

## ENHANCING TEACHER PERFORMANCE IN DIGITAL ERA: A STUDY ON TRANSFORMATIONAL LEADERSHIP, CREATIVITY, AND MOTIVATION

Nina Indrawati <sup>a\*)</sup>, Nandang Hidayat name <sup>a)</sup>, Hendarman <sup>a)</sup>

<sup>a)</sup> Universitas Pakuan, Bogor, Indonesia

<sup>\*)</sup>Corresponding Author [aden17072006@gmail.com](mailto:aden17072006@gmail.com)

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**Abstract.** This study analyzed the influence of transformational leadership, teacher creativity, and work motivation on teacher performance in the digital age, motivated by challenges in adapting to technological development and the Merdeka Curriculum policy. The study used a quantitative approach with survey methods and statistical analysis, including path analysis. The sample comprised 254 permanent foundation teachers at private junior high schools in Bogor City. Results showed positive direct influences between: Transformational leadership on teacher performance ( $\beta_1 = 0.385$ ). Teacher creativity on teacher performance ( $\beta_2 = 0.305$ ). Work motivation on teacher performance ( $\beta_3 = 0.341$ ). Transformational leadership on work motivation ( $\beta_{31} = 0.257$ ). Teacher creativity on work motivation ( $\beta_{32} = 0.203$ ). Transformational leadership showed indirect influence on teacher performance through work motivation ( $\beta_{31} = 0.098$ ). Teacher creativity on teacher performance through work motivation ( $\beta_{32} = 0.061$ ). The study concluded that transformational leadership, teacher creativity, and work motivation significantly influence teacher performance, with work motivation mediating the effects of leadership and creativity. These findings inform strategies to enhance teacher performance through leadership, pedagogical creativity, and motivation.

**Keywords:** Digital age; Creativity; Teacher performance ;Transformational leadership; Work motivation

### I. INTRODUCTION

The transformation of education in the digital era demands a more adaptive, innovative, and professional role of teachers. The development of information and communication technology (ICT) has changed the learning paradigm from conventional methods to digital-based learning. Teachers no longer only play the role of delivering material, but also as facilitators, inspirers, and motivators in the teaching and learning process. The most decisive component in the education system is teachers, so it must receive the main attention. A teacher must be able to adapt to the rapid development of science and technology, because teachers must carry out their functions professionally [1]. However, in practice, not all teachers are able to keep up with technological developments optimally. The problems that often arise are the lack of skills in operating digital devices, the lack of innovation in the preparation of teaching materials, and the weak internal and external motivation that affects teachers' work motivation.

This condition is exacerbated by the lack of transformative leadership from the principal. According to [2] Transformational leadership is leadership that involves inspiring all its members to commit in order to a shared vision that gives meaning to the development of their own potential and some problems from a new perspective. Transformational leadership is an important factor in forming a positive work

culture, improving performance, and building a collective work ethic.

Teacher creativity also plays an important role, because creative teachers will be better able to present interesting learning methods and media that are in accordance with the characteristics of today's students. Teacher creativity is an encouragement that can be established by the growth of new ideas from various sources, so that students' trust is able to grow through creative teachers [3].

On the other hand, work motivation is the main driver in achieving optimal performance. According to the opinion [4] Motivation is a will impulse that causes a person to do an act to achieve a certain goal. Motivation is a factor that encourages a person to do a certain activity, therefore motivation is often interpreted as a factor that drives a person's behavior. High motivation will encourage teachers to continue learning, developing themselves, and carrying out tasks with full responsibility. Therefore, it is important to examine in depth the relationship between transformational leadership, teacher creativity, and work motivation to teacher performance in the digital era.

Teacher performance according to [5] are a number of the results of activities that have been or will be carried out by teachers in accordance with their profession as teachers. With indicators 1) Abilities in planning, 2) Implementing and 3) Evaluating learning. Meanwhile, the definition of performance according to [6] Performance is the end result of

an activity, with the criteria of whether the result can be said to be efficient and effective. Work Productivity (Comparison between inputs and outputs) Work effectiveness (level of achievement of goals). The term job performance means the value of a set of employee behaviors that contribute both positively and negatively to the achievement of organizational goals [7]. This formulation includes behaviors that can be controlled or beyond the employee's control. Furthermore, Colquitt et al., (2015) divide this behavior into three categories, namely task performance, and citizenship behavior that contributes positively to organizational achievement, and counterproductive behavior that contributes negatively to the organization [7]. Furthermore, the discussion of performance will focus on task performance. Task performance is a person's behavior that is directly related to the transformation of an organization's resources into products and services that the organization produces. This formulation focuses on the tasks, obligations, and responsibilities that are the main part of the job. This performance includes routine tasks, adaptive and creative tasks.

Leadership in an organization has an important and strategic role in managing and empowering all resources in achieving goals. One of the leadership styles that is relatively widely studied today is the transformational leadership style. According to [8] Transformational Leader, are those who stimulate and inspire followers to both achieve extraordinary outcomes and in the process, develop their own leadership capacity. This formulation means that transformational leadership is a leadership style in which a leader consistently stimulates and inspires his followers to achieve outstanding results, while developing leadership capacity among his followers.

In the scope of education, the role in growing and developing children's creativity is educators or teachers. A teacher who wants to awaken creativity in his students, needs to try to awaken creativity in himself. Creativity is defined as an idea or thought pattern that arises imaginatively and spontaneously and characterizes artistic achievements, mechanical creations and scientific discoveries [9]. In this case, the creative teacher has a supportive environment and has good motivation in the teacher, according to the opinion [10] argues that teacher creativity is an application of new ideas during the teaching and learning process in the classroom.

Motivation is always associated with words: desires, desires, hopes, goals, goals, motivations, and incentives. According to [12], motivation is a concept that describes the forces that work on or within a person to initiate and direct behavior. The concept is used to explain the difference in the intensity of behavior, and also to indicate the direction of behavior.

Based on the background of the challenges in adapting to technological developments and the Independent Curriculum policy, the aim of this research is to analyze the influence of transformational leadership, teacher creativity, and work motivation on teacher performance in the digital era.

## II. RESEARCH METHOD

This type of research is a quantitative research with a causal explanatory approach. This approach is used to explain the causal relationship between variables through hypothesis testing. The population in this study is all teachers who are categorized as permanent foundation teachers in private junior high schools in Bogor City, with a total of 636 teachers. Sampling was carried out proportionally random sampling so that 254 teachers were obtained as respondents. The sample is a part or representative of the population to be studied [12]. Meanwhile, according to Sugiyono (2014) samples are a part of the number and characteristics possessed by the population [13]. In accordance with the opinion of Arikunto (2011) stated that "If the subject is less than 100, it is better to take it in its entirety, so that the research is a population study [12]. Furthermore, if more than 100 subjects can be taken between 10-15% or 20-25% or more of the population so that in the sampling technique it is fulfilled". From the above opinion, the author determined the number of samples randomly because the number was more than 100 teachers, so the sample was 40% of the population of 254 teachers with a sampling technique, namely random sampling.

The instrument used was a questionnaire with a five-point Likert scale, ranging from strongly disagree to strongly agree. The independent variables in this study include transformational leadership (X1), teacher creativity (X2), and work motivation (X3), while the bound variable is teacher performance in the digital era (Y). The validity of the instrument was tested through confirmatory factor analysis (CFA), while the reliability was tested with cronbach alpha. The results of the construct validity analysis showed that all indicators had a loading factor value above 0.5, which means that these indicators were valid in measuring the variables in question. The results of the reliability test using Cronbach Alpha showed a > value of 0.70, which indicates that the instrument used is reliable.

Data analysis was carried out by descriptive statistical analysis, analysis prerequisite tests, and continued with path analysis. This method was chosen because it is able to test the direct and indirect relationships between variables simultaneously and test complex models more accurately.

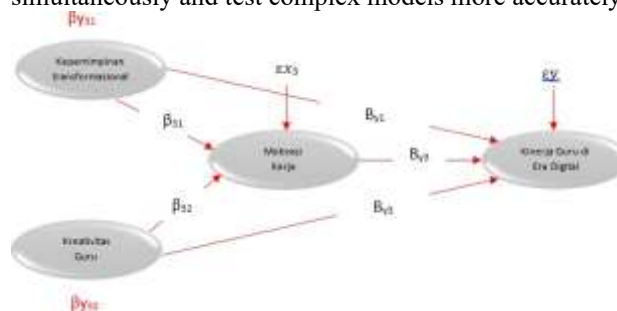


Figure. 1 Theoretical framework

Based on the research objectives and theoretical framework, the following hypotheses were formulated:

**H<sub>1</sub>:** Transformational leadership has significant effect on teacher performance.

**H<sub>2</sub>:** Transformational creativity has significant effect on teacher performance

**H<sub>3</sub>:** Teacher creativity has significant effect on Work motivation

**H<sub>4</sub>:** Transformational leadership has significant effect on work motivation.

**H<sub>5</sub>:** Teacher creativity has a positive and significant effect on work motivation.

### III. RESULTS AND DISCUSSION

The results of this study are based on descriptive analysis, validity and reliability tests, and structural model testing using path analysis.

#### A. Descriptive analysis of variables

In general, respondents' responses to each variable showed a high category, indicating that teachers had a good perception of the principal's transformational leadership and teacher creativity.

Table 1. Average Value of Variables

No	Variable	Mean	Category
1	Transformational Leadership	4.17	High
2	Teacher Creativity	4.39	High
3	Work Motivation	2.87	Low
4	Teacher Performance	3.46	Moderate

Based on the results of data processing, it is known that Transformational Leadership (M = 4.17) was perceived as high, suggesting that teachers generally view their school leaders as exhibiting strong transformational leadership behaviors, such as inspiring a shared vision and providing individualized support. The Teacher Creativity variable (M = 4.39) was the highest among the variables, indicating that teachers in this study perceived themselves as highly creative in developing innovative teaching strategies and adapting to evolving educational needs. Work Motivation variable (M = 2.87) was relatively low, highlighting a potential motivational gap among teachers. This is significant because motivation is a key driver of performance, particularly in digital education [14]. Teacher Performance (M = 3.46) was moderate, suggesting that while teachers exhibit creativity and perceive strong leadership, these factors have not yet fully translated into high performance, likely due to low work motivation.

Despite strong leadership and creativity, low motivation may explain why performance remains moderate. This finding aligns with Self-Determination Theory (SDT), which states that autonomy, competence, and relatedness are essential for fostering intrinsic motivation [14]. However, the weak direct effects of leadership and creativity on performance suggest that these factors alone do not guarantee improved outcomes. They need to be complemented by motivational strategies such as recognition, professional development, and supportive digital resources [15].

#### B. Path Analysis of transformational leadership, creativity, motivation and teacher performance in the digital era

Based on the results of regression processing with a causal model that was prepared theoretically before, a path analysis

diagram was produced along with the coefficient values of each path as follows

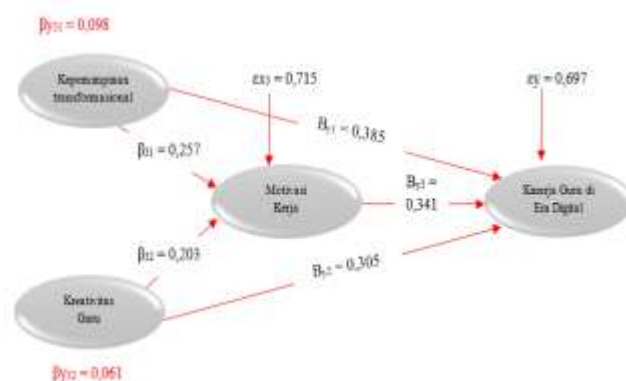


Figure. 2 Path Analysis Results transformational leadership, creativity, motivation and teacher performance in the digital era

Table 1. path analysis results

Hypothesis	Sig.	Coefficient (β)	Decision	R <sup>2</sup>
H <sub>1</sub>	0.000	0.385	Accepted	0.715
H <sub>2</sub>	0.000	0.305	Accepted	
H <sub>3</sub>	0.000	0.341	Accepted	
H <sub>4</sub>	0.000	0.257	Accepted	0.697
H <sub>5</sub>	0.000	0.203	Accepted	

#### Direct Effects

The standardized coefficient ( $\beta_1$ ) is 0.257, indicating a positive and significant effect of transformational leadership on work motivation. This means that teachers who perceive their leaders as transformational tend to have higher motivation to perform their duties. Teacher Creativity  $\rightarrow$  Work Motivation, the standardized coefficient ( $\beta_2$ ) is 0.203, suggesting that teacher creativity positively influences work motivation. Teachers with higher creative abilities are more intrinsically driven to achieve better teaching performance. Work Motivation  $\rightarrow$  Teacher Performance, the path coefficient ( $\beta_3$ ) is 0.341, reflecting a positive and substantial effect of work motivation on teacher performance in the digital era. Motivated teachers tend to adapt better to technological demands and deliver higher-quality learning experiences. Transformational Leadership  $\rightarrow$  Teacher Performance, the direct effect of transformational leadership on teacher performance is relatively small, with a path coefficient of 0.098. This suggests that while transformational leadership has an influence, its impact on performance is largely indirect through motivation. Teacher Creativity  $\rightarrow$  Teacher Performance, the direct effect of teacher creativity on teacher performance is 0.061, indicating a weak relationship. This finding implies that creativity alone does not significantly enhance teacher performance unless coupled with motivational factors.

The error variance for work motivation ( $\epsilon_{x3} = 0.715$ ) and teacher performance ( $\epsilon_y = 0.697$ ) indicates that there are other unmeasured factors influencing these variables, suggesting future research opportunities. The R<sup>2</sup> for teacher performance is 0.715, indicating that transformational leadership, creativity, and motivation collectively explain 71.5% of the

variance in teacher performance. Similarly,  $R^2$  for work motivation is 0.697, meaning that transformational leadership and creativity explain 69.7% of the variance in work motivation.

The findings of this study offer several important insights into the factors influencing teacher performance in Indonesia, particularly in the context of digital-era education. The descriptive analysis shows that teachers rated transformational leadership ( $M = 4.17$ ) and teacher creativity ( $M = 4.39$ ) at a high level, whereas work motivation was relatively low ( $M = 2.87$ ), and teacher performance was moderate ( $M = 3.46$ ). This disparity suggests that despite strong leadership practices and creativity, the absence of sufficient motivation may hinder optimal performance outcomes.

#### Leadership and Performance

The structural model indicates that transformational leadership has both a direct and an indirect effect on teacher performance, with the indirect effect mediated by motivation being more substantial. This finding aligns with prior research in Indonesia, where transformational leadership significantly improved teacher effectiveness and job satisfaction when accompanied by motivational support [16]. According to Bass and Riggio (2006), transformational leaders inspire followers through idealized influence and intellectual stimulation, creating a sense of purpose that enhances performance. In the Indonesian context, effective leadership is critical in guiding teachers through educational reforms and technology integration [17].

#### Creativity and Performance

Although teacher creativity received the highest mean score ( $M = 4.39$ ), its direct impact on performance was weak ( $\beta = 0.061$ ). This suggests that creativity alone is insufficient to produce higher performance without motivational reinforcement. Previous studies have also noted that teachers' creativity must be supported by institutional resources and professional development to influence classroom practices effectively [18].

#### Low Motivation and Moderate Performance

The low average score of work motivation ( $M = 2.87$ ) is concerning, as it suggests systemic challenges such as workload, limited digital competence, and insufficient incentives, which are commonly reported in Indonesian schools [15]. These factors likely contribute to the moderate level of teacher performance ( $M = 3.46$ ) despite favorable leadership and creativity levels. To address this, school leaders must implement motivational strategies, such as recognition programs, fair compensation, and continuous professional development, particularly in digital competencies [19].

## IV. CONCLUSIONS

This study shows that transformational leadership, teacher creativity, and work motivation simultaneously have a significant impact on improving teacher performance in the digital era. The principal's transformational leadership has been shown to have a direct, positive impact on teacher motivation and performance. Principals who are able to

inspire, support, and empower teachers create a work climate that supports optimal performance. Teacher creativity also contributes significantly to teacher performance, both directly and indirectly through work motivation. Teachers who are creative in designing digital learning are able to create innovative and enjoyable learning processes, thus positively impacting student learning outcomes. Work motivation is a mediating variable that strengthens the influence of transformational leadership and creativity on teacher performance. High work motivation encourages teachers to be more disciplined, responsible, and focused on the quality of learning. Therefore, improving teacher performance in the digital era cannot be achieved in isolation, but rather through an integrated and synergistic approach involving leadership, creativity, and work motivation.

Suggestions from this study Principals are expected to apply transformational leadership styles in school management, such as providing inspiration, individual support, and encouraging teacher participation in decision-making. Educational institutions and local governments need to conduct ongoing training that focuses on developing teachers' creativity and innovation in digital-based learning. The researcher can further expand the model by adding other variables such as academic supervision, job satisfaction, and digital competence as additional factors that can affect teacher performance.

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