

Modeling Strengthening Teacher Creativity

Andi Hermawan¹, Ahmad Fatih Ghozali², Masduki A. Sayuti³

^{1,2,3} Institut Agama Islam Depok Al – Karimiyah West Java Indonesia

Abstract

In educational institutions, teachers are a core part of the management element. The implementation of a teacher's main duties cannot be separated from a teacher's ability to master knowledge, skills, and attitudes in carrying out their duties as a professional educator. Teachers who have high creativity in teaching always utilize information and new approaches in teaching so that learning activities are enjoyable. Creative teachers are encouraged to innovate in creating new learning media, using varied learning methods to support the effectiveness of the learning process.

This research aims to produce a model for strengthening teacher creativity in the form of a constellation model of influence between variables along with a mathematical model. From this model, a research hypothesis is then derived which will then be tested using path analysis at the quantitative research stage. The research began by interviewing informants who were considered competent in providing the expected answers. Next, data reduction, data codification, data display, data analysis, and conclusion drawing are carried out. The research was carried out at a private vocational school in the Bogor district in the period of October to December 2022.

From the research conducted, several variables were produced that are thought to have a positive and dominant influence on teacher creativity, namely emotional intelligence, professional competence, empowerment, organizational support, interpersonal communication, service leadership, and job satisfaction and work motivation as intervening variables.

Keywords: *Teacher creativity, the configuration model of influence between variables, mathematical-statistical model*

Date of Submission: 06-10-2023

Date of Acceptance: 16-10-2023

I. Introduction

The era of Industrial Revolution 4.0 has had an impact on the world of education. The use of digital technology in the learning process, completing various tasks, and increasing teacher competence, cannot be separated from the flow of information and technology developments. Facing these challenges, teachers as the front guard in the world of education are required to be ready to change and adapt. The role of the teacher will not be replaced by any sophisticated machine. Because teachers are needed to shape the character of the nation's children with good manners, tolerance, and good values. Teachers are also able to foster social empathy, build imagination and creativity, and strengthen the spirit of national unity and unity.

Law Number 20 of 2003 concerning the National Education System Article 15 states that vocational education aims to prepare students, especially to work in certain fields. For this goal to be achieved, the vocational education process must equip students with appropriate competencies development in the world of work. Therefore, the main indicator of vocational school success is how many graduates are absorbed into the world of work according to their field of expertise. One important component of the success of vocational education in vocational schools is the role of vocational subject teachers. The importance of the existence of vocational subject teachers can be seen from the very dynamic aspects of the curriculum and learning. The importance of aligning the school curriculum with the development of competencies in the world of work gives teachers great autonomy to develop learning outcomes, learning objectives, scope of material, learning strategies, and assessment.

Teachers who have high creativity in teaching always utilize information and new approaches in teaching so that learning activities are enjoyable. Creative teachers are encouraged to innovate in creating new learning media, using varied learning methods to support the effectiveness of the learning process. Teachers who have high teaching creativity are not afraid to try various ways to help students understand the learning material. They dare to face the challenges ahead, including managing the limitations in their work environment, where they will try to turn something less useful into an interesting learning tool. Teachers with high creativity always show high curiosity, strive to continuously develop insight and relevant knowledge that supports the effectiveness of learning, always try to find ways so that students can feel comfortable and look forward to the lesson the teacher will deliver, dare to do something different and not fixate on just one learning pattern and rely on standard teaching materials.

This study to aim produce model strengthening leadership serve form model constellation influence between variable along with modeling the math. From this model then hypothesis is derived study which next, it

will be tested using path analysis at *the* research stage quantitative.

II. Literature Review

Creativity

The definition of creativity is new and adapts to the task or field in which it is being developed (Hennessey, BA & Amabile, TM 2010; Weiner, 2000; Simonton, 2012; Kaufman & Sternberg, 2019). Creativity is an action or process that is a key element of novelty that is adapted to each field. The development of creativity involves an authenticity or originality approach combined with discovery to find solutions, solve problems, or produce something new. In the creative process, the novelty will reflect a person's imagination, experience, and thoughts. Creative people are not only capable of intellectually generating new ideas, but they are also people who have a creative attitude toward life and approach problems in depth. They are motivated to solve problems in creative ways. Although the average level of creativity may vary from one time or place to another. The main variable in creativity is the mindset toward finding new, surprising, and interesting ways, and this mindset can be taught to students.

R. Kreitner and A. Kinicki (2010), that creativity is the activity of developing something new or unique. It was further explained that developing unique ideas means being different from existing ones, it can be in the form of verbal suggestions, processes, methods, or finished products that are beneficial to the environment (organization). The creativity dimension arises from the inner drive (intrinsic motivation), using one's knowledge and competence, and enjoying challenging activities or problem-solving.

According to Kaufman, CJ, and Sternberg, JR (2019): Everyone has the potential to be creative. Creativity is needed in facing the changing times which are taking place continuously as the key to success in all areas of life. Creativity must be teachable. Therefore, creative teachers are needed to produce students who are creative too, so that they don't give up easily, are smart in thinking, and are open to new things.

Tierney, P. & Farmer, SM (2011), confirms that creativity can also be seen as the result of a creative self-concept. People who have high self-efficacy find it easier to express their ideas. The dimensions of self-concept are (1) beliefs, (2) perspective or perception, and (3) evaluation of oneself. The creative self-concept itself consists of (1) creative self-efficacy; (2) creative role identity; and (3) creative self-esteem.

Creativity is the ability to interpret the context of the problem faced into a new idea, new behavior, or new product. So the dimensions of creativity are: (1) new ideas, (2) new behavior, (3) individual thinking; and (4) socio-cultural (Kim, Min Kyeong, et al., 2015). Meanwhile, according to Anderson et al. (2014), a stage of creativity starts from a process that refers to generating ideas. Meanwhile, the innovation stage implements ideas for better work procedures and products. The dimensions of creativity are affective, cognitive, and motivation (Anderson, et al., 2014).

Furthermore, Adair (2007) explains that creativity is the ability of the mind and soul to be empowered to create something that does not seem to exist. The creativity process involves (1) The ability to change material, (2) Combining perceptions, ideas, and feelings into a concept, (3) Combining existing ideas or elements, and (4) creative thinking. And to Loveless (2006), creativity is defined as an effort to develop one's potential by using imagination to express oneself and make choices. The creativity process involves (1) Imagination skills, (2) Dare to create a work, (3) Ability to use computer technology.

Beghetto (2019) explains that creative teaching consists of three interconnected components: (1) teaching about creativity, (2) teaching for creativity, and (3) teaching with creativity. Teaching about creativity is aimed at increasing knowledge about creativity, and the field of study of creativity. Meanwhile, teaching for creativity is aimed at fostering creative thinking and creative action in students. Finally, teaching with creativity is aimed at teaching any subject matter creatively.

Runco (2014) explains that creative studies are interdisciplinary because they include behavioral, clinical, cognitive, developmental, economic, educational, evolutionary, historical, organizational, personality, and social perspectives. So the definition of creativity can be expressed in various ways, such as in art or science, and can involve different processes, such as cognitive or social. It is also influenced by various things, including personality, genetics, social and environmental regulations, and culture. So that creativity is a complex thing, which is the view most widely accepted by all parties to date. Furthermore, Runco explained in The Originality to Effectiveness Balance Theory that creativity is a balance between originality and effectiveness, both of which are prerequisites that must be met for every creative effort. Something original (new) but ineffective (does not have elements of usefulness) cannot be called something creative. The three main factors forming creativity are (1) declarative and procedural knowledge; (2) problem-finding, idea, and evaluation skills; (3) intrinsic and extrinsic motivation

According to Colquitt et al. (2019), people who are open to new experiences (openness to experience) tend to easily learn new things, this is following the profession as a teacher. Together with cognitive ability, intelligent thinking and openness to experience are the main drivers of creative thinking which will then have an impact on creative performance. Creative thinking will produce new ideas and create new approaches for problem-

solving, or suggesting innovations that can help improve performance in the workplace. So it can be concluded that creative behavior is an activity that is focused on producing new, useful ideas and solutions.

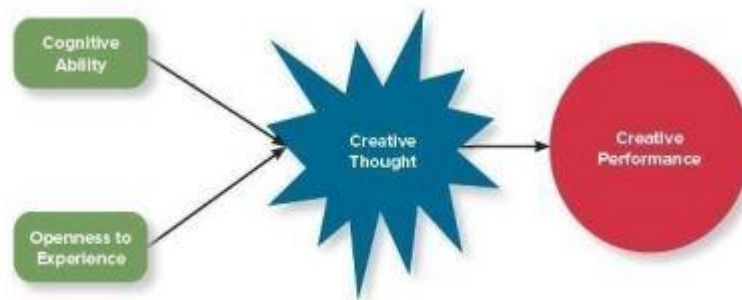


Figure 1. *Openness to Experience and Creativity*
(Colquitt et al. 2019, p. 277)

Meanwhile, creativity according to Kinicki and Fugate (2016, pp. 394-395) is the process of generating new and useful ideas in the form of products, services, processes, and procedures. It is further explained that the effectiveness of creativity is defined as the novelty and shared usefulness (quality) of a product or service that can be assessed by other people. In Figure 2 below, it is explained that creative behavior is strongly influenced by personality factors and environmental characteristics. Personality factors that encourage a person's creativity are motivation and knowledge relevant to their field. In other words, someone needs to be motivated to apply the knowledge and abilities they have to create new ideas, new products, and solutions to all kinds of problems.

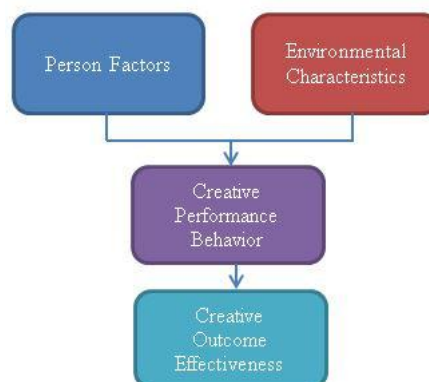


Figure 2. Creativity Model
Kinicki and Fugate (2016, p. 394).

Creativity by Kinicki and Fugate is defined as the process of using a person's imagination and skills to develop new or unique products, objects, processes, or thoughts. Four creative performance behaviors can be used to increase a person's creativity, namely: (1) formulating or defining problems; (2) preparation or gathering of information; (3) generating ideas; and (4) evaluation or validation of ideas.

Sawyer (2012) in his book *Explaining Creativity: The Science of Human Innovation*, explains that the concept of creativity based on rationalism is a belief that results from a conscious, considered, intelligent, and rational mind. Creativity does not appear suddenly, instead, creativity is a conscious effort and hard work. Creativity is a unique expression of an individual's inner strength. Creativity is a tool for the creator to communicate and convey his intentions through a work.

In the journal Anderson and Krathwohl Bloom's Taxonomy Revised (Wilson, 2016) revise the findings of Benjamin S. Bloom who identified the cognitive domain in the taxonomy of educational objectives, which consists of the stages of knowledge, understanding, application, analysis, synthesis and evaluation; which was then revised into the creation stage in the synthesis section and placed at the top of the cognitive domain diagram, this is because the process of creating or working (creativity) is the most difficult mental function. After all, it requires the user to put cognitive elements together and synthesize them into something new and different. So creativity is the highest order of thinking needed in a learning environment to achieve the final goal. From the description of creativity theories above, a synthesis of the conceptual definition of Creativity is the behavior of individuals within their organizations to formulate new ideas, thoughts, concepts, products, services, or methods

that aim to solve problems and develop certain fields to provide benefits to achieve success organization.

By selecting indicators based on the understanding that a person's creativity will emerge if a person is accustomed to creative behavior, where the characteristics of someone who is accustomed to creative behavior are: (1) Having confidence and the habit of being independent in solving the problems they face (Colquitt et al., 2019 ; Gibson et al., 2012); (2) Accustomed to observing and studying various complex things (Kreitner and Kinicki, 2010; James, MA, 2015); (3) Openness to other people's ideas, experiences, and new things (Colquitt, et al., 2019; Kinicki and Fugate, 2016); (4) Having intelligent, rational, divergent and logical thinking patterns and cognitive abilities (Colquitt, et al., 2019; Sternberg & Grigorenko, 2001; Mc Shane & Von Glinow, 2018; Kinicki and Fugate, 2016; Sawyer, 2012); (5) Persistence in finding solutions to problems and developing new ideas (Colquitt et al, 2019; James, MA, 2015; Sawyer, 2012); and (6) Originality in producing something new and different (Hennessey and Amabile, 2010; Sternberg, 2006; Loveless, 2006; Sawyer, 2012), so the indicators chosen are: 1). Habit: Habits of behavior in solving problems; 2). Interest: The behavior of being interested in complex things. 3). Openness: Open behavior in accepting new ideas and ideas; 4). Smart: Acting cleverly in looking for opportunities; 5). Persistent: Acting persistently in trying. 6). Original: originality in developing something new or different.

Based on the conceptual definition above, an operational definition of Teacher Creativity can be built as teacher behavior in schools which is assessed by the teacher himself regarding his efforts in formulating new ideas, thoughts, concepts, products, services, or methods aimed at solving problems and developing the field of education and education. teaching so that it provides benefits for achieving educational success, which is measured using an instrument in the form of a questionnaire with indicators: (1) **Habit**: Behavioral habits in solving problems; (2) **Interest**: Behavior that is interested in complex things; (3) **Openness**: Open behavior in accepting new ideas and insights; (4) **Smart**: Acting cleverly in looking for opportunities; (5) **Persistent**: Acting persistently in trying; (6) **Original**: originality in developing something new or different.

Theory Modeling

Operations research is a common method used in the study and optimization of systems through modeling systems. Hardhienata, S (2017), defines Researchoperation as an application method scientific for find a solution and make decisions about a problem by taking into account resources and existing limitations. The analysis and solution of the problems mentioned above are usually done with the use of modeling and optimization. In field management education there is a lot of analysis and solution problems done with the use of statistical models.

Statistical models are equality which is formed from a framework of thinking for describing connection or influence from variable bound with independent variables. Part big study used model statistics in field management, specifically in field educational management, the discussion was stopped at the finding that there was a relationship or influence positive between the variables researched. Matter the result Research conclusions are only statistical conclusions and result in suggestions which made only normative.

Research Method

This research uses the *tally mark*/Taurus analysis method to determine which variables have a positive and dominant influence on the reinforcement Teacher Creativity. Setyaningsih, S. and Hardhienata, S. (2019), elaborate stages in making hypotheses research as follows:

1. Study introduction / Survey beginning done in locus study For know circumstances from Theme Which will be researched is Already in circumstancesgood or still needs to be improved, meaning there is still a gap between reality and hope or *das Sein* Not yet by *das Sollen*.
2. Excavation in locus study through interviews with informants to considered competent can provide good answers about variables with positive and dominant influence on the main research variables. Continued with excavation variable toinfluential positive and dominant to variable which positive influence on the main variable.
3. Reduction Data and Codification Data.
 - a) Reduction data is something from analysis that sharpens, classifies, directs, and throws away no need, and organizes data in such a way that the variables in the finale can be found and verified.
 - b) Codification data is process simplification data results interview with method give code to data which obtained. Codificationis the process of giving a symbol for every piece of data which there is. The objectivemain codification is for data to be concise form and dense.
4. Data analysis uses the *Tally Mark* / Turus Method to determine variables which has a positive and dominant influence on the main variable and the positive effect on variables that have a positive effect on the variables.
5. Drafting Installation Variable Study.
 Researchers compile constellation with the use variable to influential positive and dominant from variable toinfluence to variable influenced.

6. Evaluation Expert to installation variable study.
Experts evaluate relevance influence between variables found by researchers with levels of not relevant, less relevant, quite relevant, relevant, and very relevant. Results end from expert assessment. This is consists of three categories, ie
 - a) *Can be continued without revision.*
If an expert assessment is given to a category it can be continued *without revision*, so researchers can continue on next stage.
 - b) *Can next with revision.*
If an expert assessment is given to a category, it can *be continued with revision*, then the researcher improves the constellation of research variables that have been prepared. Repair constellation variable is already repaired, assessed return by expert.
 - c) *No can be continued*
If the expert assessment is given in the category *it cannot be continued*, then the researcher is required to return a repeat interview to find the variable.
7. Preparation of statistical mathematical models based on the influence between variables with confirmed expert assessment.
8. Research hypotheses are derived from the framework of thinking/configuration of research variables has already been confirmed by the Expert. As for the step explained above the groove like seen in Fig 3 below:

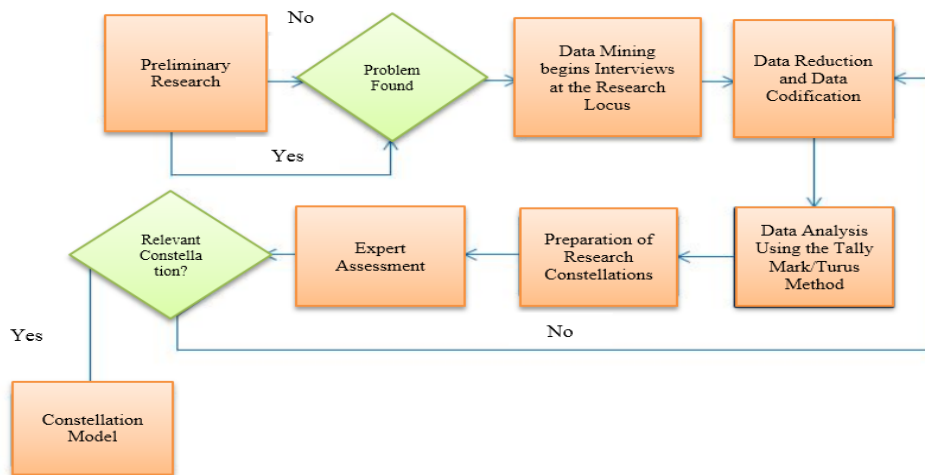


Figure 3. Stages Making Model

III. Results and Discussion

Collection Data Study

Research data was collected through interviews with research informants consisting of 16 school principals. Of the 16 informants, the researcher felt that the data obtained was saturated so data processing was carried out.

Table 1. Place of Qualitative Research

No	School Name	Address
1.	SMKS 2 Triple J Citeureup	Jl. Landbow No. 01 Karang Asem Barat, Karang Asem Barat, Kec. Citeureup, Bogor, West Java 16810.
2.	SMKS Budiniah Citeureup	Jl. Golf Jagorawi, Jl. Raya Karanggan, Puspasari, Kec. Citeureup, Bogor, West Java 16810.
3.	SMKS PGRI Citeureup	Jl. Pahlawan No.72, Karang Asem Barat, Kec. Citeureup, Bogor, West Java 16810
4.	SMK Bina Mandiri Multimedia Cileungsi	Jl. Raya Jonggol - Cileungsi KM.1 No.16, Cileungsi Kidul, Kec. Cileungsi, Bogor, West Java 16820
5.	SMKS PGRI 2 Cibinong	Jl. Golf, RT.003 RW.007, Ciriung, Cibinong, Bogor, West Java 16918.
6.	SMKS Pratama Gunung Putri	Jl. Raya Karanggan Muda, RT 3 RW 4, Gunung Putri, Karanggan, Kec. Gn. Putri, Bogor, West Java 16960.
7.	SMKS PGRI 1 Cibinong	Perumahan Puri Nirwana I, Jalan Raya Cikaret, Cibinong, Pabuaran, Cibinong, Bogor, West Java 16916.
8.	SMKS Budiniah 2 Citeureup	Jl. Golf Jagorawi, Jl. Raya Karanggan, Puspasari, Kec. Citeureup, Bogor, West Java 16810

No	School Name	Address
9	SMKS Putra Pakuan	Jl. Ruko Megapolitan Kebon Kelapa, Desa No.5, RT.03/RW.04, Cimandala, Kec. Sukaraja, Bogor, West Java 16710.
10	SMK PGRI Sukamakmur	Jl. Raya Citeureup. RT 01 RW 06. Sukamakmur, Kec.Sukamakmur Kabupaten Bogor
11	SMK Manunggal	Jl. Raya Jakarta-Bogor No.KM.43, Pabuaran, Cibinong, Bogor, West Java 16916.
12	SMK Ibnu Hamzah	Jl. HR. Lukman, Cirimekar, Cibinong, Bogor, West Java 16919.
13	SMKS PGRI Pamijahan	Jl. Gunung Salak Endah, Pamijahan, Gunung Sari, Gn. Picung, Kec. Pamijahan, Bogor, West Java 16630
14	SMKS Sumpah Pemuda 2 Ciawi	Jl. Karakal, RT 2 RW 5, Cukang Galeh 2, Jambu Luwuk, Ciawi, Jambu Luwuk, Kec. Ciawi, Bogor, West Java 16720
15	SMKS Sapta Marga	Jl. Al-Baliyah, Pabuaran, Cibinong, Bogor, West Java 16916
16	SMKS PGRI Babakan Madang	Jl. Raya Babakanmadang, Babakan Madang, Kabupaten Bogor, Babakan Madang, Kec. Babakan Madang, Bogor, West Java 16811.

From the collected data, data reduction, data codification, and display are then carried out data the result is seen in Table the following 2:

Table 2. Recapitulation Variable is called by the Source Person

The so-called factors by Informant	Tally Mark/Taurus	Amount	Percentage (%)
Emotional Intelligence	E e i	12	$12/16 \times 100\% = 75\%$
Social Intelligence	ih	4	$4/16 \times 100\% = 25\%$
Professional Competency	eE	10	$10/16 \times 100\% = 62.5\%$
Pedagogical Competence	Ea	6	$6/16 \times 100\% = 37.5\%$
Empowerment	a an i	8	$8/16 \times 100\% = 50\%$
Assignment	ea	6	$6/16 \times 100\% = 37.5\%$
Responsibility	ah	2	$2/16 \times 100\% = 12.5\%$
Organizational Support	ee	10	$10/16 \times 100\% = 62.5\%$
Facilities and infrastructure	ea	6	$6/16 \times 100\% = 37.5\%$
Interpersonal Communication	ee	11	$11/16 \times 100\% = 68.75\%$
Abilities	e	5	$5/16 \times 100\% = 31.25\%$
Servant Leadership	ee	10	$10/16 \times 100\% = 62.5\%$
Transformational leadership	ea	6	$6/16 \times 100\% = 37.5\%$

Based on the results analysis *tally mark* / straight, constellation can arranged as follows:

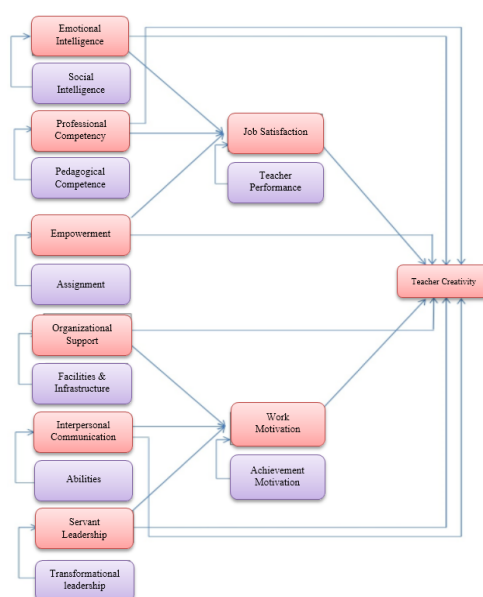


Figure 4. Variable obtained from interviews with informants

Determination Variable Intervening

Variable *intervening* is a variable that becomes an intermediary between exogenous variables and endogenous variables. The intermediate variable is said to be effective if the indirect influence is greater or stronger than the influence direct. (Sugiyono, 2017). In this research, a commitment variable was found in organization and work motivation as intervening variables. Variable assignment between these is done after the researcher triangulates the data through a confirmation expert.

Experts judge the relevance influence between variables which was discovered by researchers with levels of not relevant (TR), less relevant (KR), quite relevant (CR), relevant (R), and very relevant (SR). Results end from evaluation expert this consists of three categories, namely: 1) *can be continued without revision*. If the expert judgment given to the category can be continued *without revision*, then the researcher can continue to the stage next, 2). *Can be continued with revisions*. If expert judgment is given to categories that can be *continued with revision*, then the researcher improves the constellation of variables research that has been prepared. Fixed variable constellation improvements, reassessed by experts, and 3) *cannot be continued*. If the expert judgment is given in the category *that cannot be continued*, the researcher is required to repeat it interview to find a variable new. As for results evaluation expert looks at Table 3 and Table 4.

Table 2. Evaluation Expert 1

No	Variables that influence	Variables that influenced	Evaluation				
			TR	KR	CR	R	SR
1.	Emotional Intelligence	Teacher Creativity	-	-	-	-	√
2.	Professional Competency	Teacher Creativity	-	-	-	-	√
3.	Empowerment	Teacher Creativity	-	-	-	√	-
4.	Emotional Intelligence	Job satisfaction	-	-	√	-	-
5.	Professional Competency	Job satisfaction	-	-	-	√	-
6.	Empowerment	Job satisfaction	-	-	-	√	-
7.	Organizational Support	Teacher Creativity	-	-	-	√	-
8.	Interpersonal Communication	Teacher Creativity	-	-	-	√	-
9.	Servant Leadership	Teacher Creativity	-	-	-	-	√
10.	Organizational Support	Work motivation	-	-	-	-	√
11.	Interpersonal Communication	Work motivation	-	-	-	√	-
12.	Servant Leadership	Work motivation	-	-	√	-	-

Table 3. Evaluation Expert 2

No	Variables that influence	Variables that influenced	Evaluation				
			TR	KR	CR	R	SR
1.	Emotional Intelligence	Teacher Creativity	-	-	-	√	-
2.	Professional Competency	Teacher Creativity	-	-	-	√	-
3.	Empowerment	Teacher Creativity	-	-	-	-	√
4.	Emotional Intelligence	Job satisfaction	-	-	-	-	√
5.	Professional Competency	Job satisfaction	-	-	-	-	√
6.	Empowerment	Job satisfaction	-	-	-	√	-
7.	Organizational Support	Teacher Creativity	-	-	-	√	-
8.	Interpersonal Communication	Teacher Creativity	-	-	-	√	-
9.	Servant Leadership	Teacher Creativity	-	-	-	-	√
10.	Organizational Support	Work motivation	-	-	-	-	√
11.	Interpersonal Communication	Work motivation	-	-	-	-	√
12.	Servant Leadership	Work motivation	-	-	-	√	-

Determination Constellation Study.

Based on the results interview and triangulation expert, so constellation can arranged. The structure formed is Emotional Intelligence (X_1), Professional Competence (X_2), Empowerment (X_3), Organizational Support (X_4), Interpersonal Communication (X_5), and Servant Leadership (X_6) were determined as variable exogenous. Job Satisfaction (Y_1) and Work Motivation (Y_2) as variables intervening and Teacher Creativity (Z) is a variable endogenous. Path influence in full with combined results analysis on every substructure, can

depicted as follows:

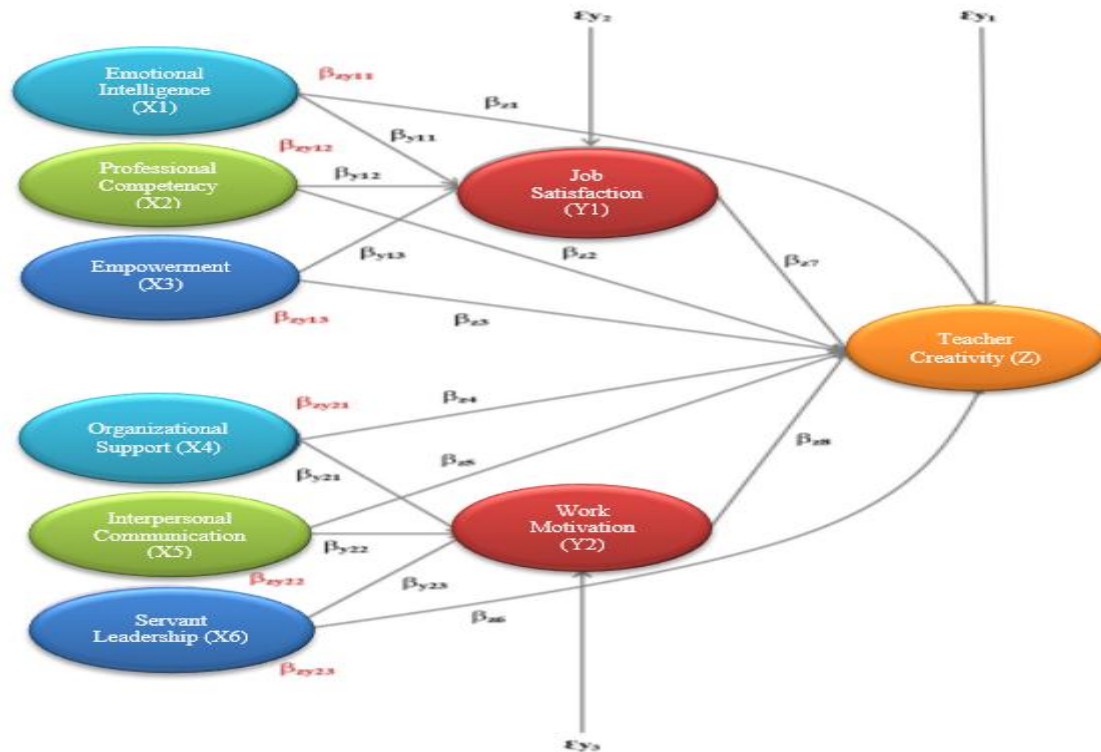


Figure 5. Installation of Influence between Internal Variables Strengthening Teacher Creativity

- β_{z1} = Coefficient influence direct Emotional Intelligence (X_1) to Teacher Creativity (Z).
- β_{z2} = Coefficient influence direct Professional Competency (X_2) to Teacher Creativity (Z).
- β_{z3} = Coefficient influence direct Empowerment (X_3) to Teacher Creativity (Z).
- β_{z4} = Coefficient influence direct Organizational Support (X_4) to Teacher Creativity (Z).
- β_{z5} = Coefficient influence direct Interpersonal Communication (X_5) to Teacher Creativity (Z).
- β_{z6} = Coefficient influence direct Servant Leadership (X_6) to Teacher Creativity (Z).
- β_{z7} = Coefficient influence direct Job Satisfaction (Y_1) to Teacher Creativity (Z).
- β_{z8} = Coefficient influence direct Work Motivation (Y_2) to Teacher Creativity (Z).
- β_{zy11} = Coefficient indirect influence Emotional Intelligence (X_1) to Teacher Creativity (Z).
- β_{zy12} = Coefficient indirect influence Professional Competency (X_2) to Teacher Creativity (Z).
- β_{zy13} = Coefficient indirect influence Empowerment (X_3) to Teacher Creativity (Z).
- β_{zy21} = Coefficient indirect influence Organizational Support (X_4) to Teacher Creativity (Z).
- β_{zy22} = Coefficient indirect influence Interpersonal Communication (X_5) to Teacher Creativity (Z).
- β_{zy23} = Coefficient track indirect influence Servant Leadership (X_6) to Teacher Creativity (Z).

SUBSTRUCTURE – 1

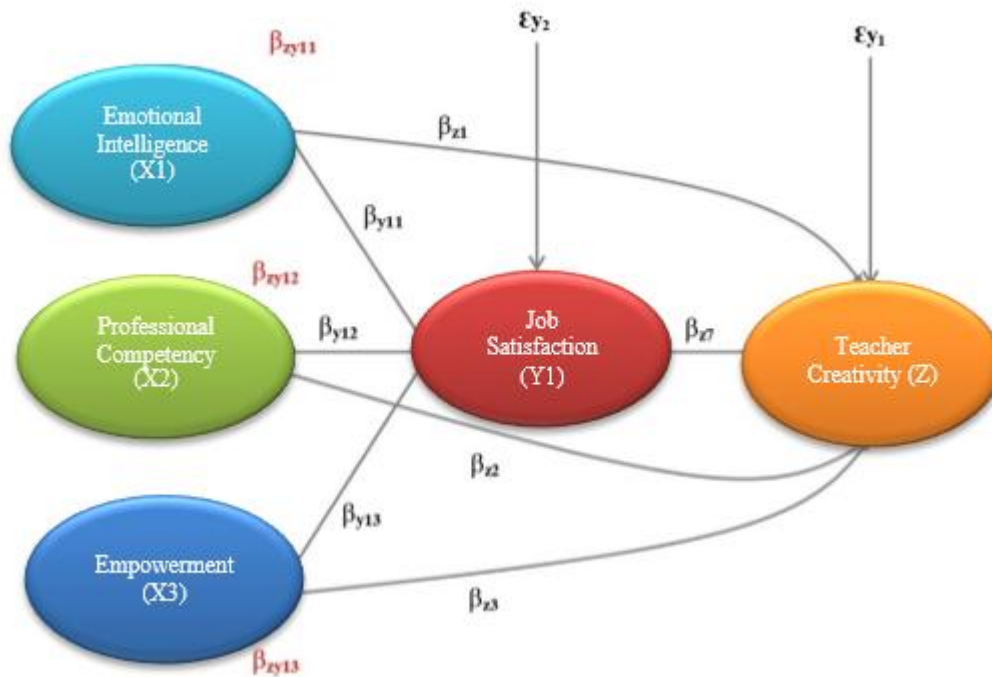


Figure 6. Substructure-1

- β_{y11} = Coefficient influence direct Emotional Intelligence (X₁) to Job Satisfaction (Y₁).
 β_{y12} = Coefficient influence direct Professional Competency (X₂) to Job Satisfaction (Y₁).
 β_{y13} = Coefficient influence direct Empowerment (X₃) to Job Satisfaction (Y₁).

SUBSTRUCTURE – 2

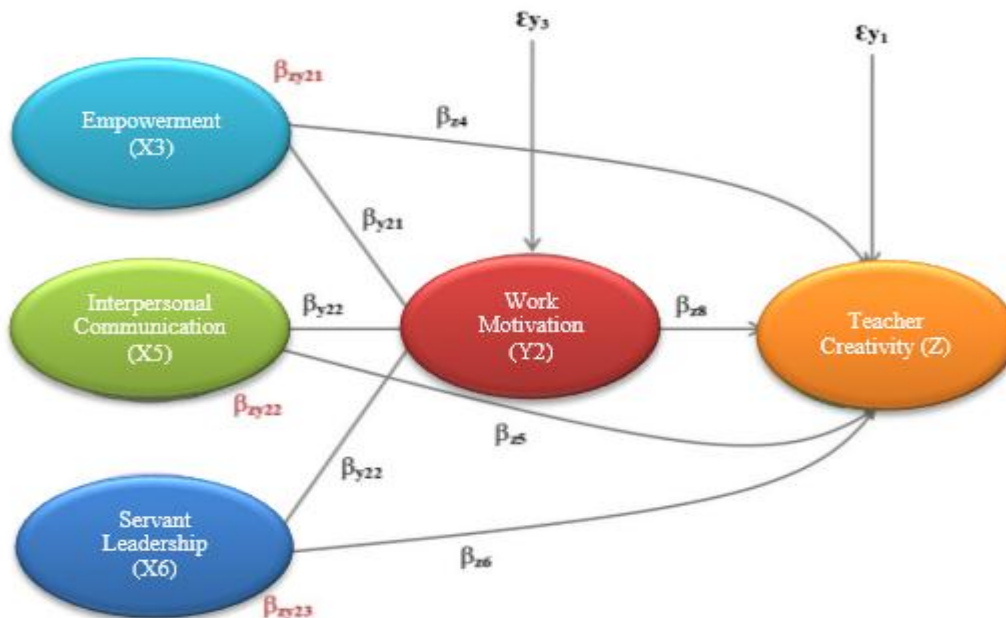


Figure 7. Substructure-2

- β_{y21} = Coefficient influence direct Organizational Support (X₄) to Work Motivation (Y₂).
 β_{y22} = Coefficient influence direct Interpersonal Communication (X₅) to Work Motivation (Y₂).
 β_{y23} = Coefficient influence direct Servant Leadership (X₆) to Work Motivation (Y₂).

Model Statistical Mathematics

Based on constellation influence between variables are generated model mathematics statistics as follows:

a) Equality Substructural 1

$$\hat{y} = \beta_{z1} X_1 + \beta_{z2} X_2 + \beta_{z3} X_3 + \beta_{z4} X_4 + \beta_{z5} X_5 + \beta_{z6} X_6 + \beta_{z7} Y_1 + \beta_{z8} Y_2 + \varepsilon_y$$

b) Equality Substructural 2

$$\hat{y} = \beta_{y11} Y_1 + \beta_{y12} Y_1 + \beta_{y13} Y_1 + \varepsilon_{y1}$$

c) Equality Substructural 3

$$\hat{y} = \beta_{y21} Y_2 + \beta_{y22} Y_2 + \beta_{y23} Y_2 + \varepsilon_{y2}$$

IV. Conclusion

Based on the discussion results study Which has outlined can concluded that model strengthening Teacher creativity is influenced by Endogenous variables consisting of Emotional Intelligence, Professional Competence, Empowerment, Organizational Support, Interpersonal Communication, and Servant Leadership variables. Whereas variable intervening found is variable Job Satisfaction and Work Motivation. With thereby so model.

Whereas model mathematics statistics which was lowered from constellation onis as follows:

a) Equality Substructural 1

$$\hat{y} = \beta_{z1} X_1 + \beta_{z2} X_2 + \beta_{z3} X_3 + \beta_{z4} X_4 + \beta_{z5} X_5 + \beta_{z6} X_6 + \beta_{z7} Y_1 + \beta_{z8} Y_2 + \varepsilon_y$$

b) Equality Substructural 2

$$\hat{y} = \beta_{y11} Y_1 + \beta_{y12} Y_1 + \beta_{y13} Y_1 + \varepsilon_{y1}$$

c) Equality Substructural 3

$$\hat{y} = \beta_{y21} Y_2 + \beta_{y22} Y_2 + \beta_{y23} Y_2 + \varepsilon_{y2}$$

REFERENCES

- [1]. Law Number 20 Of The Year (2003). About The National Education System
- [2]. K. Beycioglu and P Parshiadris (2015). Multidimensional Perspective On Principal Leadership Effectiveness, Hershey, Pa. USA: The IGI Global
- [3]. Colquitt, J. A., Lepine, J. A., & Wesson, M. J. (2008). Organizational Behavior: Improving, Performance and Commitment In The Workplace. New York: Hill/Irwin.
- [4]. Creswell, J. W. (2008). Educational Research: Planning, Conducting, and Evaluating Quantitative (Vol. 7). Prentice Hall Upper Saddle River, NJ.
- [5]. Gibson, J. L., Donnelly Jr., J. H., Ivancevich, J. M., & Konopaske, R. (2012). Organizational Behavior, Structure, and Processes (14 Ed). New York: McGraw-Hill.
- [6]. M.S. (2009). Human Resource Management (Revisited). Jakarta: Bumi Literacy.
- [7]. Mcshane, S. ., & Ann, V. G. M. (2008). Organizational Behavior: Emerging Realities for the Workplace Revolution. New York: McGraw-Hill.
- [8]. Robbins, S.P., & Judge, T.A. (2013). Essentials of Organizational Behavior. Upper Saddle River, NJ: Pearson Education.
- [9]. Schermerhorn, J., John, R., Hunt, J. G., Osborn, R. N., & Uhl-Bien, M. (2011). Organizational Behavior. New Jersey: John Wiley & Sons, Inc.
- [10]. Amabile, T. M. (1983). Social Psychology of Creativity: A Componential Conceptualization. Journal of Personality and Social Psychology, 45(2), 357–377.
- [11]. Amabile, T. M. (1988). A Model of Creativity and Innovation In Organizations. In BS Cummings (Ed.), Research In Organizational Behavior (Pp. 123 – 167). Greenwich, CT: JAI Press.
- [12]. Amabile, T. M. (1996). Creativity In Context: Update To “ The Social Psychology Of Creativity .” Boulder, CO: Westview Press.
- [13]. Amabile, T. M. & Pratt, M. G. (2016). The Dynamic Componential Model of Creativity and Innovation In Organizations: Making Progress, Making Meaning. Research In Organizational Behavior, 36, 157 – 183.
- [14]. Beghetto, R. A., & Karwowski, M. (2017). Toward Untangling Creative Self-Beliefs. In M. Karwowski & J. C. Kaufman (Eds.). The Creative Self: Effects of Beliefs, Self-Efficacy, Mindset, and Identity (Pp. 3-22). London, UK: Academic Press. [Http://Dx.Doi.Org/10.1016/B978-0-12-809790-8.00001-7](http://Dx.Doi.Org/10.1016/B978-0-12-809790-8.00001-7)
- [15]. Callahan. C. (2005). "Guilford Theory In Learner Differences". In Encyclopedia Of Education, Edited By Stephen J. Farenga And Daniel Ness, 5775-787. London: M.E. Sharpe.
- [16]. Cheng Eric, C.K. (2015). Knowledge Management for School Education. Singapore: Springer
- [17]. Doyle, M. A. (2013). Marie M. Clay's Theoretical Perspective: A Literacy Processing Theory (6th Edition). Clayton, Victoria, Australia: International Reading Association.
- [18]. Fugate, M. And A. Kinicki. (2016). Organizational Behavior. New York: McGraw-Hill.
- [19]. J.L. Gibson, J.M. Ivancevich, J.H. Donnelly & R. Konopaske. (2012). Organizational Behavior Structure & Process, Fourteenth Edition. New York: McGraw-Hill.
- [20]. Gl Á Veanu, VP (2013). Rewriting The Language Of Creativity: The Five A's Framework. Review of General Psychology, 17, 69 – 81.
- [21]. Cheng Eric CK (2015). Knowledge Management for School Education. Singapore: Springer.
- [22]. Hanover Research and ULEAD Reports. (2019). Differentiated Instruction - A Best Practices Report. Prepared For Utah Leading Through Effective, Actionable, And Dynamic (ULEAD) Education.
- [23]. Hennessey, B. A. & Amabile, T. M. (2010). Creativity. Annual Review Of Psychology, 61, 569 – 598
- [24]. James, M. A. (2015). Managing the Classroom for Creativity. Creative Education, 6, 1032-1043. [Http://Dx.Doi.Org/10.4236/Ce.2015.610102](http://Dx.Doi.Org/10.4236/Ce.2015.610102)
- [25]. Mcshane, SL and Von Glinow, MA 2018. Organizational Behavior: Emerging Knowledge. Global Reality. Eight

- [26]. Sawyer, R. K. (2012). *Explaining Creativity: The Science of Human Innovation*, Second Edition. New York: Oxford University Press.
- [27]. Simonton, D. K. (2012). Taking The US Patent Office Creativity Criteria Seriously: A Quantitative Three-Criterion Definition And Its Implications. *Creativity Research Journal*, 24, 97 – 106.
- [28]. Hardhienata, S. (2017). The Development of Scientific Identification Theory to Conduct Operations Research In Education Management, IOP Conf. Series: Materials Science And Engineering 166. 012007 Doi : 10.1088/1757- 899X/166/1/012007
- [29]. Setyaningsih, S. Hardhienata, S (2019), Development of Modeling and Optimization Method for Strengthening Management Resources Using a Simple Exploratory Sequential Analysis and Cytological Analysis (POP-SDM). ISSN: 1315- 5216 ISSN – Electronic 2477-9555
- [30]. Sunaryo W., Setyaningsih S., Hardhienata S. (2020). *Management Resource Modeling and Optimization (POP-SDM) As a Comprehensive Research Approach*. Bandung: Alfabeta.
- [31]. Sugiyono. (2017). *Quantitative, Qualitative, and R&D Research Methods*. Bandung: Alfabeta.