

# Testing Of Validity And Reliability Of The Construction Of Job Satisfaction In Teachers Of X Elementary School In Tenggara

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**Abstract:** The purpose of this study is to analyze the validity and reliability of the construction of job satisfaction, and to find dimensions and indicators that can shape the construction of job satisfaction. The data collection method used a scale of job satisfaction. The scale of job satisfaction is measured by five dimensions, namely pay, work itself, coworkers, promotions, and supervision. The subjects in this study were 60 teachers who worked at the "X" elementary school in Tenggara. Sampling used a random sampling technique. Data in this study were analyzed using Structural Equation Modeling (SEM) SmartPLS 3.2.8 with reflective construction through CFA 2nd Order. Based on the results of the analysis of constructive validity and reliability, the dimensions and indicators that make up job satisfaction for teachers are declared valid and reliable. All dimensions and indicators can significantly form the construction of job satisfaction. Thus the model can be accepted because the theory that describes job satisfaction in accordance with empirical data obtained. The dimension that has a dominant influence on job satisfaction is supervision (leadership) with a loading factor of 0.913.

**Abstract:** CFA 2nd Order, Coworkers, Job Satisfaction, Partial Least Square, Pay, Promotion, Supervision

## 1. INTRODUCTION

The main task of the teacher as a professional educator includes educating, teaching, guiding, directing, training, assessing and evaluating students with formal education, basic education, and secondary education [1]. The teacher is one of the important factors in improving the quality of education. The teacher becomes an inseparable part of the education system and is directly involved in the teaching and learning process. Teacher quality can be seen from the teacher's professionalism in teaching. Job satisfaction of every teacher in the field has almost the same thing, which is related to the pay that can be obtained, related to coworkers, promotion, and supervision (leadership). The results of interviews with eight teachers revealed that teachers have not been able to understand the tasks that must be done well. However, the existence of mutual assistance between teachers makes teachers feel satisfaction while working. Hasibuan [2] state that high demands on teacher job satisfaction must be accompanied by supporting policies, because it is feared to be counter-productive. Job satisfaction in teachers is important because it can affect the educational process and teacher performance [3]. Other results show that job satisfaction influences organizational culture, commitment and performance [4], [5]. Low job satisfaction is related to turnover [6], occupational injuries [7], decrease in health [8], and poor emotional control [9].

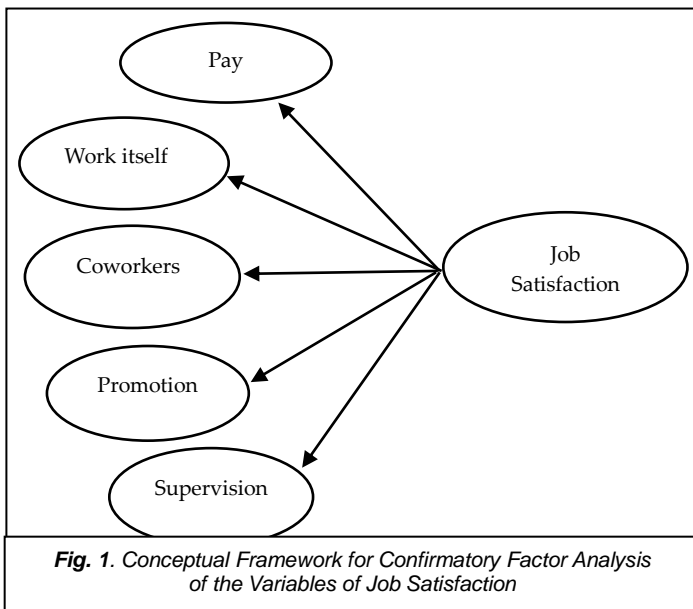
The definition of job satisfaction over the years has been developed by many experts. Hoppok and Spielgler [10] mention that job satisfaction is a set of integrated psychological, physiological and environmental conditions, which encourage employees to recognize that they are satisfied or happy with their work. Furthermore Vroom [11] states that job satisfaction is the emotional orientation of employees towards the roles they perform in the workplace. Job satisfaction is an important component for employees' motivation and encouragement for better performance. Clark [12] argues that if employees feel dissatisfied with the tasks

assigned, they are not sure about the factors that support job satisfaction itself, such as their rights, unsafe working conditions, uncooperative coworkers, supervisors do not respect them and they are not considered in the decision making process, that making them feel separated from the organization. This study uses the grand theory of Smith, Kendall and Hullin [13] which states that job satisfaction is closely related to emotional states that are pleasant or unpleasant according to the way employees view their work. Locke [14] defines job satisfaction as a positive or pleasant emotional as the results of personal appreciation of their own work or experience. Meanwhile, according to Judge and Robbins [15] job satisfaction is an individual's general attitude towards his job. Work requires interaction with colleagues and superiors follows organizational rules and policies, meets performance standards, lives in working conditions that are often less than ideal, and other similar things. Besides Griffin, and Moorhead [16] revealed that job satisfaction is the extent to which someone feels satisfied or dissatisfied with his work. Job satisfaction will reflect the degree to which people find satisfaction in their work. Levy [17] defines job satisfaction as a positive and pleasant emotional as the results of a cognitive assessment of personal work or work experience. Empirical studies of job satisfaction have been going on for years. The results of the study show that job satisfaction influences employee's benefits, human resource policies, retention [18], and organizational citizenship behavior [19]. Job satisfaction also affects working stress [20], as well as working performance and achievement [21], [22]. Smith, Kendall and Hullin [13] state that there are five dimensions create job satisfaction; 1) Pay, which is the employee's desire for fairness of the compensation system and promotion policies. Fairness will be felt if the provision of salaries is in accordance with the demands of the job, individual skill levels, and community wage standards. 2) Job itself, employees tend to prefer jobs that provide opportunities to use their abilities and skills, freedom, and feedback on how well they work. This makes the work feel more challenging. Less challenging work creates boredom, but too much challenge can also create frustration and failure. 3) Colleagues, working colleagues play a role to fill the need for social interaction. Therefore it is not surprising that having friendly and supportive colleagues will increase job

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satisfaction. 4) Promotion, when promoted employees generally face increasing demands, expertise, abilities and responsibilities. Most employees feel positive because they are promoted. 5) Supervision (supervisor), this relates to employees directly and affects employees in doing their work. Employees generally prefer to have fair, open-minded and cooperative supervisor.

H: The dimensions of pay, work itself, coworkers, promotions and supervision can create job satisfaction.



One of approaches that can be used in testing the construction of a measuring instrument is Confirmatory Factor Analysis. Confirmatory Factor Analysis (CFA) is one of the main approaches in factor analysis. CFA can be used to test the dimensionality of a construction. This test is used to measure the model (model measurement) so that it can describe the dimensions and indicators of behavior in reflecting latent variables namely job satisfaction by looking at the factor loading of each dimension that forms a construction. Confirmatory Factor Analysis (CFA) is also used to test the constructive validity and reliability of the indicators (items) forming latent construction [23]. The CFA used in this study is a second order confirmatory factor analysis (2nd Order CFA), a measurement model that consists of two levels. The first level of analysis is carried out from the latent construction of the dimension to its indicators and the second analysis is carried out from the latent construction to its dimension construction [23]. Based on the description above, the problem identification in this study are: 1) Is the construction of job satisfaction valid and reliable? 2) Are the salary indicators, job itself, coworkers, promotion and supervision able to create the construction of job satisfaction?. The objective of this research is to: 1) Know the validity and reliability of the construction of job satisfaction. 2) Find indicators that can create the construction of job satisfaction.

**2 RESEARCH METHOD**

**2.1 Research Participant**

The participant in this research were 60 elementary school teachers in Tenggarong, Kutai Kartanegara Regency of East Kalimantan Province. This research uses a sampling

technique that is a random sampling technique.

**2.2 Research Design**

The design in this research is semi-construction, where the scale design will be conducted using theoretical collaborative studies with information directly obtained from field data. The advantage of using this semi-construction design is to strengthen existing theories and reproduce as many behavioral indicators as possible. Then testing the psychometric properties, including content validity analysis, discriminating power, confirmatory factor analysis, and external concurrency validity [24].

**2.3 Data Collecting Method**

The preparation of job satisfaction scale uses a differential semantic scale. This scale is based on the dimensions of job satisfaction expressed by Luthans [13], namely pay, work itself, job promotion, and supervision. It can be seen in the table 1 below.

**TABLE 1**

*EXAMPLES OF PAY DIMENSION ITEMS AND COWORKERS DIMENSION*

In my opinion, the pay that I got ...						
Enough	1	2	3	4	5	Less
Fair	1	2	3	4	5	Not fair
In my opinion, my coworkers at work are ...						
Friendly	1	2	3	4	5	Annoying
Kind	1	2	3	4	5	Bad

The making of items in this research refers to the blueprint scale of job satisfaction which can be seen in table 2.

**TABLE 2**

*BLUEPRINT OF JOB SATISFACTION SCALE*

Dimension	Indicators	Item Numbers	Total
Pay	a. Individual reaction to the salary received	1,2,3,4,5,6	6
	b. Individual skill level		
	c. Individual perception to the salary received		
Work itself	a. Individual reaction to the work undertaken	7,8,9,10,11,12	6
	b. Individual skill and freedom to the work		
	c. Individual perception to the work undertaken		
Coworkers	a. Individual reaction to the coworkers at the office	13,14,15,16,17,18	6
	b. Individual perception to the coworkers at the office		
	c. Relationships with the coworkers		
Job promotion	a. Individual reaction to the job promotion	19,20,21,22,23,24	6
	b. Individual reaction to the job promotion		
Supervision	a. Individual reaction to the supervision at work	25,26,27,28,29,30	6
	b. Individual perception to the supervision at work		
Total		30	30

**2.4 Validity and Reliability**

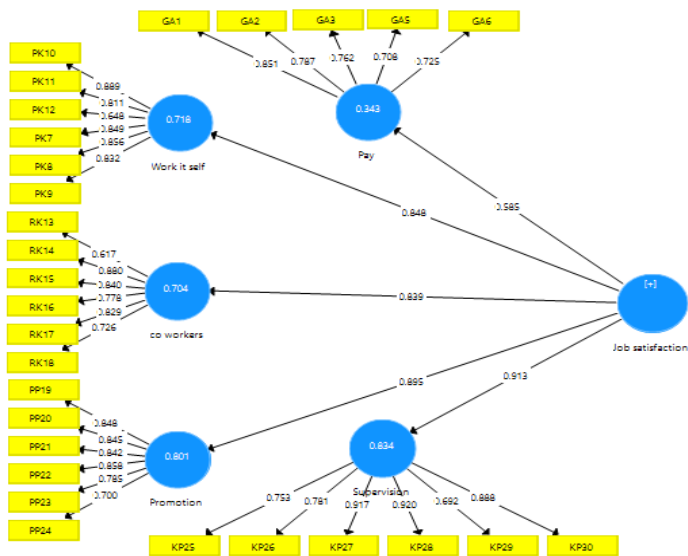
This research is aimed to test the constructive reliability and validity of measuring instruments for job satisfaction with an outer model test. The constructive validity test conducted is confirmatory in order to show how well the results obtained from the use of measuring instruments with reference to the theory used in defining the construction. The constructive validity test included convergent validity, referring to the results of the loading factor value > 0.5, the average variance extracted value or AVE > 0.05 and the discriminant validity was performed by comparing the roots of the average variance extracted or AVE where the value must be higher than the correlation among the existing dimensions. Next is a reliability test with the aim to show internal consistency in the measuring instruments used. The method is by looking at the value of composite reliability and Cronbach's alpha which according to Cooper the value that must be owned is > 0.7 [25].

**2.5 Data Analysis**

The data in this research were analyzed using the SmartPLS 3.2.8 program with reflective construction through the 2nd Order CFA. According to Abdillah and Hartono [26] PLS is a variance-based structural equation analysis (SEM) that can simultaneously testing the measurement models to test validity and reliability.

**3 RESULT**

Based on the results of outer model test analysis on the scale of job satisfaction conducted using the SmartPLS 3.2.8 program, the results can be seen as shown in the figure2 below:



**Fig. 2. Output PLS Outer Model**

**3.1 The Validity Test Result**

**3.1.1 Convergent Validity**

Based on the convergent validity test on the outer model, it was found that the factor loading values from variables to dimensions had values > 0.5 as shown in table 3.

*LOADING FACTOR VALUES (VARIABLE-DIMENSION)*

Dimension	Loading factor	Annotation
Salary	0.585	Valid
Work itself	0.848	Valid
Coworkers	0.839	Valid
Job promotion	0.895	Valid
Supervision	0.913	Valid

Based on the convergent validity test on the outer model, it was found that the factor loading value from dimensions to indicators has a value > 0.5, which is shown in table 4.

**TABLE 4**  
*FACTOR LOADING VALUE (DIMENSION-INDICATOR)*

Dimension	Loading factor	Annotation
GA1	0.851	Valid
GA2	0.787	Valid
GA3	0.762	Valid
GA5	0.708	Valid
GA6	0.725	Valid
PK7	0.849	Valid
PK8	0.856	Valid
PK9	0.832	Valid
PK10	0.889	Valid
PK11	0.811	Valid
PK12	0.648	Valid
RK13	0.617	Valid
RK14	0.880	Valid
RK15	0.840	Valid
RK16	0.778	Valid
RK17	0.829	Valid
RK18	0.726	Valid
PP19	0.848	Valid
PP20	0.845	Valid
PP21	0.842	Valid
PP22	0.858	Valid
PP23	0.785	Valid
PP24	0.700	Valid
KP25	0.753	Valid

**TABLE 3**

KP26	0.781	Valid
KP27	0.917	Valid
KP28	0.920	Valid
KP29	0.692	Valid
KP30	0.888	Valid

Based on the convergent validity test value shows the average variance extracted or AVE in the construction of job satisfaction by 0.523 with the average variance extracted or AVE value in each dimension can be seen in table 5.

**TABLE 5**

AVERAGE VARIABLE EXTRACTED VALUE OF THE CONSTRUCTION OF JOB SATISFACTION

Dimension	AVE	Annotation
GA	0.590	Valid
PK	0.669	Valid
RK	0.613	Valid
PP	0.664	Valid
KP	0.689	Valid

### 3.1.2 Discriminant Validity

Based on the discriminant validity test values, it shows that the root results of the Average Variance Extracted or AVE in each dimension are higher than the average variance extracted root or AVE in other dimensions, so that the discriminant validity criteria are fulfilled. Average Variance Extracted (AVE) root value of the construction of job satisfaction can be seen in table 6.

**TABLE 6**

AVE ROOT VALUE OF THE CONSTRUCTION OF JOB SATISFACTION

Dimension	GA	PK	RK	PP	KP
GA	0.768	0.485	0.650	0.431	0.439
PK	0.485	0.818	0.485	0.711	0.715
RK	0.650	0.550	0.783	0.703	0.734
PP	0.431	0.711	0.703	0.815	0.723
KP	0.439	0.715	0.734	0.723	0.830

The constructive validity in SEM (Confirmatory Factor Analysis / CFA) shows that all four dimensions are valid with a loading factor value ( $\lambda$ )  $\geq$  0.5.

### 3.2 The Construct of Reliability Test

Based on the results of the constructive reliability test conducted, the Composite Reliability and Cronbach's Alpha values  $>$  0.7 can be obtained so that the items used in this study are reliable.

**TABLE 7**

COMPOSITE RELIABILITY AND CRONBACH ALPHA OF JOB SATISFACTION

Variable	Composite Reliability	Cronbach alpha	Annotation
Job satisfaction	0.961	0.957	Valid

The results of constructive reliability testing using Confirmatory Factor Analysis 2nd Order in Table 6 above shows that construction have good reliability and give meaning that the dimensions that measure constructions of job satisfaction are fulfilled the unidimensional criteria [27]. This is indicated by the value of Composite Reliability 0.961 and Cronbach's Alpha 0.957. Constructive validity and reliability test produces valid and reliable items that are able to reflect the dimensions of job satisfaction, namely items on numbers 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, and 30. While there is only one item that is not able to reflect job satisfaction, that is the item at number 4. Based on the processing and analysis of research data on the dimensions of the construction of job satisfaction formed using the 2nd Order Confirmatory Factor Analysis, the results show that the model is acceptable, because all dimensions are able to reflect on the construction formed.

## 4 DISCUSSION

Based on the results of the analysis of constructive validity and reliability, the dimensions and indicators that create job satisfaction are declared as valid and reliable. This shows that all dimensions and existing indicators are able to reflect and target the job satisfaction. The most dominant dimension that is able to reflect job satisfaction is supervision with a loading factor of 0.913, which the main indicators are individual's reaction to the supervision at work and individual's perception to the supervision at work. Generally, individuals prefer to have supervision that is fair, open-minded and cooperative with the subordinates. It can be seen from the findings in the field that the supervision of elementary school teachers in Tenggara is very tight and discipline can positively affect job satisfaction. The lowest dimension that reflects job satisfaction is salary, with a loading factor of 0.585; with the main indicators are individual's reaction to the salary received, the level of individual skills and the individual's perception to the salary received. This can be seen from the findings in the field that teachers' salaries are late but some do not affect job satisfaction. The results of Syauta, Troena, and Setiawan [28] showed that job satisfaction fulfills the reliability requirements of 0.807. Other findings made by Awang, Ahmad, and Zin [29] proved that job satisfaction meets the reliability requirements of 0.951, while in this research proved that job satisfaction meets the requirements with a reliability of 0.961. This proves that in this research has a higher reliability than previous studies. The findings that are in line with this research are very influential to reflect job satisfaction in the point of promotion dimension with a loading factor value of 0.612 [29]. Dimensions of supervision with a loading factor value of 0.82 is in line with this research where the value of loading factor supervision that affect job satisfaction is 0.913 [30]. The results of this research are expected to provide an overview of the validity and reliability of the construction of job satisfaction on elementary school teachers in Tenggara so that it can be used as a reference in subsequent studies related to job

satisfaction.

## 5 CONCLUSION

Based on the results of the analysis and discussions, it can be concluded that the job satisfaction construction fulfills good validity and reliability. All dimensions or indicators can significantly create the construction of job satisfaction; with the dimension that has a dominant influence on job satisfaction is supervision (leadership) with a loading factor of 91.3%. Thus, the findings of this research are able to provide theoretical implications in the development and practical implications of teachers' job satisfaction. Advanced researchers can test the model of job satisfaction in relation to other variables, to broaden different research so that research results can be generalized.

## ACKNOWLEDGMENT

The author would like to thank Ahmad Dahlan University and the Master of Psychology Programme University of Ahmad Dahlan for supporting the implementation of this research.

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