

Strategies to Strengthen Group Cohesion, Stress Management, Self-Awareness and Creativity to Improve Teacher Work Effectiveness: A Study in Tasikmalaya Regency

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ABSTRACT

This study investigates the influence of group cohesion, stress management, self-awareness, and creativity on the work effectiveness of elementary school teachers in Tasikmalaya Regency. Employing an exploratory sequential mixed-methods design, the research integrates qualitative and quantitative approaches. The qualitative phase involved in-depth interviews and observations, while the quantitative phase collected data from 163 proportionally randomized ASN (Aparatur Sipil Negara) teachers through structured questionnaires. Data analysis was conducted using Structural Equation Modeling-Partial Least Squares (SEM-PLS), complemented by the System Improvement Through Organizational Renewal and Empowerment (SITOREM) method to prioritize development indicators. The findings reveal that group cohesion, stress management, and self-awareness significantly and positively influence teacher creativity, which in turn mediates their impact on work effectiveness. Among the variables, self-awareness emerges as the strongest direct predictor of work effectiveness, whereas group cohesion exerts the most substantial influence on enhancing creativity. Creativity serves as a crucial mediating factor, bridging psychosocial factors and overall teacher performance. These results underscore the importance of fostering a collaborative work culture, implementing effective stress management initiatives, promoting self-reflective practices, and cultivating creative pedagogical approaches. This research contributes to the body of knowledge on teacher development by integrating psychosocial and professional dimensions into a comprehensive framework. The study offers valuable insights for policymakers and school leaders in advancing educational transformation in alignment with the vision of a Golden Indonesia 2045.

Keywords: Teacher Work Effectiveness, Group Cohesion, Stress Management, Self-Awareness, Creativity

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INTRODUCTION

The effectiveness of teachers' work is needed to meet the community's demands for quality education. Quality education can be realized when school management practices are strengthened so that the effectiveness of teachers' work also increases which ultimately contributes to students' academic progress. The effectiveness of teachers' work in improving student learning outcomes includes teachers' efforts to encourage student learning achievement through their teaching methods in accordance with professional competence (Amtu, Makulua, Matital, & Pattiruhu, 2020). We believe that maintaining consistency in teacher work effectiveness has practical benefits in teacher evaluation, as well as theoretical value in developing richer models of effectiveness. In addition, there are important methodological

implications, namely the need to apply various approaches in looking at the effectiveness of teachers' work (Charalambous, Kyriakides, Kyriakides, & Tsangaridou, 2019).

The effectiveness of teachers' work plays an important role in forming superior resources so as to increase social and economic development. Because effective teachers in their work are directly related to the quality of education and its impact on society and the economy, where effective teachers can improve learning progress, academic achievement, and motivation for students to continue learning (Nikolaidis, Ismail, Shuib, Khan, & Dhiman, 2022). So that teacher preparation programs play an important role in building the self-efficacy of prospective teachers which in turn strengthens teaching practices, teacher effectiveness, and student learning (Naidoo & Naidoo, 2023).

With effective teaching methods from teachers, students can prepare themselves to adapt and accept the challenges of modern education. The effectiveness of teachers' work in implementing curriculum changes is greatly influenced by the support of school leadership, working relationships with peers and superiors, and the school's culture and operational practices, in addition to personal motivation (G. Jenkins, 2020). Teacher teaching innovation also plays an important role in achieving the desired learning effectiveness in accordance with learning objectives and curriculum in schools (Tamsah, Ilyas, & Yusriadi, 2021).

Teachers with high work effectiveness play a strategic role as a catalyst for change in forming graduates who have superior competencies and integrity characters. Increasing teachers' positive emotions can help them carry out classroom management tasks and manage inappropriate behaviors thus creating a positive learning environment that supports students and teachers (Chen, 2019). Therefore, the effectiveness of teachers' work requires an adaptive and responsive learning environment as well as the ability of teachers related to personal attributes and also the manifestation of teacher behavior that facilitates students to achieve optimal learning outcomes (Aldrup, Carstensen, & Klusmann, 2024; Bada, Tengku Ariffin, & Nordin, 2024; Myrberg, Johansson, & Rosén, 2019).

Based on findings in the field, it indicates that the effectiveness of teachers' work in Tasikmalaya Regency still faces various challenges, including, 50% of teachers show non-optimality in learning planning, which is the main foundation in the teaching process. In addition, 47% of teachers experienced obstacles in teaching readiness, 48% showed low motivation in teaching, and 52% were not optimal in choosing learning strategies that were in accordance with the characteristics of students. On the other hand, as many as 42% of teachers have not been optimal in carrying out comprehensive learning evaluations, 49% have not succeeded in creating a conducive learning environment, 46% are less than optimal in the use of educational facilities and infrastructure, and 53% have not been effective in guiding students academically and emotionally. This condition reflects the urgent need to know various factors that can optimize the effectiveness of teachers' work.

Although the effectiveness of teachers' work has been the focus of research (Good, 2024), many studies tend to be fragmented (Dedy Yusuf Aditya, Setyaningsih, & Laihat, 2024) So that it does not consider the influence of factors, especially those based on findings in the field as conveyed by the informant. The research conducted shows several factors that can optimize the effectiveness of teachers' work such as group cohesion, stress management, self-awareness, and creativity. Research on the effectiveness of teachers at the elementary school level, especially in Tasikmalaya Regency, is still very limited. This research gap needs to be addressed given the misalignment between the demands of 21st century education and the competence of teachers today (Herlinawati et al., 2024), which has implications for the quality of teaching that is not optimal and the slow implementation of technological innovations in education that affect the effectiveness of teachers' work (Sarwa, Simaremare, Hasibuan, & Priyadi, 2020).

In order to overcome the issue of the effectiveness of teachers' work in elementary schools in Tasikmalaya Regency, a research model design that is able to comprehensively analyze various aspects that affect it is needed. The fundamental question that needs to be answered is: How to develop a research model that holistically investigates the various factors that contribute to the effectiveness of teachers' work in the context of Tasikmalaya Regency? What factors, including group cohesion, stress management, self-awareness, and creativity need

to be considered to formulate the most appropriate solutions to improve teacher work effectiveness? Identifying these key factors will guide us in finding the most effective strategies to optimize the effectiveness of teachers' work. Furthermore, it is important to establish specific strategies that can be implemented to increase the effectiveness of teachers' work, as well as how this strategy can be implemented effectively in the reality of the local education environment of Tasikmalaya Regency. By answering these questions, this study aims to propose a comprehensive approach, which not only identifies challenges but also offers clear solutions and concrete implementation measures to improve the effectiveness of teachers' work in Tasikmalaya Regency primary schools.

In this study, the *Mix Method Exploratory Sequential Design* research design was adopted (A. M. Jenkins, Bayer, Yousefi Nooraie, & Fiscella, 2023; Kasakewitch, Coelho, & Lima, 2025), an approach that integrates qualitative and quantitative methods sequentially. The initial stage of the research involves collecting and analyzing qualitative data (Chiarini & Kumar, 2022) to explore in depth the phenomenon of teacher work effectiveness in elementary schools in Tasikmalaya Regency. The findings from this qualitative phase are then used to develop instruments and inform more structured quantitative data collection (Skamagki, King, Carpenter, & Wählin, 2024). Furthermore, the quantitative data collected (Koskey et al., 2023) analyzed using the *Structural Equation Modeling-Partial Least Squares* (SEM-PLS) method (Hair et al., 2021; Sarstedt, Ringle, & Hair, 2021) to test relationships between variables, including including group cohesion, stress management, self-awareness, creativity and teacher work effectiveness.

The combination of these two approaches is expected to provide a more comprehensive and in-depth understanding (Teerawongpaiboj, Tantipoj, & Sipiyaruk, 2024) about the complex dynamics that affect the effectiveness of teachers' work in the context of basic education in Tasikmalaya Regency. This research is important because the effectiveness of the work of elementary school teachers in Tasikmalaya Regency greatly determines the quality of basic education, but it has not been studied in depth with a comprehensive approach. The uniqueness of this study lies in the use of the Mix-Method Exploratory Sequential design, which combines qualitative data for initial exploration and quantitative data with SEM-PLS analysis to test the relationship between psychosocial variables, thereby resulting in a more complete and contextual understanding of the factors that affect the effectiveness of teachers' work.

Teachers who are effective in their work play a central role as the main driver of educational transformation towards sustainable progress, in line with the development of science and technology in the present and future era. In line with national aspirations, improving the quality of human resources through education is expected to realize the vision of a Golden Indonesia 2045 (Ari Irawan, Sri Setyaningsih, & Eka Suhardi, 2024).

Group cohesion plays an important role in strengthening the effectiveness of teachers' work by building a shared identity, increasing autonomy motivation, and encouraging organizational civic behavior, thereby creating a more productive and collaborative educational environment (Noman, Xu, Kaur, & Fang, 2024). Kohesi Groups contribute to improving teachers' work effectiveness by strengthening relationships between team members, supporting the success of collective tasks, and magnifying the positive impact of knowledge-based leadership in educational settings (Mariam, Khawaja, Qaisar, & Ahmad, 2022; Volobuev, 2025).

Stress management plays an important role in improving teachers' work effectiveness, although differences in stress levels and teacher characteristics can affect the success of interventions (Paudel et al., 2022). Effective stress management through various psychological interventions, such as *Mindfulness-Based Interventions* and *Rational Emotive Behavioral Therapy*, contributes significantly to reducing teachers' stress and burnout, thereby improving their well-being and work effectiveness in the educational environment (Agyapong, Brett-MacLean, Burbach, Agyapong, & Wei, 2023).

Teachers who have high self-awareness through active involvement in *Continuous Professional Development* (CPD), are able to manage learning reflectively, share experiences, build professional communities, and adapt to global educational standards. The results of the analysis show that positive belief in self-development encourages teachers to be more confident

in teaching, thus contributing directly to the achievement of student learning outcomes. Thus, self-awareness is a key factor that strengthens the effectiveness of teachers' work in facing the demands of professionalism in the world of education (Vadivel, Namaziandost, & Saeedian, 2021). Teachers with high self-awareness are better able to manage behavior, build good professional relationships, and adapt to the demands of education, thus improving their overall work (Candeias, Portelada, Félix, & Galindo, 2024; London, Sessa, & Shelley, 2023; Yahşi, 2021).

Meanwhile, creativity contributes significantly to the effectiveness of teachers' work by encouraging innovation in learning and problem solving. Through a challenge-based approach and real projects, creativity strengthens the role of teachers in achieving 21st-century educational goals, making them a key factor in improving professional performance (Haim & Aschauer, 2024). Creativity contributes significantly to the effectiveness of teachers' work, especially in improving adaptation, innovation, and response to the diversity of students in the learning environment (Soeharto, Subasi Singh, & Afriyanti, 2024).

THEORETICAL REVIEW

Group Cohesion

Group cohesion is the strength of bonds between members that affects the closeness, interaction, and effectiveness and success of the group in achieving goals (Hallam, 2023; Sweeten, 2022). Group cohesion is described as a sense of belonging and a spirit of unity in a group (Alexander Gilgur, 2023). Group cohesion is a shared attraction, bond, or sense of pride among team members that is driven by social or task-based elements associated with team membership (Grossman, Nolan, Rosch, Mazer, & Salas, 2022). Group cohesion is an attraction and bond between members of a group. Team unity encourages members to develop compatibility and remain part of the team despite challenges. Group cohesion is closely related to the outcome of group performance. Groups with low levels of cohesion tend to experience a decline in effort to a minimal degree, while groups with high cohesion rarely experience this, even requiring the large incentives needed to push their efforts as expected (Gächter, Starmer, & Tufano, 2023; Qu, Liu, Wang, Chang, & Fan, 2023). Conveyed that, in fact, group cohesion can be seen as a mechanism to maintain connection and unity based on the cooperative behavior, obedience to expectations, and emotional bonds of group members, which will influence the behavior and decision-making of subgroups to some extent (Buheji, 2024; Gai et al., 2023). Kanik, M., & Özçelik, İ. Y. (2023, p. 2572) [76] The concept of group cohesion, relates to the team's efforts to support each other and stay together in pursuit of team goals and objectives (González-García, Martinent, & Nicolas, 2022; Kanik, 2023). Based on the expert theories about group cohesion that have been studied, it can be synthesized that group cohesion is a behavior of attachment and attachment that makes group members feel emotionally and instrumentally connected in achieving common goals. In the context of teacher groups, group cohesion is an important key in forming and maintaining a positive work environment. When a group of teachers feel emotionally and instrumentally connected, they tend to work more effectively in achieving a common goal, which in the scope of this research is to provide quality education to students. Emotionally, group cohesion builds mutual trust, appreciation, deep respect and support among the members of the teacher group. When teachers feel that they are accepted and appreciated by their colleagues, teachers will be more likely to be able to support each other in overcoming challenges that arise in the school environment. This creates a positive atmosphere in the school, which can affect the motivation and well-being of teachers and learners as well as students.

Stress Management

Stress management is the process of evaluating and modifying a person's cognitive assessment of stressors. This involves changing one's perception of stress, examining one's response to stress, and implementing coping strategies (Lambert & Orkaido, 2024). Stress management is the management of one's stress by using the best approach to deal with the demands and pressures placed on the person by changing the internal or environmental triggers that cause it or strengthening one's coping mechanisms (Akintunde-Adeyi, Akinbode, & Akinola, 2023; Wiharjanto, Rusmana, & Suharyat, 2024). It is also explained that stress

management is the process of utilizing techniques and interventions to reduce the negative effects of stress on the body and mind by using various approaches to stress (Ruchiwit, Vuthiarpa, Ruchiwit, Muijeen, & Phanphairoj, 2024). Stress management is the use of techniques to stop the stress response from causing fight-or-flight symptoms (a physiological response that occurs in response to a threat or stressful situation that is considered to potentially threaten a person's safety; Increased heart rate; Improved breathing; Increased blood flow to large muscles; Increased blood pressure; Increased sweating) thus allowing the body to return to a state of homeostasis (the body's effort to maintain its stable internal balance despite external changes that can affect it) (Felsenstein, 2024). Stress management is an action through training, facilitation, and education about the effects of stress on individuals or groups that encourage the development of coping mechanisms, which are cognitive and behavioral processes that a person carries out to overcome or overcome stress, pressure, or challenges in daily life (Sandya & Kumar, 2024). Stress management is a technique or way to manage the stress faced, so that it can make individuals healthier and have good performance and productivity (Safira, 2024). Based on the presentation of experts on stress management, it can be synthesized that stress management is an active and holistic action to regulate perceptions and responses involving various techniques and strategies, aiming to improve the physical and mental well-being of individuals in facing the challenges of daily life. Stress management for teachers is not just about reducing workload or avoiding stressful situations, but also involves efforts to regulate perceptions and responses to those challenges. By utilizing the various techniques and strategies available, teachers can develop skills in managing stress effectively, both physically and mentally. By adopting a holistic approach, teachers can improve their well-being across the board, which in turn will have a positive impact on the quality of teaching conducted, interaction with learners, and overall well-being.

Self-Awareness

Self-awareness is how an individual to see himself clearly, that is, to become the object of sendir's attention (London et al., 2023). Self-awareness is an individual's awareness of oneself (Haryanto, 2024). Self-awareness is an attempt to understand and recognize an individual's mental actions in the same way that an individual is aware of his or her physical actions or behavior (Peacocke, 2023). Self-awareness is a mental picture that a person has of himself and how he interacts with the world around him (He, 2024). Onceptualization of self-awareness includes interpersonal and intrapersonal perspectives (Carden, Jones, & Passmore, 2023). Self-awareness is a deep understanding of feelings, strengths, weaknesses, needs and motivations to act independently that can affect an individual's strengths (Surya, Wibowo, & Mulawarman, 2023). Self-awareness is how individuals assess and determine strengths in the environment, and learn how to maintain strengths and correct weaknesses (Wong, Gerras, Kidd, Pricone, & Swengros, 2022). Self-awareness is the ability to recognize one's own mental state, including emotions, sensations, beliefs, and desires. Self-awareness is considered one of the highest forms of human cognitive functioning, as it allows a person to understand the mental state of themselves or others. In various contexts, self-awareness can be seen from the physical side as knowledge of one's own body and face, while in psychological and temporal contexts, self-awareness forms individuals with unique characteristics that continue throughout life (Ahmad, Minervini, & Roane, 2023; Kreibich et al., 2022; Nurazizah, Fitria, Komalasari, & Musfichin, 2024). Based on the definition of self-awareness that has been explained by experts, it can be synthesized that, Self-awareness is an attitude of individual awareness to be able to reflect on one's strengths and weaknesses and understand one's own thoughts, feelings, and actions with one's environment. Self-awareness for teachers means not only recognizing one's strengths and weaknesses, but also understanding how teachers' behaviors and attitudes affect interactions with students, stakeholder, and the overall work environment. By having high self-awareness, teachers can recognize their emotions and reactions to certain situations, as well as understand how to manage those emotions well. In addition, self-awareness also allows teachers to identify mindsets and beliefs that may be limiting their professional growth, so that teachers can continue to develop and improve the quality of teaching.

Creativeness

Creativity is a behavior that is capable of proposing or generating some new, original, and appropriate solutions to problems and is an essential skill for survival and flourishing in the 21st century (Zhan, He, & Zhong, 2024). Creativity is a natural activity that determines how we can achieve something innovative or different through originality and flexibility (Villalustre, Cueli, & Zarzuelo, 2024). Creativity refers to the development of new and potentially useful ideas that are based on a person's unique knowledge and experiences and allow that person to respond and shape the environment (Bledow, Kühnel, & Kuhl, 2024; Harvey & Berry, 2023). Creativity is defined as a domain-specific trait that consists of different thoughts, i.e. the extent to which an individual can generate, expand, and support original and diverse ideas (Calafato, 2024). Creativity is the process by which people develop new and useful ideas or solutions to problems (Gonlepa, Dilawar, & Amosun, 2023; Jean Jr. & Ferinia, 2023). Creativity is the process of looking at things from a different perspective, and going beyond the boundaries of traditional ways of thinking and revealing unique products by creating new results from seemingly unrelated elements but are original and useful (Ata-Akturk & Sevimli-Celik, 2023; Park, Li, & Niu, 2023). Based on experts' explanations of the meaning of creativity, it can be synthesized that creativity is a process that involves the efforts of individuals or groups in producing new ideas that are useful and in accordance with needs, both in the form of products, services, or solutions to certain problems. Highlighting the important role of creativity in the context of the teaching profession, teacher creativity is not only about the skills to create new ideas, but also about the willingness to apply those ideas in a learning context that suits the needs of the learner. Creative teachers can come up with innovative learning approaches and strategies, which can increase student engagement and facilitate a better understanding of the subject matter. In addition, teachers' creativity is also needed in designing interesting and motivating learning activities, as well as in adjusting learning approaches according to the needs and interests of students.

Teacher Work Effectiveness

The effectiveness work of teachers' is generally understood as the teacher's efforts to influence their students and is seen as the result of education (Knopik & Domagała-Zyśk, 2022). Bormasa, M. F. (2022, p. 134) [22] said that work effectiveness is a state that shows the achievement of a predetermined goal by exerting all the power available to humans through their activities (Anasih, 2022; Bormasa, 2022). Still in line with the classic definition of teacher effectiveness, for our work, an effective teacher contributes to learners' achievement and delivers high-quality teaching (Bardach, Klassen, & Perry, 2022). The effectiveness of teachers' work is the level of achievement of teachers' work in managing the learning process on target and on time, directed and systematic, and the creation of conducive learning activities, as well as the achievement of learning goals in accordance with what has been planned in advance (Halimah, Retnowati, & Herfina, 2019; Vrazhnova, Anastasov, & Nikiporets-Takigawa, 2021). Teacher work effectiveness means achieving results in accordance with the goals or plans that have been set. The effectiveness of the work of teachers and employees is seen when the implementation of tasks runs optimally, creating a dynamic balance between the quality and quantity of learning with the use of existing resources (Gultom, Munthe, & Purba, 2021; Suhailis, Isjoni, & Suanto, 2022). (Hasanudin, 2020; Nuraprilia & Sutarni, 2019) explained that the effectiveness of teachers' work is the implementation of tasks precisely, effectively, and efficiently, in accordance with applicable planning and rules. From the description of the definition of teacher work effectiveness that has been explained, it can be synthesized that teacher work effectiveness is the accuracy of teachers in carrying out their duties as educators in order to achieve learning goals and targets that are focused on the learning success of students. Based on the synthesis submitted, it can be interpreted that the effectiveness of teachers' work is not only related to technical skills in delivering subject matter, but also to the ability of teachers to direct learning towards achieving the goals that have been set. Accuracy in carrying out educational tasks includes a deep understanding of the subject matter, the skill of conveying material clearly and attractively, and being able to motivate students to learn. In addition, teachers also need to have skills in assessing students' learning progress and providing

constructive feedback to help students reach their full potential. With a focus on the success of student learning as the main target, the effectiveness of teachers' work is key in ensuring a meaningful educational experience and having a positive impact on the overall development of students.

METHOD

This study applies *the Mix Method Exploratory Sequential Design* by combining qualitative and quantitative approaches. Qualitative data was collected through interviews, observations, and documentation, this activity aimed to explore the conditions of teachers' work effectiveness and identify the main factors that contributed positively and dominantly. Once the data is collected, the qualitative analysis follows six stages (Creswell, 2021), It is done by sorting relevant information and coding to group variables based on the frequency with which they appear in interviews. This coding makes it easy to identify dominant variables. Furthermore, a constellation model was developed that describes the relationship between exogenous and endogenous variables to be tested in the study. Quantitative data was obtained using a closed questionnaire on the Likert scale, to be further analyzed through structural model testing; The validity and reliability of the instruments are tested to ensure the accuracy of the results.

In the quantitative phase, the study used a sample calculated using the Slovin formula, resulting in 163 respondents of ASN teachers at the State Elementary School of Tasikmalaya Regency, selected to describe the factors that affect the effectiveness of teachers' work. The sampling technique used was proportional random sampling, and data was collected through questionnaire distribution. Data analysis begins with descriptive statistical analysis, which aims to describe the characteristics of the research variables. In addition, path analysis was performed to test the relationships between variables. To analyze the data, the *Partial Least Square (PLS) Structural Equation Modeling (SEM)* method(Hair et al., 2021; Shela, Ramayah, Aravindan, Ahmad, & Alzahrani, 2023) used with the SmartPLS application, was chosen because the study is based on a constructivist approach that builds on the construction of variables based on qualitative findings in the field, which allows the use of data without the conditions of normal distribution and is more flexible in sample size (Vishnoi et al., 2024). Furthermore, the analysis was carried out using the *Scientific Identification Theory for Conducting Operations Research in Education Management (SITOREM)* approach (Hardhienata, 2017; Novita, Sukmanasa, Suhardi, & Suhendra, 2023; Setyaningsih, 2020; Setyaningsih & Suchyadi, 2021) to identify indicators that need to be improved and indicators that need to be maintained in an effort to optimize research results from the scope of the variables studied, including Teacher Work Effectiveness (Y), Group Cohesion (X1), Stress Management (X2), Self-Awareness (X3), and Creativity (X4).

RESULT AND DISCUSSION

Based on the results of structured interviews in the early stages, this study was carried out through a qualitative approach to explore in depth the experiences and views of teachers as key informants in Tasikmalaya Regency regarding the effectiveness of their work, obtaining preliminary findings that reflect the real challenges they face, as well as the need for strategies that are able to strengthen their work effectiveness in the following table 1:

Table 1. Preliminary Findings of Qualitative Interview Results, Issues, and Needs of Teachers in Improving Work Effectiveness				
No.	Theme Findings	Statement of Resource Persons	Interpretation	Initial implications
1.	Cohesion of Weak Groups	Gr. O1 "We feel that we are still running separately, there is no cohesiveness in the teacher team."	Lack of communication and cooperation between teachers hinders collaboration in the	A strategy to strengthen collaboration and solidarity in teachers' work teams through

			school environment.	group cohesion is needed.
2.	Work Stress	Gr. D2 "The high administrative burden makes me often feel exhausted and depressed."	Teachers face significant stress due to the backlog of non-teaching assignments.	There is a need for an understanding of stress management based on the contextual needs of teachers.
3.	Low Self-Awareness	Gr. Y0 "Sometimes I don't realize that my emotions are affecting the way I teach."	Teachers lack self-reflection on emotional conditions that have an impact on professionalism.	There is a need to develop self-awareness improvement programs in the context of teaching
4.	Lack of Creativity Space	Gr. F1 "Teachers tend to hold back their creative potential due to the lack of environmental support, even though creativity is part of professional competence that must be actualized.."	Reinforcement is needed that encourages and facilitates teachers to actively bring out and apply creativity in the learning process	It is necessary to strengthen and facilitate teachers to actively bring out and implement creativity in the learning process
5.	Stress Management Needs	Gr. O2 "We know stress is there, but we don't know the right way to manage it yet."	Teachers are aware of the pressure of work, but do not have effective coping skills or strategies	Special training or assistance related to stress management techniques that are applicable to teachers is needed.

Based on Table 1. It can be explained that the initial findings of the qualitative interviews in this series of exploratory designs reveal the challenges faced by teachers in carrying out their professional duties. Some of the main issues that arise include weak group cohesion, high stress pressure, low self-awareness, and limited space to channel creativity. The resource person said that teamwork between teachers has not been built optimally (Shand & Goddard, 2024), which has an impact on low collaboration in the implementation of learning. In addition, administrative burden and work pressure are sources of stress (Hongyi & Abdul Aziz, 2024) and have not been addressed with an adequate coping approach (Qu et al., 2023). Teachers also show a lack of reflective ability to understand personal emotional states (Januszka, 2023), that indirectly affect the effectiveness of teaching. On the other hand, inhibited creativity causes teachers to tend to maintain conventional approaches in teaching (Pazin Fadzil, Mistima, & Sofwan, 2022). Overall, this analysis emphasizes that increasing the effectiveness of teachers' work requires strengthening four fundamental aspects, namely: group cohesion (X1), stress management (X2), self-awareness (X3), and creativity (X4), which synergistically form an important element in developing teacher work effectiveness.

Based on the demographic analysis of respondents, as many as 39 people (23.9%) were men, while the majority of respondents, namely 124 people (76.1%), were women. In terms of education level, all respondents have S1 educational qualifications (100%), without any of them reaching the S2 or S3 level. Based on teaching experience, most of the respondents had less than

5 years of experience, with 8 people (civil servants) and 74 people (P3K). Respondents with 5-10 years of experience consisted of 11 people (civil servants) and 4 people (P3K). Meanwhile, there are 28 people (civil servants) with 11-20 years of experience, while none from PPPK are in this category. Respondents with more than 20 years of experience all came from civil servants as many as 38 people. In terms of personnel status, the number of civil servants reached 135 people (49.3%) and P3K was 139 people (50.7%). In addition, there are 12 teachers who have become Driving Teachers (GP) and 8 people who are still in the Driving Teacher Candidate (CGP) stage. This analysis shows that most respondents are women with a balanced employment status between civil servants and P3K.

Table 2. Descriptive Data of Research

Statistical	Teachers' work Effectiveness	Group Cohesion	Stress Management	Self-Awareness	Creativeness
Mean	138,607	138,466	144,23	141,95	134,85
Galat Baku	1,309	1,308	1,41	1,35	1,19
Median	134	135	144	139	134
Mode	128	131	146	168	128
Standard Deviation	16,718	16,705	17,95	17,24	15,24
Sample Variance	279,487	279,065	322,19	297,29	232,19
Kurtosis	-1,191	-1,139	-1,09	-1,02	-1,06
Skewness	0,105	0,175	0,11	0,12	0,03
Range	63	60	66	65	61
Minimum	106	109	110	108	105
Maximum	169	169	176	173	166
Sum	22593	22570	23510	23138	21981
Count	163	163	163	163	163

Based on Table 2. The results of the descriptive statistical analysis showed an average score of 138.607 with a standard deviation of 16.718, which reflects a moderate level of variation among respondents. The group cohesion variable had an average of 138.466 and a standard deviation of 16.705, while stress management had the highest average score of 144.23 with a standard deviation of 17.95, indicating the importance of this factor in the work dynamics of teachers. Self-awareness showed an average of 141.95 and a standard deviation of 17.24, while creativity had the lowest average of 134.85 with a comparatively smaller variation (standard deviation of 15.24). The skewness values of the entire variable ranged from 0.03 to 0.175, indicating a relatively symmetrical distribution of the data. Negative kurtosis for all variables indicates a flatter distribution of data than the normal distribution (platycurtic). The range of scores shows a fairly wide distribution of data, showing the diversity of individual characteristics in the population. These findings provide an important starting basis for further analysis, especially in evaluating the relationship between predictive variables on teacher work effectiveness with structural model approaches.

The results of the descriptive analysis showed that the effectiveness of teachers' work was significantly influenced by group cohesion, stress management, self-awareness, and creativity. These findings are in line with previous research that emphasizes the role of teachers' work effectiveness in supporting the transformation of education towards a Golden Indonesia 2045 (Ari Irawan et al., 2024). Group cohesion strengthens collaboration and teacher motivation (Mariam et al., 2022; Noman et al., 2024), While effective stress management improves teachers' work well-being (Agyapong et al., 2023; Paudel et al., 2024). Self-awareness encourages professional reflection and confidence in teaching (London et al., 2023; Vadivel et al., 2021), Meanwhile, creativity supports learning innovation to meet the demands of 21st century

education (Haim & Aschauer, 2024; Soeharto et al., 2024). These findings reinforce the importance of strengthening these factors in an effort to improve the effectiveness of teachers' work in a sustainable manner.

The research data was processed using PLS-SEM version 4 with an *Embedded Two-Stage approach* and a *Hierarchical Component Model* (HCM) model. The first stage (*First Order*) measures the relationship of an item to a latent variable to produce a latent variable score, then the second stage (*Second Order*) uses that score to measure a higher dimension or indicator (Hair et al., 2021; Sarstedt et al., 2021). Below is a formative reflective measurement model for each variable in the model developed in this study:

Table 3. Measurement Model (External Model) Stage 1 Recapitulation

Variabel	Items	Invalid Question	Valid Question	HTM criteria
Teachers' work Effectiveness	34	4	30	Achieved
Group Cohesion	35	7	28	Achieved
Stress Management	36	4	32	Achieved
Self-Awareness	35	3	32	Achieved
Creativeness	34	1	33	Achieved

In the initial stage of testing the measurement model, an evaluation was carried out on the validity of the indicators of each research variable. The recapitulation results are presented in Table 3, showing that all variables have met the validity criteria, which is characterized by the achievement of the HTM standard (Model Test Results). The Teacher Work Effectiveness variable initially had 34 statement items, but after the validity test, as many as 4 items were declared invalid so that only 30 items were retained. This shows that most of the items in this construct are able to measure the concept of teacher work effectiveness consistently and relevantly. In the Group Cohesion variable, out of the 35 items developed, as many as 7 items did not meet the validity criteria, leaving 28 valid items. Although the number of items that fell was higher than other variables, the number of valid items remaining was still representative enough to measure group cohesion comprehensively. Meanwhile, the Stress Management variable showed a more stable performance of the instrument, with only 4 items out of a total of 36 declared invalid, so 32 items remained used in the follow-up analysis. This stability reflects that the concept of measured stress management is relatively well defined in instrument development. The Self-Awareness variable has 35 initial items, with 3 items that do not meet the validity, resulting in 32 valid items. This high validation ratio indicates the consistency of the indicator in accurately measuring the dimensions of respondents' self-awareness. As for the Creativity variable, the validation results showed excellent instrument quality, with only 1 item out of 34 items declared invalid. The remaining 33 valid items show that the development of creativity indicators has been carried out with high precision, ensuring a broad and in-depth scope of concepts. Overall, the HTM achievement on all variables confirms that the measurement model has qualified the validity of the indicators at this early stage. These findings are an important foundation to proceed to the testing stage of structural models, as they ensure that the data obtained comes from valid and reliable instruments. In addition, the high validity across variables reinforces the belief that the proposed conceptual model has good empirical carrying capacity.

The next test is to analyze the indicators of each variable in the study. The test was conducted as a validity and reliability test using PLS SEM analysis, and the results can be seen in Figure 1 below.

Figure 1. External Loading Test Results Using PLS Algorithm

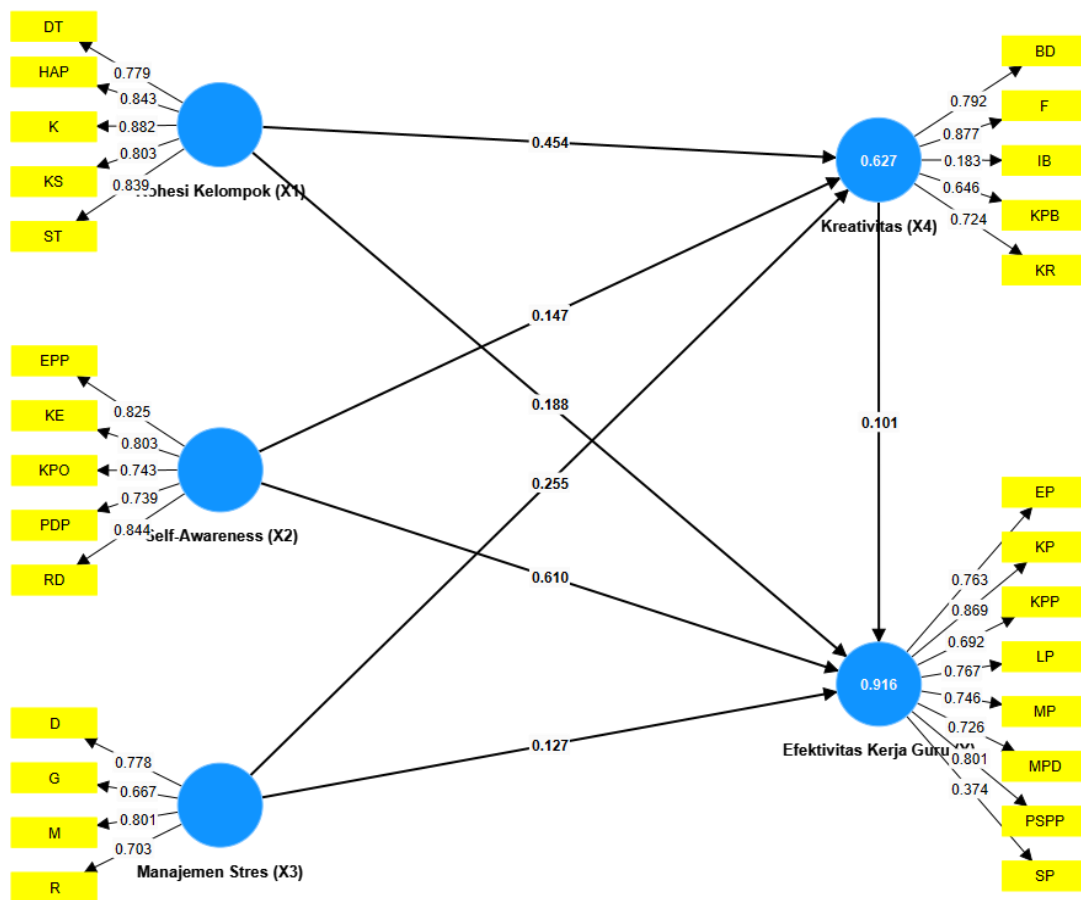


Figure 1. Explaining the structural model of the results of data processing using the Structural Equation Modeling approach with Partial Least Squares (SEM-PLS) shows the causal relationship between the constructs studied, namely Group Cohesion (X1), Stress Management (X2), and Self-Awareness (X3) on Teacher Work Effectiveness (Y), with the variable Creativity as a mediator (X4). The values of the path coefficient, R², and loading factor indicators are the basis for analyzing the strength of the relationship and contribution between variables. The results of the path estimation showed that the Group Cohesion variable (X1) had a direct positive influence on Teacher Creativity (Y) with a coefficient value of 0.454, which indicated a moderate and significant contribution to increasing teacher creativity. Creativity, in this case, is positioned as a key construct that bridges the dynamics of interpersonal relationships with the professional performance of teachers.

Furthermore, the Stress Management variable (X2) made a positive contribution to Teacher Work Effectiveness (Y) directly with a coefficient of 0.259, and also had an influence on Creativity (X4) of 0.147. Although the effect on creativity is relatively smaller, these findings suggest that stress management plays a dual role, both directly on teacher performance and indirectly through creativity.

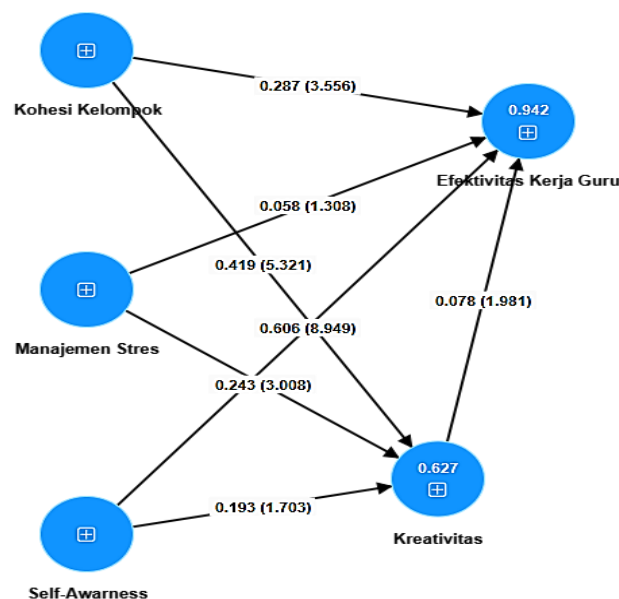
The Self-Awareness variable (X3) showed the strongest direct influence on Teacher Work Effectiveness (Y) with a coefficient of 0.619, and also affected Creativity (X4) with a value of 0.169. These findings underscore the importance of self-reflection and personal understanding as key determinants in achieving work effectiveness.

Meanwhile, the Creativity variable (X4) as a mediating variable showed a positive contribution to the Teacher's Work Effectiveness (Y) with a coefficient value of 0.101. Although this value is not as large as the direct contribution of self-awareness, the presence of creativity still reinforces the model as an intervention variable that absorbs the influence of psychological and social factors. In this model structure, Creativity plays the role of a mediating variable that

bridges relationships between psychosocial factors (Group Cohesion, Stress Management, and Self-Awareness) and Teacher Work Effectiveness. This is shown by the value of the determination coefficient ($R^2 = 0.627$) in the Creativity construct, which means that 62.7% of the variability in teacher creativity can be explained by three main variables, namely group cohesion, stress management, and self-awareness.

Specifically Group Cohesion \rightarrow Creativity ($\beta = 0.454$), this is the most powerful track, showing that a cohesive and supportive work environment significantly increases teachers' creativity in the teaching process. Stress Management \rightarrow Creativity ($\beta = 0.147$), although lower, indicates that teachers who are able to manage stress tend to be more open to new ideas and dare to experiment in learning. Self-Awareness \rightarrow Creativity ($\beta = 0.169$), this shows that teachers who have good self-understanding tend to be able to utilize their internal potential to innovate and adapt in the teaching-learning process. Creativity then made a positive contribution to Teacher Work Effectiveness ($\beta = 0.101$). Although this effect is not as large as the direct influence of self-awareness ($\beta = 0.619$), the existence of creativity as an indirect effect enriches the understanding of the psychological and social processes that contribute to work effectiveness. Thus, creativity is not only an intermediate variable, but also a strategic component in improving teacher performance in the era of educational innovation. Teachers' ability to create and innovate becomes a channel for transformation from internal conditions (stress management and self-awareness) and social environment (group cohesion) to the achievement of optimal performance.

Figure 2. Results of the Teacher Work Effectiveness Structural Model Test



Based on figure 2. the results of the structural model test using the Partial Least Squares (PLS-SEM) method show the strength and significance of the relationships between constructs that form the research model. This model focuses on the influence of independent variables such as Group Cohesion, Self-Awareness, and Stress Management on Creativity, as well as further implications on Teacher Work Effectiveness. The value of the path coefficient between Group Cohesion and Creativity of 0.287 with a t-statistic value of 3.556 shows a positive and significant relationship ($t > 1.96$). This indicates that the higher the cohesion in the work group, the higher the level of creativity of teachers in the learning process.

In contrast, the relationship between Self-Awareness and Creativity showed a coefficient of 0.058 with a t-statistic of 1.308, which means it is not statistically significant at the level of 5%. These findings indicate that self-awareness has not directly contributed to increasing teachers' creativity. The effect of Stress Management on Creativity was obtained with a coefficient of

0.419 with a t-statistic value of 5.321, which means that this relationship is very significant. This means that the better the teacher is at managing stress, the higher the level of creativity that can be generated in carrying out their duties.

The Influence of Creativity on Teacher Work Effectiveness showed the largest coefficient, which was 0.606 with a t-statistic of 8.949. These results show a very strong and significant relationship, which reinforces the strategic role of creativity in improving the effectiveness of teachers' work in the modern era of education. The direct relationship of Group Cohesion to Teacher Work Effectiveness has a coefficient of 0.243 and a t-statistic of 3.008, which means significant. This shows that group cohesion not only plays a role in building creativity, but also has a direct impact in encouraging the effectiveness of teachers' work.

Meanwhile, the direct influence of Self-Awareness on Teacher Work Effectiveness showed a coefficient of 0.193 and a t-statistic of 1.703, which is close to significant but still below the conventional threshold. This indicates that the contribution of self-awareness is more indirect through the mediation of creativity. Finally, the effect of Stress Management on Teacher Work Effectiveness has a coefficient of 0.078 with a t-statistic of 1.981, right at the limit of significance. This indicates that stress management has a marginal but still relevant influence on the effectiveness of teachers' work. The R^2 value for the Teacher Work Effectiveness construct is 0.942, indicating that 94.2% of the variability of work effectiveness can be explained by a combination of creativity, group cohesion, self-awareness, and stress management. Meanwhile, the R^2 value for Creativity is 0.627, which means that 62.7% of the variance of creativity is explained by the three exogenous variables. These two values show excellent models in explaining the phenomenon being studied.

The analysis of indicators in this study uses Scientific Identification Theory to conduct an analysis of Education Management Operations Research (SITOREM). SITOREM analysis is carried out through the following stages: 1) Analysis of contribution; 2) Analysis of research variable indicators; 3) Analysis of the weight of the research variable indicators; and 4) Determination of classified indicators (Setyaningsih & Suchyadi, 2021).

Table 4. Establishment of Classification of Research Variable Indicators

No.	Indicator	Average Weight of Expert Rating	Average Score	Ranking Assignment
Teacher Work Effectiveness Variables				
1	Accuracy of lesson planning	13,37%	3,99	(13,37%)(3,99) : Priorities to fix
2	Teaching readiness	11,97%	4,13	(11,97%)(4,13) : Maintained or Developed
3	Motivation for teaching	11,97%	4,20	(11,97%)(4,20) : Maintained or Developed
4	Learning strategies	13,39%	4,11	(13,39%)(4,11) : Maintained or Developed
5	Learning evaluation	13,41%	4,08	(13,41%)(4,08) : Maintained or Developed
6	Learning environment	11,97%	4,07	(11,97%)(4,07) : Maintained or Developed
7	Utilization of Learning Facilities and Infrastructure	11,97%	4,00	(11,97%)(4,00) : Priorities to fix
8	Guiding Students	11,98%	4,01	(11,98%)(4,01) : Maintained or Developed
Group Cohesion variables				

No.	Indicator	Average Weight of Expert Rating	Average Score	Ranking Assignment
1	Social Closeness	19,68%	4,12	(19,68%)(4,12) : Maintained or Developed
2	Task Synergy	19,09%	4,14	(19,09%)(4,14) : Maintained or Developed
3	Group Pride	20,45%	4,07	(20,45%)(4,07) : Maintained or Developed
4	Interpersonal Relationships	22,28%	4,02	(22,28%)(4,02) : Maintained or Developed
5	Individual attraction to groups	18,50%	4,00	(18,50%)(4,00) : Priorities to fix
Stress Management Variables				
1	Relaxation	22,39%	3,94	(12,39%)(3,94) : Priorities to fix
2	Time Management	27,61%	4,20	(27,61%)(4,20) : Maintained or Developed
3	Healthy Lifestyle	26,12%	3,98	(26,12%)(3,98) : Priorities to fix
4	Social Support	23,88%	3,90	(23,88%)(3,90) : Priorities to fix
Self-Awarness Variable				
1	Personal self-understanding	20,04%	3,94	(20,04%)(3,94) : Priorities to fix
2	Emotional Awareness	21,21%	4,08	(21,21%)(4,08) : Maintained or Developed
3	Self-reflection	21,18%	4,02	(21,18%)(4,02) : Maintained or Developed
4	Awareness of Others' Perceptions	19,98%	4,20	(19,98%)(4,20) : Maintained or Developed
5	Personal Experience Evaluation	17,60%	4,08	(17,60%)(4,08) : Maintained or Developed
Creativity Variable				
1	Original and useful new ideas	21,95%	4,09	(21,95%)(4,09) : Maintained or Developedn
2	Openness to new experiences	22,43%	4,05	(22,43%)(4,05) : Maintained or Developed
3	Flexibility	16,25%	3,97	(16,25%)(3,97) : Priorities to fix
4	Divergent thinking	19,31%	3,89	(19,31%)(3,89) : Priorities to fix
5	Willingness to take risks	20,07%	3,84	(20,07%)(3,84) : Priorities to fix

Based on Table 4. The SITOREM (Scientific Identification Theory to conduct an analysis of Education Management Operations Research) approach used in this study is used to identify priority indicators that need to be improved or maintained/developed to improve the effectiveness of teachers' work. The analysis process was carried out through four systematic stages. First, the contribution analysis, at this stage, all research variables, namely group cohesion, stress management, self-awareness, and creativity, are analyzed for their contribution to the effectiveness of teachers' work. Each indicator in the variable was evaluated based on the weight of expert judgment and the average perception score.

Second, the analysis of the indicators of the research variables, the analysis of each indicator is carried out to assess the actual level of achievement through the average score of the teacher's perception results. As in the stress management variables, the indicators of relaxation, healthy lifestyle and social support have an average score below 4.00 indicating the need for special attention. The same thing is also found in the variables of teacher work

effectiveness in the Accuracy of Lesson Planning indicator, the group cohesion variable in the individual attraction to groups indicator, the self-awareness variable in the indicators of personal self-understanding and creativity in the indicators of flexibility, divergent thinking, and willingness to take risks, where some important indicators are still at the level of achievement that is not optimal.

Third, the analysis of the weight of variable indicators. The weight of the indicator is determined by its level of importance based on the opinions of experts. For example, in the creativity variable, the Openness to New Experiences indicator has the highest weight (22.43%), while in the stress management variable, the time management indicator is the most dominant (27.61%). The combination of weights and average scores provides a basis for determining whether the indicator belongs to the category of maintained/developed or needs to be improved.

Fourth, the determination of the classification of indicators. Based on the results of multiplying the weight and the average score, the indicators are classified into two categories, namely maintained or developed: consisting of indicators of teaching readiness, motivation for teaching learning strategies, learning evaluation, learning environment, guiding students on the variables of teacher work effectiveness. Furthermore, the indicators of social closeness, task synergy, group pride, interpersonal relationships, on the group cohesion variable. Furthermore, the time management indicator on the stress management variable. Furthermore, on the indicators of emotional awareness, self-reflection, awareness of others' perceptions, personal experience evaluation, on the self-awareness variable. and the indicator of original and useful new ideas, openness to new experiences, on the creativity variable. Meanwhile, the priorities to be improved: in the indicators of Accuracy of Lesson Planning, Utilization of Learning Facilities and Infrastructure, Individual Attraction to Groups, Relaxation, Healthy Lifestyle, Social Support, Personal Self-Understanding, Flexibility, Divergent Thinking, and Willingness to Take Risks because they have low scores despite high weight, indicate implementation gaps that need to be addressed immediately. The following classification is set out in table 5:

Table 5. Priority Order of Indicator Improvement

Priority Order of Indicators to Be Improved	Priority Order of Indicators Retained/Developed
1 st Utilization of Facilities & Infrastructure Learning (11,97%)	1 st Motivation for teaching (11,97%)
2 nd Accuracy of lesson planning (13,37%)	2 nd Teaching readiness (11,97%)
3 rd Personal self-understanding (20,04%)	3 rd Learning strategies (13,39%)
4 th Daya tarik individu terhadap kelompok (18,50%)	4 th Learning evaluation (13,41%)
5 th Flexibility (16,25%)	5 th Learning environment (11,97%)
6 th Divergent thinking (19,31%)	6 th Guiding Students (11,98%)
7 th Willingness to take risks (20,07%)	7 th Awareness of Others' Perceptions (19,98%)
8 th Healthy Lifestyle (26,12%)	8 th Emotional Awareness (21,21%)
9 th Relaxation (22,39%)	9 th Evacuation of Personal Experience (17,60%)
10 th Social Support (23,88%)	10 th Self-reflection (21,18%)
	11 th Task Synergy (19,09%)
	12 th Social Closeness (19,68%)
	13 th Group Pride (20,45%)
	14 th Interpersonal Relationships (22,28%)
	15 th Original and useful new ideas

	(21,95%)
	16 th Openness to new experiences (22,43%)
	17 th Time Management (27,61%)

Based on table 5. the results of the analysis of indicators on each variable show that certain aspects still require serious attention in order to increase the effectiveness of teachers' work, especially in the era of technology-based education transformation. The indicators "Personal self-understanding" (20.04%), "Individual's attraction to the group" (18.50%), as well as the three dimensions of creativity, namely "Flexibility" (16.25%), "Divergent thinking" (19.31%), and "Willingness to take risks" (20.07%) are the main priorities to be improved because they have a relatively low average score, but contribute significantly to their respective constructs. Similarly, in the stress management variables, the indicators "Relaxation", "Healthy lifestyle", and "Social support" are recorded as areas that require strategic intervention due to the low effectiveness of current implementation (Abbasi, Ghahremani, Nazari, Fararouei, & Khoramaki, 2021). In contrast, a number of indicators such as "Teaching motivation", "Teaching readiness", "Awareness of the perception of others", and "Openness to new experiences" show high performance and are recommended to be maintained or even further developed as an internal force in supporting teachers' professional performance (John, 2025; Kholifah et al., 2024). The priority of improving these personal and social aspects is important, given their significant correlation with creativity and ultimately the effectiveness of teachers' work, as evidenced by the structural models that have been tested (Damanik & Widodo, 2024).

Measurement model testing showed that all variables met the criteria of validity and reliability. The item selection process with HTM (Model Test Results) ensures that the maintained indicators truly represent the constructed being measured. The Creativity variable showed the best instrument performance with only one item dropped, while the Group Cohesion variable experienced the most item reduction but still maintained construct representativeness. The high validity of this instrument strengthens the validity of the data in the structural model testing stage. Thus, these results provide confidence that the data analyzed in this study come from reliable measuring instruments, and that the relationships between the constructs found truly reflect the phenomenon being studied in the field.

The results of structural model testing with the PLS-SEM approach show that Group Cohesion, Stress Management, and Self-Awareness have a significant effect on Creativity, which further mediates the relationship with Teacher Work Effectiveness. Self-awareness made the strongest direct contribution to the effectiveness of teachers' work ($\beta = 0.619$), showing that self-understanding and professional reflection are the main foundations in the optimal performance of teachers (Lefebvre, Lefebvre, Gauvin-Lepage, Gosselin, & Lecocq, 2023). Group Cohesion has the greatest contribution to increasing Creativity ($\beta = 0.454$), emphasized that a collaborative work environment plays a very important role in fostering innovation among teachers (Geada, 2023). Meanwhile, Stress Management contributes directly to work effectiveness and indirectly through Creativity, although its indirect influence is relatively smaller. These findings confirm that stress management not only improves individual well-being, but also opens up an essential space for creativity in learning (Ostrum, Gilrain, & Smith, 2023).

Overall, the model developed in this study proves that Creativity plays a significant mediating role in the relationship between psychosocial factors and teacher work effectiveness. A determination coefficient (R^2) value of 62.7% in the Creativity construct indicates that group cohesion, stress management, and self-awareness collectively explain more than half of the variability in teacher creativity (Elahi Shirvan, Taherian, Pawlak, & Kruk, 2024; Liu, Lin, & Wu, 2022). Although the direct contribution of creativity to the effectiveness of teachers' work is not as great as the contribution of self-awareness, its existence as a mediator remains crucial in enriching the conceptual model. The practical implication of these findings is the need for a teacher capacity building strategy that not only focuses on improving technical competence, but

also pays attention to psychosocial factors, self-empowerment, and the creation of a work environment that supports collaboration and innovation. Thus, the results of this study make an important empirical contribution in an effort to realize the effectiveness of sustainable teacher work to support the transformation of national education towards a Golden Indonesia 2045.

DISCUSSION

The initial findings of qualitative research in the exploratory design series reveal the challenges faced by teachers in carrying out their professional duties. Some of the key issues that arise include weak group cohesion, high stress pressure, low self-awareness, and limited space to channel creativity. Overall, this analysis emphasizes that increasing the effectiveness of teachers' work requires strengthening four fundamental aspects, namely: group cohesion (X1), stress management (X2), self-awareness (X3), and creativity (X4), which synergistically form an important element in developing teacher work effectiveness.

Quantitative research results through structural model analysis with PLS-SEM approach, show that each variable is free to make a different contribution to the effectiveness of teachers' work, either directly or through the role of creativity mediation. These findings underscore the importance of group cohesion as one of the dominant factors that not only directly affect teacher performance, but also indirectly through increasing the capacity of individual creativity. This means that a cohesive work environment can create a collaborative space that supports the birth of innovative ideas, which in turn has a positive impact on the effectiveness of teachers' work.

Stress management has also proven to play an important role, although its direct influence on work effectiveness is relatively limited. However, his indirect contribution through creativity suggests that teachers' ability to manage psychological stress and workload has significant implications for their professional performance. This emphasizes that the strategy of strengthening personal resilience through a creative approach is crucial in increasing the effectiveness of teachers' work in the midst of dynamic educational challenges.

On the other hand, self-awareness shows a weaker influence both directly and indirectly on the effectiveness of teachers' work. These findings indicate that although self-awareness is an important aspect of personal development, its role has not been fully internalized in teachers' professional work processes. In contrast, creativity appears as the most powerful variable that directly increases work effectiveness. Creativity serves as a strategic node that connects psychosocial factors with professional performance, making it a key element in designing interventions to improve the quality of teachers' work across the board. The structural model built in this study shows very high validity, reinforcing the position of creativity as a key determinant in the effectiveness of today's teachers' work.

Based on the results of the analysis using the Scientific Identification Theory to Conduct an Analysis of Education Management Operations Research (SITOREM) approach, this study succeeded in mapping strategic indicators that need to be the main concern in efforts to improve the effectiveness of teachers' work. The analysis procedure is carried out systematically through the stages of variable contribution, evaluation of the achievement of teacher perception, determination of the weight of indicators by experts, to final classification based on the combination of the level of importance and actual achievement. The results show that not all indicators that contribute significantly to the main variables have reached optimal levels of implementation, so targeted policy interventions are needed.

Group cohesion, stress management, self-awareness, and creativity, which synergistically form important elements in developing the effectiveness of teachers' work. When these elements are integrated, they create a supportive and effective teaching environment. Group cohesion improves collaboration and resource sharing, stress management ensures teacher well-being, self-awareness encourages proactive stress management, and creativity encourages innovative teaching practices. Together, they significantly improve work effectiveness according to research conducted by (Cayirdag, 2017; Fung, 2022; Gearhart, Blaydes, & McCarthy, 2022; Hepburn, Carroll, & McCuaig, 2021; Liu et al., 2022; Loughland & Alonzo, 2018).

Group cohesion has a direct effect on teacher performance, but also indirectly through increasing the capacity of individual creativity. This means that a cohesive work environment can create a collaborative space that supports the birth of innovative ideas, which in turn has a positive impact on the effectiveness of teachers' work. As conveyed that the quality of group cohesion is associated with increased work effectiveness, which results in productive collaboration that helps encourage knowledge development and innovation in the work environment (Zamecnik et al., 2022). A supportive organizational environment that encourages group cohesion can enhance the creativity of individual teachers, contributing to their professional development. This underscores the importance of cohesive group dynamics in fostering creativity (Han & Abdrahim, 2023). So that a cohesive group of teachers can better manage their assignments and innovate in their teaching methods (Kumar, Sohbaty, Jain, Shafi, & Rupeika-Apoga, 2024).

Stress management has been shown to play an important role, although its direct influence on work effectiveness is relatively limited. Despite increasing concern for teacher well-being, stress management interventions are often underutilized and show small effect sizes, and research on teachers' informal stress management practices and desired resources is limited. However, studies (Gearhart et al., 2022) and (Khachaturova & Fedorova, 2018) acknowledged that this limitation is more due to teachers' access to support resources that is still low, not because of the lack of importance of stress management itself. Even, (Ngwenya, 2021) implies that good stress management, especially when associated with increased creativity, has a significant impact on teachers' professional performance.

Self-awareness shows a weaker influence both directly and indirectly on the effectiveness of teachers' work. This is in line with Reichenberg's research, although self-awareness is important for personal growth and professional development, its direct impact on teaching effectiveness is underemphasized compared to self-efficacy. Self-efficacy, which is a belief in a person's ability to perform a task, has a more substantial direct influence on work effectiveness (Reichenberg, 2024). These findings appear to contradict the results of other studies, meanwhile, in another study, it was stated that teachers who have high self-awareness in communicating are better at maintaining the educational process and fostering a positive learning environment (Yahşi, 2021). Self-awareness not only has an impact on teachers' self-management, but also has direct implications for the quality of interaction with students and the success of the learning process (Rahman, Bin Amin, Yusof, Islam, & Afrin, 2024). It was also conveyed that strengthening self-awareness through reflective approaches such as autoethnography is an important strategy in forming teachers who are effective, emotionally resilient, and sensitive to the socio-cultural dimensions of education (Romero, 2025).

In contrast, creativity emerged as the most powerful variable that directly increased work effectiveness. Creativity in teaching not only increases teacher effectiveness but also has a positive impact on student learning outcomes. Creative teaching practices foster critical thinking skills and problem-solving skills among students, which are critical to their academic and personal development (Almulla, 2023; Aquije-Mansilla, Rios, Solis-Trujillo, & Pérez-Ruiz, 2025; Khatami, Lai, He, & Haji-Othman, 2023). In line with this, teachers' beliefs about creativity have a significant impact on their teaching practices. Positive beliefs about creativity are associated with more effective teaching methods that foster students' creativity and engagement (Arifani, Khaja, Suryanti, & Wardhono, 2019). While creativity is recognized as important, there are challenges in its implementation, such as existing norms and practices that can hinder creativity. Teachers need support and training to overcome these barriers and integrate creative teaching methods effectively (Lamb, 2021; Pazin Fadzil et al., 2022; Valquaresma & Coimbra, 2021).

This research makes an important contribution to the development of teachers' work effectiveness by integrating psychosocial and professional dimensions, namely group cohesiveness, stress management, self-awareness, and creativity into a complete framework. The mixed method approach with a sequential exploratory design allows for a deep understanding of the challenges faced by teachers as well as the measurement of the contribution of each variable. One of the key findings is that creativity emerged as the most

dominant predictor that directly increases work effectiveness, while group cohesiveness plays an important role directly or indirectly through creativity. The use of the SITOREM approach also strengthens this research by mapping strategic indicators that require intervention based on expert assessments and actual perceptions of teachers.

However, this study has some limitations. First, self-awareness shows a statistically weak influence, although a variety of literature and qualitative data show its important role in classroom communication and emotional resilience. This indicates the possibility of gaps in measurement or context. Second, the scope of generalizations is limited to teachers in specific regions and cultures, so results may not fully represent a broader or international context. In addition, although stress management is recognized as important, teachers' limited access to support resources is likely to influence the low contributions detected in quantitative data.

Based on these findings, it is recommended that intervention programs prioritize the development of creative learning strategies and strengthen collaborative and cohesive work environments. Schools and policymakers also need to expand access to stress management resources and encourage reflective practices to deepen teachers' self-awareness, thereby improving work effectiveness directly and indirectly. Further research is suggested to explore the long-term impact and examine the role of self-efficacy alongside self-awareness, in order to provide a more comprehensive understanding of teacher professional development.

CONCLUSION

Based on the results of research and discussion, the effectiveness of teachers' work is influenced by group cohesion, stress management, self-awareness, and creativity. Group cohesion creates a supportive work environment that encourages creativity, while stress management helps maintain teacher well-being and performance. Self-awareness strengthens reflection and self-development, while creativity is an important link for innovation in learning. The implication is that schools need to build a collaborative work culture, routinely hold stress management training, provide space for reflection and mentoring, and encourage teacher innovation through support and appreciation, so that the effectiveness of teachers' work can continue to be improved in a sustainable manner.

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AUTHOR CONTRIBUTION STATEMENT

EF plays a role in designing research concepts, compiling instruments, and conducting data analysis. ES is responsible for collecting field data, processing initial data, and preparing the discussion section. RR contributes to the literature review, the preparation of theoretical frameworks, and the final editing of the manuscript. The three authors jointly review and approve the final manuscript before submission.

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