

## Modeling of Strengthening Lecturers Creativity through Exploration of Positive and Dominant Influence Factors

Ersam Mahendrawan<sup>a\*</sup>, Soewarto Hardhienata<sup>b</sup>, Sri Setyaningsih<sup>b</sup>

<sup>a</sup> Universitas Pamulang, Tangerang Selatan, Indonesia

<sup>b</sup> Post-graduate School, Universitas Pakuan, Bogor, Indonesia  
dosen01329@unpam.ac.id\*; s-hardh@indo.net.id; sri\_setya@unpak.ac.id;

\*Corresponding author

### Article Info

#### Article history:

Received Aug 1, 2022  
Revised May 22, 2023  
Accepted May 28, 2023

#### Keywords:

Creativity  
Constellation Model of  
Influence between Variables  
Statistical Mathematical Model

### ABSTRACT

One of the challenges experienced by every university is to improve the quality of the tridharma of higher education, where the most important component in improving the quality is the lecturer. Pamulang University as one of the universities with the largest number of lecturers in Indonesia, namely 2024 lecturers, of course requires many aspects to improve its quality in order to realize the vision it wants to achieve. This study aims to produce a model of strengthening creativity in the form of a constellation model of the influence between variables and their mathematical model. From the mathematical model, it can be derived into a research hypothesis. The research begins by interviewing informants who are considered competent in providing the expected answers for further data reduction, data codification, data analysis, and conclusion drawing. The research was conducted at Pamulang University from June 2020 to February 2021. From the research that has been carried out, it is concluded that there are variables that are thought to have a positive and dominant influence on creativity, namely professional commitment, job satisfaction, and achievement motivation, while the intervening variables are job satisfaction and achievement motivation.

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## Introduction

University is a place for interaction of various components of education to achieve the goals that have been set. To realize the goal of law no. 12 of 2012 (Republik Indonesia, 2012) concerning higher education, one of the challenges experienced by every university is to improve the quality of the tridharma of higher education in it, where the most important component in improving the quality is the lecturer.

Pamulang University as one of the universities with the largest number of lecturers in Indonesia, namely 2024 lecturers, of course requires many aspects to improve its quality in order to realize the vision it wants to achieve, namely "To become a university ranked in the top 40 at the national level based on humanist and religious values in 2024". Realizing this vision cannot be separated from the tridharma activities of higher education which include education, research, and community service which must always be improved, both in terms of quantity and quality. One of the important variables in realizing this vision is the creativity

of the lecturers. This is because the creativity of lecturers has an important role in realizing qualified learning objectives. Based on the data and facts obtained through the initial survey, it was found that the creativity variable still needs to be improved. This study aims to produce a model of strengthening creativity in the form of a constellation model of influence between variables and their mathematical model. From this model, it is then reduced to a research hypothesis.

According to (DuBrin, 2002), creativity can be defined simply as the process of developing good ideas that can be put into action. The indicators include: 1) There are new and different ways; 2) Enthusiasm to solve confusing problems; and 3) Persistent and willing to take risks. Another opinion from McShane & Von Glinow (2022) explains that creativity refers to the development of original ideas that make socially recognized contributions. The indicators consist of: 1) high openness to experience; 2) The ability to synthesize, analyze, apply ideas, and the ability to evaluate the potential usefulness of ideas; 3) Not locked in a fixed knowledge mindset; and 4) High need for achievement and strong task motivation. In addition, according to Benedek et al. (2020), creativity can be defined as a creative activity that occurs in one's spare time. The indicator is the existence of intrinsic motivation and the existence of extrinsic motivation. Then according to Ivcevic et al. (2021), creativity is generally defined as the production of new and useful ideas by an individual or a small group of individuals working together. The indicators include: 1) Ideas for idea development; 2) Courage to take risks; and 3) There is a target to complete and present the product.

Based on the explanations of the experts above, it can be synthesized that creativity is the embodiment of new and original ideas that are socially recognized to find opportunities to produce products, services, processes, or procedures. The indicators consist of: 1) Analysis of ideas; 2) Different thinking (out of the box); 3) Resistance to criticism; 4) Creative thinking skills; and 5) Confidence in work. (Akar & Karabulut Coskun, 2020; Gumusluoglu & Ilsev, 2009, 2009; Tongchaiprasit & Ariyabuddhiphongs, 2016)

## Method

In general, operations research is a method used in the study and optimization of systems through a model. More according to Hardhienata (2017) operations research is the application of scientific methods to find optimal solutions in decision making of a problem by taking into account existing resources and constraints, where the analysis of the problem solution is carried out using modeling and optimization. Scientific introduction theory is a theory that describes the steps in systems analysis, modeling, and simulation described in Figure 1.

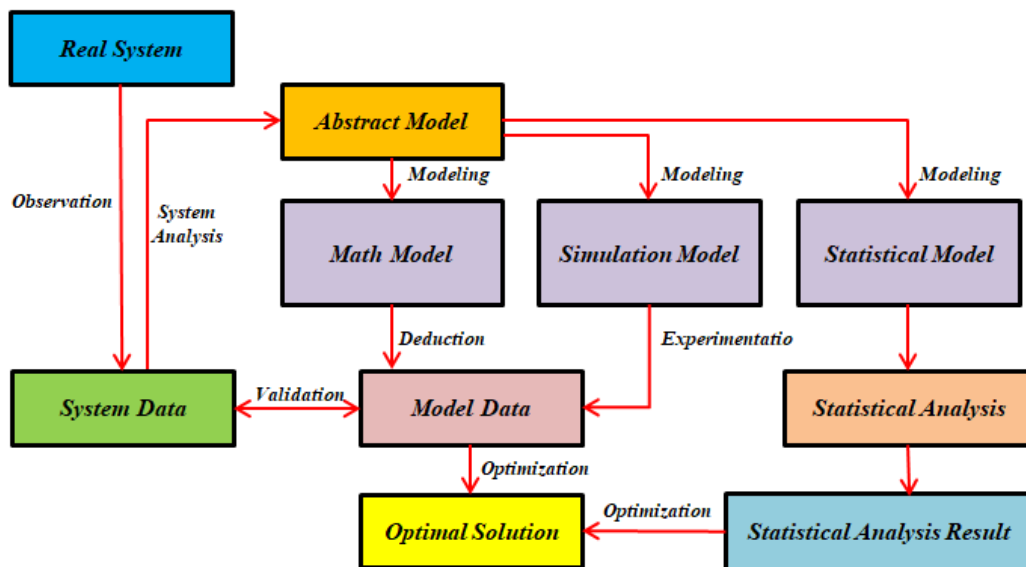


Figure 1. Steps of Scientific Introduction Theory

This study uses a qualitative method followed by the Tally Mark method (turus) to determine what variables have a positive and dominant influence on creativity. In this study, qualitative research is divided into 2 stages. Phase 1 qualitative research to determine the variables to be selected as variables that affect creativity. Meanwhile, in the second stage of qualitative research, to determine the variables most frequently mentioned by the informants as variables that affect the independent variables that affect creativity from the first stage of qualitative research.

To develop research hypotheses, the steps taken by researchers are described as follows.

1. Researchers conduct preliminary research / initial survey of researchers at the research locus to find out whether the state of the theme to be studied is in good condition or needs to be improved.
2. Data mining at the research locus was carried out on informants who were considered competent and could provide good answers to variables that had a positive and dominant influence on creativity. Continued with the exploration of variables that have a positive and dominant influence on the creativity of lecturers.
3. Data Reduction and Data Codification
4. Analysis using the Tally Mark/Turus method is used to determine the variables that have a positive and dominant effect on the main variable (creativity) and the variables that have a positive effect on the variables that have a positive effect on the main variable.
5. The preparation of the constellation of research variables carried out by researchers using variables that have a positive and dominant influence from variables that influence to variables that are influenced.
6. The constellations that have been prepared are then asked for an expert's judgment. Experts assess whether the relevance of the influence between variables found by researchers at the level of irrelevant, less relevant, quite relevant, relevant, or very relevant. Expert assessment of the constellation of research variables consists of 3 categories, namely:
  - a. Can be continued without revision  
If the expert assessment given to the category can be continued without revision, then the researcher can proceed to the next stage.

- b. Can be continued without revision  
If the expert assessment is given to the category that can be continued without revision, the researcher improves the constellation of research variables that have been compiled. Improvements to the fixed variable constellations were reassessed by experts.
  - c. Cannot be continued  
If the expert assessment is given to the category that cannot be continued, the researcher is required to re-examine the variables for the informants to find new variables.
7. Based on expert judgment, the researchers then made a mathematical model of the constellation substructure.
  8. Deriving research hypotheses from the constellation of research variables that have been assessed and confirmed by experts (Expert's Judgment).

From the description of the steps above, it can be seen in Figure 2 below.

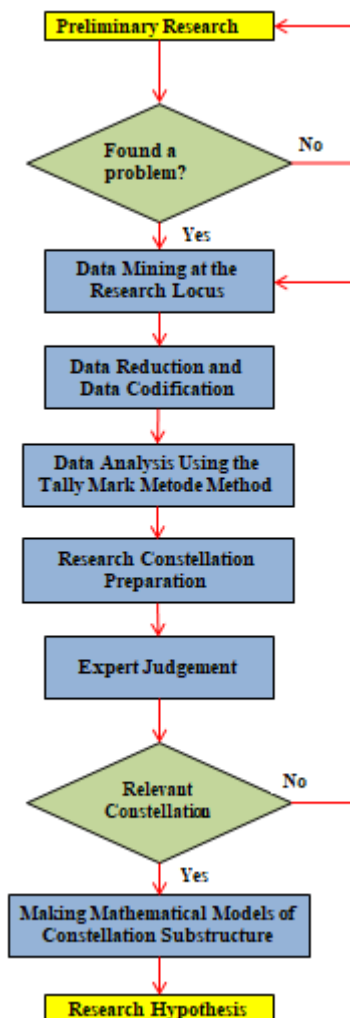


Figure 2. Steps for Formulating Research Hypotheses

## Results and Discussion

### *Research Data Collection*

Research data were collected through interviews which were divided into 2 stages. The sample of data sources used at this stage of qualitative research is the head of the study program, either the chairperson, deputy, or secretary of the study program at the University of Pamulang. The determination of the study program leader as an informant is based on the assumption that the study program leader is the person who knows best about the condition of the creativity of the lecturers in each study program and the factors that influence it. As for the qualitative research, the first phase was conducted on 12 people and the second phase was conducted on 11 people. After the stage 1 interview was conducted, the results were obtained as shown in Table 1 below.

Table 1. Results of Phase 1 Qualitative Research

No.	Variables referred to by informants	Number of informants	Percentage (%)	Information
1	Achievement motivation	7	19.44	Selected variable
2	Organizational culture	6	16.67	
3	Professional commitment	5	13.89	
4	Work motivation	5	13.89	
5	Group cooperation	4	11.11	
6	Organizational commitment	4	11.11	
7	Emotional intelligence	3	8.33	
8	There is a speed of change	1	2.78	
9	Noble morals and integrity	1	2.78	

Based on these data, it can be concluded that the independent variable that has a direct effect on the creativity variable is Achievement Motivation. (Manafi et al., 2015; Salami, 2008). Then in stage 2 the data is generated as shown in Table 2 below.

Table 2. Results of Phase 2 Qualitative Research

No.	Variables referred to by informants	Number of informants	Percentage (%)	Information
1	Job satisfaction	6	18.18	Selected variable
2	Professional commitment	6	18.18	Selected variable
3	Work motivation	5	15.15	
4	Organizational culture	4	12.12	
5	Work discipline	3	9.09	
6	Organizational climate	2	6.06	
7	Organizational commitment	2	6.06	
8	Self-efficacy	1	3.03	
9	Employee engagement	1	3.03	
10	Work engagement	1	3.03	
11	Compensation	1	3.03	
12	Group work pattern	1	3.03	

Based on these data, it can be concluded that the independent variables that have an indirect effect on the creativity variable and have a direct effect on the achievement motivation variable are job satisfaction and professional commitment. (Lu et al., 2007; Padmanabhan, 2021; Setyaningsih & Sunaryo, 2021; Sjahid et al., 2021).

#### *Determining and Intervening Variables*

The intervening variable or often called the intermediate variable is a variable that acts as an intermediary between the dependent variable and the independent variable. The intermediate variable is said to be effective if the indirect effect is greater or stronger than the direct influence (Sugiyono, 2013). In this study the intervening variables obtained were

job satisfaction and achievement motivation. The determination of these variables was carried out after the researchers triangulated the data through expert confirmation.

The expert assessed the relevance of the influence between the variables found by the researchers with the levels of very relevant (SR), relevant (R), moderately relevant (CR), less relevant (KR), and irrelevant (TR). The results of the expert assessment are described in Tables 3 and 4 below.

Table 3. Expert Assessment 1

No	The variable that Influence	The variable that Influenced	Evaluation				
			TR	KR	CR	R	SR
1.	Achievement Motivation	Creativity					√
2.	Professional Commitment	Creativity				√	
3.	Job satisfaction	Creativity			√		
4.	Professional Commitment	Achievement Motivation					√
5.	Job satisfaction	Achievement Motivation					√

Table 4. Expert Assessment 2

No	The variable that Influence	The variable that Influenced	Evaluation				
			TR	KR	CR	R	SR
6.	Achievement Motivation	Creativity					√
7.	Professional Commitment	Creativity					√
8.	Job satisfaction	Creativity				√	
9.	Professional Commitment	Achievement Motivation					√
10.	Job satisfaction	Achievement Motivation					√

*Research Constellation Determination*

Based on the analysis of tally marks and expert constellations, the composition of the variables obtained includes creativity (Y), professional commitment (X1), job satisfaction (X 2), and achievement motivation (X3). The research constellation is described as in Figure 3 below.

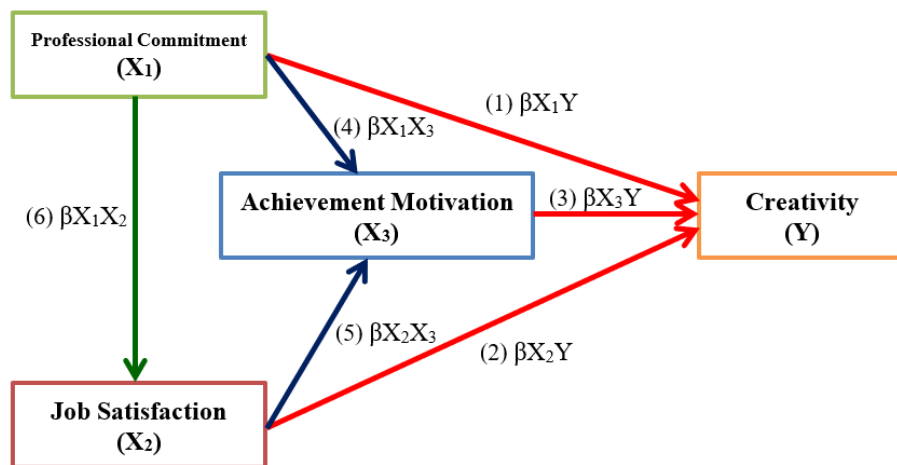


Figure 2. Research Constellation

- X1Y = path coefficient of direct influence of professional commitment (X1) on creativity (Y)
- X2Y = path coefficient of direct influence of job satisfaction (X2) on creativity (Y)
- X3Y = path coefficient of direct influence of achievement motivation (X3) on creativity (Y)
- X1X3 = path coefficient of direct influence of professional commitment (X1) on achievement motivation (X3)

$X_2X_3$  = Path coefficient of direct influence of job satisfaction ( $X_2$ ) on achievement motivation ( $X_3$ )  
 $X_1X_2$  = path coefficient of direct influence of professional commitment ( $X_1$ ) on job satisfaction ( $X_2$ )

Based on the constellation of influences between variables that have been described, the resulting statistical mathematical model is as follows.

a. Substructure Equation 1

$$Y = X_1Y + X_2Y + X_3Y$$

b. Substructure Equation 2

$$X_3 = X_1X_3 + X_2X_3$$

c. Substructure Equation 3

$$X_2 = X_1X_2$$

## Conclusion

Based on the discussion of the research results that have been described, it can be concluded that the model of strengthening creativity is influenced by independent variables which include professional commitment, job satisfaction, and achievement motivation. While the intervening variables found are the variables of job satisfaction and achievement motivation.

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