95.06 |
| | WD2 | 87.78 ± 8.24 | high | - | - | 13 | 8.02 | 149 | 91.98 |
| | WD3 | 91.31 ± 7.57 | high | - | - | 4 | 2.47 | 158 | 97.53 |
| | WD4 | 89.56 ± 7.20 | high | - | - | 5 | 3.09 | 157 | 96.91 |
| Average | | 89.99 ± 7.52 | high | - | - | 1 | 0.62 | 161 | 99.38 |
| Pedagogic Competence | PC1 | 87.98 ± 8.14 | high | - | - | 10 | 6.17 | 152 | 93.83 |
| | PC2 | 84.75 ± 10.52 | high | 1 | 0.62 | 39 | 24.07 | 122 | 75.31 |
| | PC3 | 89.20 ± 9.43 am | high | 1 | 0.62 | 13 | 8.02 | 148 | 91.36 |
| | PC4 | 77.12 ± 14.49 | high | 7 | 4.32 | 62 | 38.27 | 93 | 57.41 |
| | PC5 | 82.30 ± 10.27 | high | 1 | 0.62 | 35 | 21.60 | 126 | 77.78 |
| Average | | 84.27 ± 10.57 | high | - | - | 14 | 8.64 | 148 | 91.36 |
| Teacher Performance | TP1 | 87.30 ± 8.76 | high | - | - | 20 | 12.35 | 142 | 87.65 |
| | TP2 | 81.34 ± 10.69 | high | 1 | 0.62 | 50 | 30.86 | 111 | 68.52 |
| | TP3 | 83.73 ± 8.23 | high | - | - | 31 | 19.14 | 131 | 80.86 |
| | TP4 | 82.02 ± 9.52 | high | - | - | 46 | 28.40 | 116 | 71.60 |
| | TP5 | 79.63 ± 8.46 | high | - | - | 62 | 38.27 | 100 | 61.73 |
| Average | | 82.80 ± 9.13 | high | - | - | 20 | 12.35 | 142 | 87.65 |

Generally, the average value of indicators depicting teacher activity representing each variable is highly achieved. Then, the work discipline mostly achieves the highest score compared to the other variables, with working time discipline (WD1) and positive environment (WD3) being best achieved. It indicates that elementary teachers in Banyumanik have compliance with the school's rules, which may relate to their status as civic servant teachers.

## DISCUSSION

This study found that all variables are well achieved, even though they do not affect teacher performance. Furthermore, a high score in work discipline does not significantly affect teaching performance. The typical effect of work discipline on teacher performance is not only found in this study; Malik (2003) reveals that work discipline has no significant impact on teaching performance in Islamic Senior High School in Surakarta City ($p = 0.372 > 0.05$). The insignificant influence of the work discipline variable on teacher performance may be related to the low focus on the teacher on improving their learning process quality because most respondents are more oriented toward targeted output (Lie et al., 2020). A high level of discipline is a reasonable attitude and a necessity that civic servant teachers adhere to due to the existence of rewards and punishments for compliance with regulations (Sardjana et al., 2019).

On pedagogical competence, the highest scores are observed in curriculum development and learning (PC3) activity. While the smallest value is obtained in the information and communication technology usage in the learning process (PC4). In fact, during field observation, the implementation of the new curriculum by the Ministry of Education and

Culture of the Indonesian Republic is a common reason for teachers to convey changes in motivation and performance. In 2019-2022, the Indonesian Government overhauled the curriculum by prioritizing freedom in learning (Akib et al., 2020). The curriculum adjustment impacts changes in various education systems, teaching activities, and fostering cooperation among teachers (Dewantara, 2020; Mahfud, 2019; Retnawati et al., 2016). However, the teacher's competence and school facilities in supporting the new applied curriculum are not well developed yet.

In observed indicators of pedagogical competence, information and communication technology usage (PC4) resulting high scores in all respondents, which may cause by online learning during the pandemic. Even though diversifying and making innovative learning media was not seen in classes. We suggest that low innovation in technology used for learning may be caused by technological stuttering and low incentive. Still, regarding learning effectiveness, the media eases the burden on teachers in teaching. This research emphasizes that the rational aspects of teacher's motivation in teaching may mainly relate to business as usual in teaching duties. It manifests from the low teacher's willingness to innovate or working beyond their mandatory job responsibility. In other words, the teacher's willingness to take risks, can be considered a rational action depending on the objectives and circumstances (Meinard & Tsoukiàs, 2019).

Furthermore, the highest observed teacher performance was found in the quality learning indicator (TP1), while the lowest score was found in the social role and self-actualization (TP5). High teaching performance is related to pedagogical competence, although no significant influence was found in this study. The missing link between pedagogical competence and teacher performance probably caused by low competitive driving factors to reach more learning achievement. Researchers suspect that teachers prefer to work in their comfort zone in completing their main tasks and functions of educating and teaching. In addition, some studies have also shown that teachers are more focused on achieving administrative deliverables than developing innovations in the teaching process (Mahdum et al., 2019; Rahman, 2016). In other words, elementary school teachers in Banyumanik Sub-district work strictly follow their business-as-usual and daily routines.

The low positive-competitive in the work environment relates to the absence of teachers' vision in their career goals, low innovative learning, and low-quality improvement in teaching (Chen & Cheng, 2019). In fact, the teacher's performance in forming a vision and goal of a competitive career is a form of self-encouragement to be professional at work. Vision and goals in a job encourage teachers to make maximum efforts to achieve teaching success (Beverborg et al., 2020; Strange & Mumford, 2005; Wolff et al., 2016). It is appropriate to the condition that people work toward a clear achievement goal and try to improve the abilities and capacities of the self by emphasizing perception, vision, and skills (Mostafa et al., 2016). Furthermore, to improve performance, each teacher must have the characteristics of self-improvement potential to develop consistency in teacher professionalism (Lie et al., 2020). Some conditions indicate that teachers have the primary purpose of teaching, so they consider competition or vivacious contestants in the learning world is unimportant. Furthermore,

teachers are accustomed to cooperating in dealing with school problems, such as curriculum changes or assessments.

Highly job dependents caused by school administration and teaching load are likely to affect improving the integrity (Courduff et al., 2016; Pace & Aiello, 2016) and the work ethic of teachers (Pace & Aiello, 2016). The attitude of integrity in the teacher is likely to manifest itself in various forms, both in classroom and office activities. Nevertheless, the high integrity of work needs to be related to good characters and work ethics, including positive reinforcement, honesty, dependence, and loyalty (Subrahmanyam, 2017). Therefore, it is necessary to have further studies to dig deeper into factors that affect teacher performance.

## CONCLUSION AND LIMITATION

This study shows that the valid and reliable indicators reflected their latent variables. However, the construct of work discipline and pedagogical competence did not significantly affect public elementary school teachers' performance in Banyumanik Sub-district, Semarang City. Furthermore, simultaneously the influence exerted by the discipline and pedagogical competence variables on teacher performance is only 3%, although the achievement value for all variables is predominantly on high criteria. This indicates that other influential factors can positively and negatively affect teacher performance. The observation results indicate the possibility of teaching workloads so that teachers do not have the opportunity and motivation to innovate in teaching performance. In addition, the change in the curriculum from thematic to learning will likely also influence teacher performance because they have to divide professional duties for teaching and administration in preparing for curriculum transition to students.

However, this study is limited to capturing internal factors, namely discipline and pedagogical competence towards teacher performance as measured by self-assessment, thus lacking depth and uncovering the fundamental reasons for the conditions that affect performance. There needs to be further investigation and confirmation through in-depth interviews to evaluate the performance of elementary school teachers in Banyumanik about how workload affects teachers' time and minds to innovate in learning.

## ACKNOWLEDGMENT

An acknowledgment is given to the Lembaga Penelitian dan Pengabdian Masyarakat (LPPM) Universitas Sultan Agung for funding this research through Penelitian Internal UNISSULA Tahun Anggaran 2021/2022, grant no: 246/B.1/SA-LPPM/VII/2021. Then a special thanks to the Department of Education and Culture of Semarang City for permitting the research and all teachers involved in this study.

## CONFLICT OF INTEREST

The authors declare no conflict of interest in the data collection, management, or funding.

**CONSENT TO PARTICIPATE**

All authors gave consent to participate in this publication. Consent for publication All authors provided consent for publication in the International Journal of Instruction.

**REFERENCES**

Afandi, M., MS, Z., & Neolaka, A. (2020). Causative correlation of teacher's motivation and discipline in Banyumanik, Semarang City. *International Journal of Instruction*, *14*(1), 507–520. https://doi.org/10.29333/IJI.2021.14130A

Agustina, R., Sulistyowati, R., Putrianti, R., Anggraeni, G., & Dewi, F. W. K. (2021). *Statistik Pendidikan 2021 [Education Statistic in 2021]*. https://www.bps.go.id/publication/2021/11/26/d077e67ada9a93c99131bcde/statistik-pendidikan-2021.html

Akib, E., Imran, M. E., Mahtari, S., Mahmud, M. R., Prawiyogy, A. G., Supriatna, I., & Ikhsan, MT. H. (2020). Study on implementation of integrated curriculum in indonesia. *IJORER : International Journal of Recent Educational Research*, *1*(1), 39–57. http://journal.ia-education.com/index.php/ijorer/article/view/24#.XqjhBhCQK68.mendeley

Aldrup, K., Klusmann, U., Lüdtke, O., Göllner, R., & Trautwein, U. (2018). Student misbehavior and teacher well-being: Testing the mediating role of the teacher-student relationship. *Learning and Instruction*, *58*, 126–136. https://doi.org/10.1016/j.learninstruc.2018.05.006

Almeida, J. C. de. (2017). Teacher performance evaluation: the importance of performance standards. *International Journal for Cross-Disciplinary Subjects in Education*, *8*(1), 2973–2981. https://doi.org/10.20533/ijcdse.2042.6364.2017.0404

Awang, Z., Afthanorhan, A., & Mamat, M. (2016). The Likert scale analysis using parametric based structural equation modeling (SEM). *Computational Methods in Social Sciences*, *4*(1), 13–21. https://doi.org/10.5281/zenodo.1299429

Awang, Z., Wan Afthanorhan, W. M. A., & Asri, M. A. M. (2015). Parametric and non parametric approach in structural equation modeling (SEM): The Application of Bootstrapping. *Modern Applied Science*, *9*(9), 58–67. https://doi.org/10.5539/mas.v9n9p58

Bastian, K. C., Lys, D., & Pan, Y. (2018). A framework for improvement: analyzing performance-assessment scores for evidence-based teacher preparation program reforms. *Journal of Teacher Education*, *69*(5), 448–462. https://doi.org/10.1177/0022487118755700

Beverborg, A. O. G., Sleegers, P. J. C., Moolenaar, N. M., & van Veen, K. (2020). Fostering sustained teacher learning: a longitudinal assessment of the influence of vision building and goal interdependence on information sharing. *School Effectiveness and School Improvement*, *31*(4), 576–604. https://doi.org/10.1080/09243453.2020.1754863

Chen, Y. G., & Cheng, J. N. (2019). A study investigating teachers' competitiveness-michael porter's five forces model as theoretical basis. In *Academy of Educational Leadership Journal* (Vol. 23, Issue 2).

Courduff, J., Szapkiw, A., & Wendt, J. L. (2016). Grounded in what works: exemplary practice in special education teachers' technology integration. *Journal of Special Education Technology*, *31*(1), 26–38. https://doi.org/10.1177/0162643416633333

Deslihanida, D., Arafat, Y., & Puspita, Y. (2021, July). The effect of principal leadership and work discipline on teacher performance at SMA PGRI 2 Palembang. In International Conference on Education Universitas PGRI Palembang (INCoEPP 2021) (pp. 431-437). Atlantis Press.

Dewantara, I. P. M. (2020). Curriculum changes in Indonesia: Teacher constraints and students of prospective teachers' readiness in the implementation of thematic learning at low grade primary school. *Elementary Education Online*, *19*(2), 1047–1060. https://doi.org/10.17051/ilkonline.2020.696686

Dewi, E. R., Bundu, P., & Tahmir, S. (2016). The influence of the antecedent variable on the teachers' performance through achievement motivation in senior high school. *International Journal of Environmental and Science Education*, *11*(9), 3161-3166. https://doi.org/10.12973/ijese.2016.912a.

El Hamydy, E. M., & Brigui, H. (2022). The impact of self-discipline on classroom management in casablanca-settat middle/ high schools. *International Journal of English Language Studies*, *4*(4), 01–07. https://doi.org/10.32996/ijels.2022.4.4.1

Fauth, B., Decristan, J., Decker, A.-T., Büttner, G., Hardy, I., Klieme, E., & Kunter, M. (2019). The effects of teacher competence on student outcomes in elementary science education: The mediating role of teaching quality. *Teaching and Teacher Education*, *86*, 102882. https://doi.org/10.1016/j.tate.2019.102882

Gómez, L. F., & Valdés, M. G. (2019). The Evaluation of teacher's performance in higher education. *Revista Digital Universitaria*, *7*(2), 479–515. https://doi.org/10.22201/codeic.16076079e.2018.v19n6.a2

Hakim, A. (2015). Contribution of competence teacher (pedagogical, personality, professional competence and social) on the performance of learning. *The International Journal Of Engineering And Science (IJES)* ||, *4*(2), 1–12.

Istianah, F. (2022). The importance of implementing character values in learning in elementary schools. *International Conference on Elementary Education*, *4*(1), 224–229.

KEMENDIKBUD. (2021). *Data Uji Kompetensi Guru [Data of teacher competency test]*. https://npd.kemdikbud.go.id/?appid=ukg

Kheruniah, A. E. (2013). A teacher personality competence contribution to a student study motivation and discipline to fiqh lesson. *International Journal of Scientific & Technology Research*, *2*(2), 108–112.

Klaassen, C. A. (2002). Teacher pedagogical competence and sensibility. *Teaching and Teacher Education*, *18*(2), 151–158. https://doi.org/10.1016/S0742-051X(01)00060-9

Kusumaningrum, D. E., Sumarsono, R. B., & Gunawan, I. (2019). Professional ethics and teacher teaching performance: Measurement of teacher empowerment with a soft system methodology approach. *International Journal of Innovation, Creativity and Change*, *5*(4), 611–624.

Lie, D., Sherly, S., Dharma, E., & Sudirman, A. (2020). The impact of work discipline and work ethic on the teacher performance of Sultan Agung Pematangsiantar private middle school teachers T.A. 2018/2019. *International Journal of Business Studies*, *3*(3), 125–135. https://doi.org/10.32924/ijbs.v3i3.83

Mahdum, M., Hadriana, H., & Safriyanti, M. (2019). Exploring teacher perceptions and motivations to ICT use in learning activities in Indonesia. *Journal of Information Technology Education: Research*, *18*, 293–317. https://doi.org/10.28945/4366

Mahfud, C. (2019). Evaluation of islamic education curriculum policy in Indonesia. *Premiere Educandum : Jurnal Pendidikan Dasar Dan Pembelajaran*, *9*(1), 34. https://doi.org/10.25273/pe.v9i1.4016

Malik, A. (2013). Pengaruh motivasi kerja dan kedisiplinan terhadap kinerja guru SMA Assalaam Surakarta dengan kepemimpinan kepala sekolah sebagai variabel moderasi [The influence of work motivation and discipline on the performance of Assalaam Surakarta high school teachers with the principal's leadership as a moderating variable]. *Jurnal Manajemen Sumberdaya Manusia*, *7*(1), 53–66.

Marsen, S.B., Santosa, H., & Rochanah, S. 2021. The effect of pedagogical competence and work environment toward elementary school teachers performance. *Al-Ishlah: Jurnal Pendidikan*, 13(1), 668-677. https://doi.org/10.35445/alishlah.v13i1.563

Meinard, Y. & Tsoukiàs, A., 2019. On the rationality of decision aiding processes. *European Journal of Operational Research. 273*(3), 1074–1084. https://doi.org/10.1016/j.ejor.2018.09.009.

Memon, M. A., Cheah, J.H., Ramayah, T., Ting, H., Chuah, F., & Huei Cham, T. (2019). Moderation Analysis: Issues and Guidelines. *Journal of Applied Structural Equation Modeling*, *3*(1), 2590–4221.

Mostafa, M., Mohammad Javad, L., & Reza, O. H. (2016). The effect of van Hiele theory-based teaching educational package on achievement goal orientation of student teachers. *Review of European Studies*, *9*(1), 93. https://doi.org/10.5539/res.v9n1p93.

Mustafa, M. Z. bin, Nordin, M. N. bin, & Razzaq, A. R. B. A. (2020). Structural equation modelling using AMOS: Confirmatory factor analysis for task load of special education integration program teachers. *Universal Journal of Educational Research*, *8*(1), 127–133. https://doi.org/10.13189/ujer.2020.080115.

Onuma, N. (2015). Principals' management support practices for enhancing teachers' performance in secondary schools in Nigeria. *Journal of Emerging Trends in Educational Research and Policy Studies*, *6*(1), 11–17.

Orcan, F. (2018). Exploratory and confirmatory factor analysis: which one to use first? *Eğitimde ve Psikolojide Ölçme ve Değerlendirme Dergisi*, 414–421. https://doi.org/10.21031/epod.394323.

Pace, E., & Aiello, P. (2016). Deciding to act: Teachers' willingness to implement inclusive practices. *Education Sciences and Society*, *1*. https://doi.org/10.3280/ess1-2016oa3502.

Pribudhiana, R., bin Don, Y., & bin Yusof, M. R. (2021). Determining the influence of teacher quality toward teacher readiness in implementing Indonesian education policy. *Eurasian Journal of Educational Research*, *2021*(93), 373–390. https://doi.org/10.14689/EJER.2021.93.18.

Rahman, A. (2016). Teacher professional development in Indonesia: The influences of learning activities, teacher characteristics and school conditions. *University of Wollongong Thesis Collections*, 300.

Ramdhani, Y. R. (2017). Legal and human rights protection to non-permanent teachers at the private school in accordance with the indonesian law on teacher and lecture law 2005. *Al-Itqān: Journal of Islamic Science and Comparative Studies*, *3*(12), 25–36. http://journals.iium.edu.my/al-itqan/index.php/alitqan/index.

Retnawati, H., Hadi, S., & Nugraha, A. C. (2016). Vocational high school teachers' difficulties in implementing the assessment in curriculum 2013 in Yogyakarta Province of Indonesia. *International Journal of Instruction*, *9*(1), 33–48. https://doi.org/10.12973/iji.2016.914a.

Sardjana, E., Sudarmo, S., & Suharto, D. G. (2019). The effect of remuneration, work discipline, motivation on performance. *International Journal of Multicultural and Multireligious Understanding*, *5*(6), 136. https://doi.org/10.18415/ijmmu.v5i6.529.

Savery, J. R. (2019). Comparative pedagogical models of problem-based learning. In *The Wiley Handbook of Problem-Based Learning* (pp. 81–104). Wiley. https://doi.org/10.1002/9781119173243.ch4.

Sebalo, L., & Teslenko, T. (2020). Future teacher training for self-education activity in physical education at elementary school. *Revista Romaneasca Pentru Educatie Multidimensionala*, *12*(1), 105–119. https://doi.org/10.18662/rrem/202.

Segall, A. (2004). Revisiting pedagogical content knowledge: the pedagogy of content/the content of pedagogy. *Teaching and Teacher Education*, *20*(5), 489–504. https://doi.org/10.1016/j.tate.2004.04.006

Shulman, L. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1-23.

Siri, A., Supartha, I. W. G., Sukaatmadja, I. P. G., & Rahyuda, A. G. (2020). Does teacher competence and commitment improve teacher's professionalism. *Cogent Business and Management*, *7*(1). https://doi.org/10.1080/23311975.2020.1781993

Strange, J. M., & Mumford, M. D. (2005). The origins of vision: Effects of reflection, models, and analysis. *Leadership Quarterly*, *16*(1), 121–148. https://doi.org/10.1016/j.leaqua.2004.07.006.

Subrahmanyam, A. (2017). Relationship between service quality, satisfaction, motivation and loyalty: A multi-dimensional perspective. *Quality Assurance in Education*, *25*(2), 171–188. https://doi.org/10.1108/QAE-04-2013-0016.

Suciu, A. I., & Mâţă, L. (2011). Pedagogical competences-The key to efficient education. *International Online Journal of Educational Sciences*, *3*(2), 411–423. www.iojes.net.

Sumual, M. Z. I., & Ali, M. (2017). Evaluation of primary school teacher's pedagogical competence in implementing curriculum. *Journal of Education and Learning*, *11*(3), 343–350.

Susilawati, Y. Suhaimi, S., Noorhapizah, N. (2021). Relationship of transformational leadership, interpersonal communication with teacher performance through teacher discipline. *Journal of Advance in Education and Philosophy*, 5(11), 357-363. https://doi.org/10.36348/jaep.2021.v05i11.004.

Thakkar, J. J. (2020). *Applications of Structural Equation Modelling with AMOS 21, IBM SPSS* (pp. 35–89). https://doi.org/10.1007/978-981-15-3793-6_4.

Tynjälä, P., Virtanen, A., Klemola, U., Kostiainen, E., & Rasku-Puttonen, H. (2016). Developing social competence and other generic skills in teacher education: applying the model of integrative pedagogy. *European Journal of Teacher Education*, *39*(3), 368–387. https://doi.org/10.1080/02619768.2016.1171314.

Wolff, C. E., Jarodzka, H., van den Bogert, N., & Boshuizen, H. P. A. (2016). Teacher vision: expert and novice teachers' perception of problematic classroom management scenes. *Instructional Science*, *44*(3), 243–265. https://doi.org/10.1007/s11251-016-9367-z.

Wulandari, M., Fitria, H., & Wahidy, A. (2021). The effect of leadership and work discipline on teacher performance. *Jurnal Pendidikan Tambusai*, *5*(1), 2349-2353.