

The Effect Of Transformational Leadership, Management Information System, And Organizational Climate On Lecturers' Job Satisfaction

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Abstract: This study aimed at determining the effect of transformational leadership, management information systems, and organizational climate on lecturers job satisfaction. The usefulness of this research is to enrich the scientific paradigm in the field of Islamic Education Management, especially the study of organizational behavior. This research is a quantitative research with survey method. The research population is all lecturers at the private Islamic colleges in Jambi-Indonesia. The sample of this study amounted to 131 Lecturers taken using the cluster area sampling technique. Questionnaires with a Likert scale are used as instruments. Data analyzed by path analysis begins with an analysis of the test requirements which include the normality test through the chi-square formula, homogeneity test through the Berlet test, and the test of linearity and regression significance. The results of the analysis indicate that there are: 1) The direct effect of transformational leadership on lecturer job satisfaction with a path coefficient of 39.94%; 2) Direct effect of management information systems on lecturer job satisfaction with a path coefficient of 40.40%; 3) Transformational leadership and management information systems have an effect on simultaneously on lecturer job satisfaction of 74.10%; 4) Direct influence of transformational leadership on organizational climate with a path coefficient of 31.97%; 5) Direct effect of management information systems on organizational climate with a path coefficient of 50.43; 6) Transformational leadership and management information systems have an effect on simultaneously on organizational climate of 69.40%; 7) Direct effect of organizational climate on lecturer job satisfaction with a path coefficient of 69.00; 8) Indirect effects of transformational leadership on lecturer job satisfaction through organizational climate of 63.57%, 27; 9) Indirect effects of management information systems on lecturer job satisfaction through organizational climate at 61.27%; 10) Transformational leadership, management information systems, and organizational climate simultaneously affect lecturer job satisfaction of 70.50. The conclusion of this study is transformational leadership, management information systems and organizational climate affect the lecturers Job satisfaction.

Index Terms: Lecturer Job Satisfaction, Transformational Leadership, Management Information Systems, Organizational Climate.

1. INTRODUCTION

THE human qualities needed by the Indonesian people in the future must be able to face increasingly fierce competition with other nations in the world (Sarina et al, 2019). The quality of Indonesian people is produced through the provision of quality education by professional educators (Maselena et al, 2019). Regulation No 20, 2003 about the National Education System states that educators are professional staff. Therefore, lecturers as professional educators have a very strategic function, role and position. Lecturers as professionals have a vision to realize the implementation of learning in accordance with the principles of professionalism to fulfill the same rights for every citizen in obtaining quality in education. Regulation No 14, 2005 about teachers and lecturers emphasizes that lecturers are required to have academic qualifications, competencies, educator certificates, be physically and mentally healthy, and fulfill other qualifications required by the higher education unit where they are assigned to work, and have the ability to realize national education goals (Maselena et al, 2019; Wandasari et al, 2019). Lecturers are professional and scientific educators with the main task of transforming, developing and disseminating science, technology and arts through education, research, and community service. Lecturer qualifications are also regulated in Government Regulation No 19, 2005 about National Education Standards. Thus there are consequences that each lecturer is obliged to pay serious attention in developing and utilizing all his potential in order to realize organizational stability and increase productivity which is oriented towards organizational goals. In an organization there are several things that need to be managed well so that

organizational goals can be achieved, one of which is the management of human resources, Managing human resources in the organization is not easy because it involves various elements in an organization, namely employees, leaders, and systems itself. The combination of these three things is expected to bring about a conducive work environment so that both employees and leaders can carry out their work optimally. For employees, the conducive work environment is expected to create job satisfaction (Apriana et al, 2019; Khasanah et al, 2019; Renata et al, 2018; Tobari et al, 2018; Irmayani et al, 2018). Employee job satisfaction is one of the important elements in the organization. This is because job satisfaction of organizational personnel can influence work behavior, such as being lazy, diligent, productive, etc. or having a relationship with some type of behavior that is very important in the organization. In general, job satisfaction is the level of enjoyment that people receive from doing their work. When people enjoy their work, they are quite satisfied; if they don't enjoy their work, they are less satisfied. Thus, satisfied employees tend to have high morale the overall attitude of employees towards their work environment (Fitria et al, 2019). Work spirit reflects that their needs are met by their work (Badeni, 2017). Job satisfaction of employees had to be created as well as possible in order to morale, dedication, love, and discipline employees increased. Job satisfaction is an emotional attitude that is fun and loves work. This attitude is reflected by work morale, discipline, and work performance. Job satisfaction is enjoyed in work, outside work, and a combination of inside and outside work (Hasibuan, 2013). Job satisfaction at work is

job satisfaction that is enjoyed at work by obtaining praise of work results, placement, treatment, equipment, and good working environment. Employees who prefer to enjoy job satisfaction at work will prioritize their work more than compensation even though remuneration is important. Job satisfaction outside of work is employee job satisfaction enjoyed outside of work with the amount of remuneration that will be received from his work, so he can buy his needs. Employees who prefer to enjoy their satisfaction outside of work are more concerned with retaliation rather than carrying out their duties. There is no absolute level of satisfaction standard because every individual employee has different satisfaction standard. Indicators of job satisfaction can be measured by discipline, work morale, and turnover, if the turnover is small then relatively good employee job satisfaction. Conversely, if a large employee turnover, employee job satisfaction in the company is less. The following are some of the factors that influence employee job satisfaction: 1) fair and proper remuneration, 2) proper placement according to expertise, 3) severity of work, 4) work environment and environment, 5) equipment that supports work performance, 6) the attitude of the leadership in his leadership, 7) the attitude of work is monotonous or not. In addition, job satisfaction is also a generalization of employee attitudes toward work that is based on various aspects of the work. There are hundreds of job characteristics that a worker considers, but a group of job characteristics tend to be evaluated together in the same way. A group of these characteristics, which are generally found in statistical analysis from a list of attitude questions, include: salary/wages, working conditions, supervision, work colleagues, job contents, job security, and promotion opportunities (Kenneth, Wexley, Yukl, 2015). Based on the theory described above, the synthesis of job satisfaction variables in this study is a set of lecturers' feelings about their work, whether they like it or not as a result of the lecturer's interaction with his work environment or as a perception of mental attitude, as well as the results of the lecturer's assessment of his work. Lecturers' feelings about their work reflect their attitudes and behavior at work. Then the indicators of job satisfaction in this study are 1) salary and benefits 2) promotions, 3) supervision, 4) discipline, 5) work procedures and regulations, 6) co-workers, 7) communication, and 8) the work itself. Lecturers are one of the main components in the education system in higher education. The roles, duties and responsibilities of lecturers are very important in realizing national education, which is to educate the life of the nation, improve the quality of Indonesian people, including the quality of faith and piety, noble morals, and mastery of science, technology, and art, and to realize an advanced Indonesian society, just, prosperous, and civilized. To carry out the function, role and position are very strategic professional lecturers are needed. The conception of HR management colleges provide an understanding that human resources lecturer, has a vital position in shaping the image quality of graduates and the quality of higher education in general. The personnel function has direct and indirect effects on employee job satisfaction. The personnel function can make direct contact with supervisors and employees in various ways to influence them. In addition, various policies and personnel activities have an impact on the organization's climate. This organizational climate provides a pleasant or unpleasant work environment for people in the organization; where it will further affect employee job satisfaction (Handoko, 2017).

Organizational climate is a series of feelings and perceptions on the part of various workers that can change from time to time and from one worker to another. When the organizational climate is beneficial to individual needs, for example, paying attention to the interests of workers and oriented to achievement, then we can expect a high level of behavior towards goals. Conversely, when the climate that arises contrary to the goals, needs and personal motivation, it can be expected that job performance and satisfaction will be reduced (Sunyoto, 2010). The relation of organizational climate with job satisfaction becomes very important because with a conducive organizational climate, every individual, work team and leader will know, understand and carry out work procedures according to their duties, functions, jobs, positions, rights and obligations, communication, and authority and its responsibilities. The behavior of human resources in the climate aspects of public organizations becomes the backbone for government activities and is an essential factor for measuring the ability of organizational units in carrying out their autonomy. The more conducive organizational climate in a public organization, the more work productivity will increase (Salwa et al, 2019). Wirawan defines organizational climate as perceptions of organizational members (individually and in groups) and those who are constantly in contact with organizations about what is or happens in the organization's internal environment on a regular basis, which influences organizational attitudes and behavior and organizational performance which then determines organizational performance. Organizational climate is a condition, condition or situation perceived by individuals consciously or unconsciously about the condition of the organization's internal environment (Wirawan, 2017). Climate cannot be seen, but can be felt and can influence behavior in organizations. Organizational climate can be fun, because the organizational climate is built through activities and has an impact or impact on the organization. Quality organization climate according to Croft marked the presence of an atmosphere full of enthusiasm and the existence of life force, providing satisfaction to members of the organization. So, organizational climate is a series of nature of the work environment, which is assessed directly or indirectly by employees who are considered to be the main force in influencing employee behavior (Aziz, 2013). Experts have defined organizational climate, among others, Litwin said organizational climate is a set of measurable traits and an organizational environment based on the collective conception of people who live and work in an organizational environment. Andrews defines the organizational climate as an internal quality of an organization determining the quality of cooperation, organizational development, and the amount of dedication and commitment to organizational goals. Owens argues that organizational climate is a study of individual perceptions of various aspects of the environment that reflect values, and organizational belief systems, therefore organizational climate is related and is considered to exist in organizational culture. Ho y and Miskel: 2010, stated "organizational climate as a set of internal characteristics is similar in some respects to early descriptions of personality". The opinions of the experts illustrate that organizational climate is a quality of relative input from the organizational environment which is an experience experienced by members of the organization and influences their behavior. Organizational climate is a series of

environmental nature of the work, which assessed directly and indirectly, by employees who become a major force in influencing employee behavior (Lian et al, 2018). Based on exposure to the theory that has been described by experts, as a synthesis of organizational climate variables in this study is the atmosphere in an organization created by prevailing patterns of interpersonal relationships. A conducive organizational climate is needed for lecturers to foster encouragement within the lecturer to work more enthusiastically, this means that the organizational climate influences the level of motivation of the lecturers which further impacts on the organizational climate. While indicators of the intended organizational climate variables are, (1) responsibility; (2) identity; (3) warmth; (4) support; (5) leadership and (6) conflict. Furthermore, Mastering Information Technology well can help us to realize e-government in the context of the creation of Good Government and Good Governance that has become the demands of society today. Guidelines for the development of Information Technology in the field of Governance have been formulated by the Central Government through Presidential Instruction of the Republic of Indonesia No 6, 2001 concerning Development and Utilization of Telemetric in Indonesia, Presidential Instruction of the Republic of Indonesia No 3, 2003 Concerning National Policies and Strategies for the Development of E-Government and Regulations The Minister of Communication and Information Technology Number 126 / M / KI / K / VI / 2002 concerning the circulation of site utilization. The sophistication of the progress of information technology that has been synergized in corporate or organizational governance activities and used by the community in daily life cannot be ignored by universities. The positive response is that computerization and service automation in tertiary institutions is a must. Failure to apply information technology to academic and non-academic services will make the university figure look using, old-fashioned, and lagging (Amir, 2016). Therefore, without the use of information technology, the service is certain to be slow, the response to the needs of stakeholders cannot be provided immediately, and loses due to the loss of a lot of information that should be captured, stored, and empowered for the progress of the institution. As an organization that involves a lot of human resources with certainty, universities need a strong and reliable management information system. Lecturers, students, staff and leaders are the core human resources that enable the creation of sustainable 'educational services' production activities. The need for a management device system that has more value and is in accordance with the times is no longer seen as a compulsion but has been seen as a necessity. In this globalization era, the device needs Management Information System (MIS) and modern capable gives great influence to the advancement of higher education. According to Gordon B. Davis, a management information system is a human and machine system that is integrated to present information to support the operations, management and decision making functions in an organization. Meanwhile according to Raymond Mcleod, Jr. management information system is a computer-based system that presents information for the needs of the user. Furthermore James AF Stoner defines management information systems as a formal method that provides management with timely, trustworthy information, to support the decision making process for planning, monitoring, and

operating functions of an organization more effectively. Based on the explanation of the theory that has been described by experts, then as a synthesis of management information system variables is a combination of human resources (HR) with a set of information technology applications to select, store and process data in order to achieve more effective organizational functions of higher education. In this case the condition of management information systems used by lecturers at tertiary institutions. The indicators of the management information system are as follows; (1) Information, (2) Humans as Information Processing, (3) Systems Concepts, (4) Organizational and Management Concepts (5) Decision Making Concepts. In the current era of globalization, the need for management information system tools is no longer seen as coercion but rather needs, management information systems (MIS) that are quality and modern are able to have a major influence on the progress of higher education. So that if the existence of a management information system of a tertiary institution will improve lecturers' performance and provide job satisfaction to lecturers in tertiary institutions. Awareness and commitment of organizational members to organizational goals must also be supported by other factors in the form of leadership or leadership. Organizational goals will be realized easily if the leaders in the organization have good leadership. Leadership is the ability (potential) a person has to carry out organizational activities, where he presents himself as a person who guides, guides, points the way and utilizes the organization's resources to its full potential to achieve organizational goals. Leadership tends to be assumed in the context of formal organizations, both simple and modern, although in real conditions leadership is not only inherent in an organization, but is actually inherent in every individual. because basically every one of us is a leader, as the hadith of the Prophet Muhammad, *حديث عبدالله بن عمر رضي الله عنه. أن رسول الله صلى الله عليه وسلم قال: كلكم راع فمسؤول عن رعيته. فالأمير الذي على الناس راع وهو مسؤول عنهم. والرجل راع على أهل بيته وهو مسؤول عنهم. والمرأة راعية على بيت بعلها وولده وهي مسؤولة عنهم، والعبد راع على مال سيده وهو مسؤول أخرجه البخاري في ٤٩ كتاب العتق: ١٧. عنه، ألا فكلكم راع وكلكم مسؤول عن رعيته* *باب كراهية التطاول على الرقيق*. Meaning: Hadith from Abdullah bin Umar ra that RaSulullah SAW said: "All of you are leaders and are responsible for their leadership. An imam (amir) leader and responsible for his people. A husband is a leader in his family and is responsible for his leadership. A leader's wife and responsible for the use of her husband's property. A servant (employee) is responsible for the employer's property and will be asked about his caregivers, keep in mind that all of you care for and will be sued about their care (Narrated by Bukhari, Muslim, 1199). From various viewpoints and opinions of management experts including Yukl, Stephen R. Covey, David Ulrich, and Luthan, plus a number of studies on organizational behavior it can be concluded that the leadership style expected and needed in this globalization era is transformational leadership style (Hadi Permadi & Daeng Arifin, 2010). Transformational leadership for university leaders is centered on empowerment of existing tertiary resources based on local cultural values. The implementation of transformational leadership for Higher Education is directed at improving lecturer performance so that it can achieve optimal learning outcomes. This optimization does not only have quantity implications, but also quality (Andriani et al, 2018). Bass, Avolio, in (Komariah's book : 2010), (Wirawan : 2017), and (Susanto : 2016), states

four factors that can influence transformational leadership, namely: (1) idealized influence ; (2) individual consideration ; (3) intellectual stimulation; and (4) inspiration motivation.

2 RESEARCH METHODS

This research is a quantitative study with a type of survey approach. Survey research is a study conducted through direct observation of a symptom or gathering information from large and small populations, but the data studied is data from the sample as representing the population data (Iskandar: 2009: 66). Creswell explained that the survey research method in which the researcher conducted a survey of the sample or the entire population of people to describe attitudes, behavior, opinions, or characteristics of the population by sampling data from one population using a questionnaire as a primary data collection tool (John W. Creswell: 2012 : 376). According Suharsimi Arikunto that quantitative research is a research approach that is often demanded to use numbers, starting from data collection, interpretation of the data, and the appearance of the results (Suharsimi: 2008: 12). Similar expressed Bambang, the survey method is a quantitative study using the same structured questions to then be recorded, processed and analyzed (Bambang Prasetyo & Lina Miftahul Jannah : 2012 : 143). Data analysis technique used in this study is path analysis. This model is used to analyze the pattern of relationships between variables in order to find out whether there is a direct or indirect influence on a set of independent (exogenous) variables on the dependent variable (endogenous). The coordinator of private Islamic college Region XIII Jambi has 16 Private Islamic colleges located in its area. The population in this research is about 567 lecturers and the sample is taking using the cluster area sampling. the sampling techniques is used to determine the sample area when the object to be inspected or very extensive data sources, such as the population of a country, province or district (Sugiyono, 2017). in this research sample area was obtained, Private Islamic College Yasni Muara Bungo, Private Islamic College Batanghari and Private Islamic College Maarif Jambi city. So that the number of research samples is 131 lecturers.

Research Samples

N o	College	Districts	Number of Lecturers	Number of Samples
1	STAI Yasni Bungo	Bungo Regency	93 people	46 people
2	STAI Ma'arif Jambi	Jambi City	71 people	52 people
3	STAI Batanghari	Batanghari Regency	65 people	33 people
Amount			229	131 people

Data collection techniques in this study used observation, documentation and questionnaires. Analysis of the data used is the path analysis. Analysis Descriptive, test analysis and test Prerequisites of hypothesis.

3 RESULTS AND DISCUSSION

Description of the data presented in this section

includes transformational leadership variable (X₁), management information systems (X₂), organizational climate (X₃), to lecturer job satisfaction (X₄), after processing using descriptive statistics with SPSS Version 22.0 obtained the size of the central tendency as shown in the following table:

Measuring Central Tendency

	Transformational leadership	Management information System	Organizational climate	Job satisfaction of lecturers
Valid N	88	88	88	88
Missing	0	0	0	0
The mean	151,765	152.05	152.7273	148.2159
Median	152,000	152.12	152,700	148,1290
Mode	152.00	152.00	153.50	148.00
Std. Deviation	8,502	8,192	8.97259	8.54391
Variance	75,039	70,274	84,247	76,631
Minimum	128.00	47.00	46.00	48.00
Maximum	175.00	128.00	128.00	124.00
Sum	9713.00	175.00	174.00	172.00

3.1. Test analysis prerequisites

3.1.1. Normality test

Normality test with Chi Square is a goodness of fit test. In the test of compatibility will be compared between the frequency of observations with the frequency of expectations / theoretical. Does the frequency of observations deviate or not

from the expected frequency. If the value is small, it means that the results of the observation are very close to the frequency of expectations, and this shows a good fit. If the

value is large, it means that the frequency of observations differs significantly from the frequency of expectations, so the suitability is poor. Good conformity will lead to acceptance of H₀, and poor conformance will lead to rejection of H_a.

The formula used is:

$$\chi^2 = \sum_{i=1}^k \frac{(o_i - e_i)^2}{e_i} = \sum_{i=1}^k \frac{(f_o - f_e)^2}{f_e}$$

Information:

o_i = f_o = Observation Frequency

e_i = f_e = Expectation Frequency

1) Test the normality of transformational leadership variable data distribution (X₁)

Based on the data distribution of transformational leadership variables (X₁) and in accordance with the normality test calculation steps, the following research data are obtained:

- a. Number of interval classes = 6
- b. The length of the interval class = (175-128) / 6 = 7.83 = 8
- c. Frequency distribution table

Table for testing data normality with chi squared

NO	Interval Class	f_o	f_h	$f_o - f_h$	$(f_o - f_h)^2$	$(f_o - f_h)^2 / f_h$
1	128-135	2	2	0	0	0.00
2	136-143	12	12	0	0	0.00
3	144-151	24	30	-6	36	1.21
4	152-159	36	30	6	36	1.21
5	160-167	11	12	-1	1	0.08
6	168-175	3	2	1	1	0.50
	amount	88	88		χ^2_{counts}	3.00
					χ^2_{tables}	11.07

From the calculation results in the table above, the value of Chi square value $\chi^2 = 3.00$ is obtained. at the significance level α and degrees of freedom (dk) = k-1 with k = the number of class intervals, if the number of classes is 6, then dk = 6 - 1 = 5. Based on Table χ^2 it can be seen that dk = 5 with an error rate that is set = 5%, then the value $\chi^2_{table} = 11.07$. Because $\chi^2_{count} < \chi^2_{tables}$ namely 3.00 < 11.07 then H_0 is accepted and concluded the data distribution of transformational leadership is normal.

2) Test the normality of variable data distribution Management information system (X2)

Based on the distribution of management information system variable data (X2) and in accordance with the normality test calculation steps, the following research data are obtained:

- Number of interval classes = 6
- The length of the interval class = $(175-128) / 6 = 7.67 = 8$
- Frequency distribution table

Table for testing data normality with chi squared

NO	Interval Class	f_o	f_h	$f_o - f_h$	$(f_o - f_h)^2$	$(f_o - f_h)^2 / f_h$
1	128-135	4	2	2	4	2.00
2	136-143	9	12	-3	9	0.75
3	144-151	24	30	-6	36	1.20
4	152-159	31	30	1	1	0.03
5	160-167	15	12	3	9	0.75
6	168-175	5	2	3	9	4.50
	amount	88	88		χ^2_{counts}	9.23
					χ^2_{tables}	11.07

From the results of calculations in the table above, the value of Chi squared (χ^2) = 9.23 is obtained. at the significance level α and degrees of freedom (dk) = k-1 with k = the number of class intervals, if the number of classes is 6, then dk = 6 - 1 = 5. Based on Table χ^2 it can be seen that dk = 5 with an error rate that is set = 5%, then the value $\chi^2_{table} = 11.07$. Because $\chi^2_{count} < \chi^2_{tables}$ namely 9.23 < 11.07 then H_0 is accepted and concluded the data distribution of management information system is stated normal.

3) Test for normality in organizational climate variable data distribution (X3)

Based on the distribution of organizational climate variable data (X3) and in accordance with the normality test calculation steps, the following research data are obtained:

- Number of interval classes = 6
- The length of the interval class = $(172-124) / 6 = 8$

c. Frequency distribution table

Table for testing data normality with chi squared

NO	Interval Class	f_o	f_h	$f_o - f_h$	$(f_o - f_h)^2$	$(f_o - f_h)^2 / f_h$
1	124-131	3	2	1	1	0.50
2	132-139	13	12	1	1	0.08
3	140-147	22	30	-8	64	2.13
4	148-155	33	30	3	9	0.30
5	156-163	14	12	2	4	0.34
6	164-172	3	2	1	1	0.50
	amount	88	88		χ^2_{counts}	3.85
					χ^2_{tables}	11.07

From the calculation results in the table above, the value of Chi squared (χ^2) = 3.85 is obtained. at the significance level α and degrees of freedom (dk) = k-1 with k = the number of class intervals, if the number of classes is 6, then dk = 6 - 1 = 5. Based on Table χ^2 it can be seen that dk = 5 with an error rate that is set = 5%, then the value $\chi^2_{table} = 11.07$. Because $\chi^2_{count} < \chi^2_{tables}$ namely 3.85 < 11.07 then H_0 is accepted and can be summed that data distribution of climate organization is normal.

4) Test the normality of variable data distribution on Job satisfaction (X4)

Based on the data distribution of lecturers job satisfaction (X4) and in accordance with the steps for calculating the normality test, obtained research data as follows:

- Number of interval classes = 6
- The length of the interval class = $(167-120) / 6 = 7.67 = 8$
- Frequency distribution table

Table for testing data normality with chi squared

NO	Interval Class	f_o	f_h	$f_o - f_h$	$(f_o - f_h)^2$	$(f_o - f_h)^2 / f_h$
1	120-127	3	2	1	1	0.50
2	128-135	11	12	-1	1	0.08
3	136-143	25	30	-5	25	0.83
4	144-151	30	30	0	0	0.00
5	152-159	16	12	4	16	1.33
6	160-167	3	2	1	1	0.50
	amount	88	88		χ^2_{counts}	3.25
					χ^2_{tables}	11.07

From the calculation results in the table above, the value of Chi square value (χ^2) = 3.25 is obtained. at the significance level α and degrees of freedom (dk) = k-1 with k = the number of class intervals, if the number of classes is 6, then dk = 6 - 1 = 5. Based on Table χ^2 it can be seen that dk = 5 with an error rate that is set = 5%, then the value $\chi^2_{table} = 11.07$. Because $\chi^2_{count} < \chi^2_{tables}$ namely 3.25 < 11.07 then H_0 is accepted and can be inferred that the data of lecturers job satisfaction variables distributed normally.

3.1.2. Homogeneity Test

Homogeneity test is done to know that: data from each score from populations that have the same variance. Homogeneity testing of variance using the Barlett Test.

- Homogeneity test of transformational leadership data variant (X_1) with lecturer job satisfaction (X_4).

No	X ₁	k	n _i	X ₄	d b	si ²	db (si ²)	log si ²	db. (log si ²)
am ount	133 80	3 2	8 8	127 08	5 6	532.938 4921	1279, 0972	19.405 2025	57.91 8869
Combined Variant						22.84			
Unit Price B						76.08806961			
Chi Square Price						41.84366892			
Chi Tables (0.95; 56)						74.4683241			
Final Result						Homogeneous Data			

Based on the calculations above, it can be concluded that the $X^2_{count} < X^2_{tables}$ and data in said homogeneous.

2) Homogeneity test of management information system data variant (X₂) with job satisfaction of lecturers (X₄).

N	X	k	ni	X ₄	db	Si ₂	Si ₂ log	db.Si ₂	db.Log Si ₂
8 8	1344 0	3 7	8 8	1270 8	50	343. 06	780. 27	21,12 82	48.113927 58
Combined Variant						15.61			
Unit Price B						59.66			
Chi Square Price						26.60			
Chi Tables (0.95; 50)						67.50480652			
Final Result						Homogeneous Data			

Based on the calculations above, it can be concluded that the $X^2_{count} < X^2_{tables}$ and data in said homogeneous.

3) Homogeneity test of transformational leadership data variant (X₁) with organizational climate (X₃).

N	X ₁	k	n _i	X ₃	d b	Si _i ²	Log Si _i ²	db.S _i ²	db.Log Si _i ²
8 8	133 80	3 2	8 8	130 43	5 6	777.61 67	1527. 47	24.5982 677	66,955, 861
Combined Variant						27.28			
Unit Price B						80.40			
Chi Square Price						30.97			
Chi Tables (0.95; 56)						74.4683241			
Final Result						Homogeneous Data			

Based on the calculations above, it can be concluded that the $X^2_{count} < X^2_{tables}$ and data in said homogeneous.

4) Homogeneity test of management information system data variant (X₂) with organizational climate (X₃).

N	X ₂	k	n _i	X ₃	d b	Si _i ²	Log Si _i ²	db.S _i ²	db.Log Si _i ²
8 8	134 40	3 7	8 8	130 43	5 0	311.5 714	759,0 952	14.9168 084	37.0154 7896
Combined Variant						15.18			
Unit Price B						59.07			
Chi Square Price						50.78			
Chi Tables (0.95; 50)						67.50480652			
Final Result						Homogeneous Data			

Based on the calculations above, it can be concluded that the $X^2_{count} < X^2_{tables}$ and data stated homogeneous.

5) Homogeneity test of organizational climate data variant (X₃) with lecturer job satisfaction (X₄).

N	X ₃	k	n _i	X ₄	d b	Si _i	Log Si _i ²	db.S _i ²	db.Log Si _i ²
8 8	1304 3	2 8	8 8	1270 8	5 7	50 0	1138. 5	16.493 2	44.249188 81
Combined Variant						19,974			
Unit Price B						74.13			
Chi Square Price						68.81			
Chi Tables (0.95; 57)						75.6237484			
Final Result						Homogeneous Data			

Based on the calculations above, it can be concluded that the $X^2_{count} < X^2_{tables}$ and data stated homogeneous.

3.1.3. Linearity Test

Linearity test is done by finding the equation of the regression line of exogenous variables to endogenous variables. Linearity test is done by finding the regression equation, then tested related to the regression coefficients and linearity of the regression line by using a simple linear regression analysis variance table. The decision is taken by comparing the $F_{calculated}$ value (regression) with F_{table} value dk (numerator; denominator) for a significance level of 5%. With the criteria if $F_{regression} < F_{table}$, then the relationship between variables is stated linear. For the linearity test of endogenous variables with exogenous variables using the SPSS program, if the $F_{calculated}$ value (tuna match) is smaller than the F_{Table} with $\alpha = 0.05$, so the regression of the exogenous variable over the endogenous variable is linear.

1) Linearity Test Transformational leadership (X₁) on lecturer job satisfaction (X₄)

Linearity test between transformational leadership variables with job satisfaction of lecturers using SPSS statistical calculations obtained from the following calculations:

ANOVA Table

	Sum of Squares	df	Mean Square	F	Sig.
TransformationalBetween(Combined) Kep * LecturerGroups Linearity Job Satisfaction	4659,211	27	172,563	7118	.000
Deviation from Linearity	3620,421	11	3620,421	149,336	.000
Within Groups	1038,790	26	39,953	1,648	.000
Total	1454,607	60	24,243		
	6113,818	87			

Test criteria if the value of r (probability / critical value) is smaller or equal to the specified α level, then the patterned linear distribution. In this study $\alpha = 0.05$ was used. Based on the results of calculations using SPSS above, it appears that the result of r is smaller than α level, that is $0,000 < 0.05$ so that the transformational leadership variable and job satisfaction of lecturers are linear patterned.

2) Test Linearity Regression management information system (X₂) toward lecturer job satisfaction (X₄)

Test the linearity between the variables of management information systems with job satisfaction lecturer by using statistical calculations SPSS obtained from the following calculation:

ANOVA Table

	Sum of Squares	df	Mean Square	F	Si g.
Management information system * lecturer job satisfaction	5638,481	27	208,833	7,410	.000
	4799,838	1	4799,838	170,310	.000
	838,643	26	32,255	1,145	.326
Within Groups	1690,974	60	28,183		
Total	7329,455	87			

Test criteria if the value of r (probability / critical value) is smaller or equal to the specified α level, then the patterned linear distribution. In this study $\alpha = 0.05$ was used. Based on the results of calculations using SPSS above, it appears that the results of r are smaller than α level, that is $0,000 < 0.05$ so that the management information system variables and lecturer job satisfaction are linear patterns.

3) Linearity Test of transformational leadership regression (X_1) to organizational climate (X_3)

Linearity test between the variables of transformational leadership with job satisfaction lecturer by using statistical calculations with the SPSS program is obtained from the following calculation:

ANOVA Table

	Sum of Squares	df	Mean Square	F	Si g.
Kep. Transformational * Organizational climate	4583,702	27	169,767	6,657	.000
	3433,075	1	3433,075	134,620	.000
	1150,626	26	44,255	1,735	.040
Within Groups	1530,117	60	25,502		
Total	6113,818	87			

Testing criteria if the value of r (probability / critical value) is smaller or equal to the specified α level, then the patterned linear distribution. In this study $\alpha = 0.05$ was used. Based on the calculation results using SPSS above, it can be seen that the result of r is smaller than α level, that is $0,000 < 0.05$ so that the job satisfaction variable (X_3) with transformational leadership (X_1) is linear patterned.

4) Regression Linearity Test of management information systems (X_2) on organizational climate (X_3)

Linearity test between work participation variables with organizational climate using statistical calculations with the SPSS program is obtained from the following calculations:

ANOVA Table

	Sum of Squares	df	Mean Square	F	Si g.
Management Information Systems * Organizational Climate	5354,730	27	198,323	6,026	.000
	4475,159	1	4475,159	135,973	.000
	879,570	26	33,830	1,028	.000
Within Groups	1974,725	60	32,912		
Total	7329,455	87			

Test criteria if the value of r (probability / critical value) is smaller or equal to the specified α level, then the patterned linear distribution. In this study $\alpha = 0.05$ was used. Based on the results of calculations using SPSS above, it appears that the results of r are smaller than α level, that is $0,000 < 0.05$ so that the organizational climate (X_3) and management information systems (X_2) is linear patterned.

5) Linearity Test of Organizational climate regression (X_3) on job satisfaction (X_4)

Linearity test between job satisfaction variables and job satisfaction of lecturers using statistical calculations with the SPSS program is obtained from the following calculations:

ANOVA Table

	Sum of Squares	df	Mean Square	F	Si g.
Organizational climate * Job satisfaction of lecturers	5117,133	27	189,523	7,338	.000
	4602,954	1	4602,954	178,206	.000
	514,180	26	19,776	.766	.000
Within Groups	1549,764	60	25,829		
Total	6666,898	87			

Test criteria if the value of r (probability / critical value) is smaller or equal to the specified level α , then the patterned linear distribution. In this study $\alpha = 0.05$ was used. Based on the results of calculations using the SPSS above, it appears that the results of r are smaller than α level, that is $0,000 < 0.05$ so that the organizational climate variable (X_3) with job satisfaction of lecturers (X_4) is linear patterned.

3.2. Hypothesis testing

Hypothesis testing in research uses path analysis. The magnitude of the direct effect of the exogenous variable on the endogenous variable is expressed by the numerical path coefficient. The influence between transformational leadership

(X_1) and lecturer job satisfaction (X_4) is expressed by the path coefficient ρ_{41} , while the magnitude of the influence between transformational leadership (X_1) on organizational climate (X_3) is expressed as ρ_{31} and organizational climate (X_3) of the management information system (X_2) is expressed by the path coefficient ρ_{32} and the big effect between transformational leadership (X_1) and the management information system (X_2) as well as the organization climate (X_3) simultaneously with the lecturer Job Satisfaction (X_4) is determined ($R^2_{(312)}$). The results of the calculation of the correlation coefficient (r) and the path coefficient ρ between bell variables can be seen in the following table:

Hypothesis	Variable	Correlation Coefficient (r)	Path coefficient (ρ)	$t_{\text{arithmetic}} / F_{\text{arithmetic}}$	t_{table}	
					$\alpha = 0.05$	$\alpha = 0.01$
1	$X_1 X_4$	0,845	0,4852	14.89	1,988	2,634
2	$X_2 X_4$	0,809	0,3601	12.88	1,988	2,634
3	$X_3 X_4$	0,830	0,9420	13.82	1,988	2,634
4	$X_1 X_3$	0,749	0,4269	10,49	1,988	2,634
5	$X_2 X_3$	0,781	0,5129	11.58	1,988	2,634
6	$X_1 X_2 - X_3$	0,833	-	208.25	3.95	-
7	$X_1 X_2 - X_4$	0.860	-	269.0	3.95	-
8	$X_1 X_2 X_3 - X_4$	0,837	-	101.86	3.95	-

Summary Table Calculation Results for Indirect Influence Coefficients and coefficient of Significance Value

Variable	INFLUENCE			
	Indirect		t_{table}	
	ρ	t_{count}	0.05 *	0.01 **
X_{1-3-4}	0,4021	4,0489	1,988	2,635
X_{2-3-4}	0,4831	5,0866		

1. The direct influence of transformational leadership (X_1) on lecturer job satisfaction (X_4)

The results of path analysis found that the first hypothesis transformational leadership (X_1) has a significant impact on job satisfaction of the lecturers (X_4). It can be noted from the results of data analysis obtained path coefficient X_1 to X_4 (ρ_{41}) = 0.485, with a real level $\alpha = 0,05$ and $dk = 85$ obtained value of $t_{\text{table}} = 1.988$. The calculation results get the value of $t_{\text{count}} = 14.89$. Based on the criteria that have turned out the value of $t_{\text{arithmetic}} (14.89) > t_{\text{table}} (1.988)$, so that H_0 is rejected and H_1 accepted. This means that the hypothesis which states transformational leadership (X_1) a direct effect on job satisfaction lecturer (X_4) may be accepted as verified. These results provide an understanding that a college leader to pay attention and develop values in his leadership so that he is able to appear as an innovative leader. Namely college leaders who are able to give birth to ideas or ideas and the courage to do a series of change actions by utilizing the skills of existing resources to achieve the progress of the institution or organization they lead. The results also indicate that a leader of a tertiary institution to be more maximal

in implementing the steps as a leader who is able to adapt to various situations and conditions, the leader of a tertiary institution is required to be smart in reading the times, especially the development of the world of education, thus the leader of a tertiary institution adjustments to these various developments. Then the leaders of higher education also strive for the ability to empower subordinates with the principle of professionalism. Empowering subordinates means utilizing the potential possessed by subordinates for the advancement of the institution, in this case the leader of the tertiary institution must be able to read what abilities the subordinates have and then place them in a position suitable to their expertise. Furthermore, higher education leaders must be able to set an example both in action and in speech, so that the actions taken are exemplary and the speech that is conveyed should be followed by all subordinates, consistency between speech and action, familiarizing noble deeds, is one way to provide an example of kindness to subordinates. Then respecting subordinates with no favoritism, respecting their work or physicality, subordinates are made partners with humane approaches rather than being slaves full of intimidation. Thus, a college leader who leads an intelligent will be able to become a transformative leader. The essence of transformational leadership, according to Uhar, is as an inspiration, able to integrate personal and group interests, be oriented toward change, empower subordinates, and have a long-term orientation. The chairman's transformational leadership is a way that empowers all the potential that exists on campus to be able to function optimally in achieving the vision of higher education. The chairman who has a type of transformational leadership has an attitude of respecting new ideas, new methods and methods, as well as new practices by his subordinates on campus. The results of this first hypothesis analysis are supported by research conducted by Elica Bica, Camelia Firica: 2010, International Journal. The Influence of Transformational Leader Upon Organizational Culture. This research shows that transformational leadership is a combination of participative leadership style, democracy, and community relations based. This research also emphasizes the importance of the process of creating an organizational culture for the achievement of organizational goals. In this study stated transformational leadership has a positive effect on increasing the capacity of organizational society through organizational culture in increasing job satisfaction.

2. The direct effect of management information systems (X_2) on job satisfaction of lecturers (X_4)

The results of path analysis on the second hypothesis is found that the management information system (X_2) has a significant impact on job satisfaction of the lecturers (X_4). It can be noticed from the analysis of the data manually coefficient lines X_2 to X_4 (ρ_{42}) = 0,3601, with a significance level $\alpha = 0,05$ and $df = 85$ values obtained $t_{\text{table}} = 1.988$. The calculation results get the value of $t_{\text{count}} = 12,88$. Based on the existing criteria it turns out that the value of $t_{\text{arithmetic}} (12,88) > t_{\text{table}} (1.988)$, so that H_0 is rejected and H_1 is accepted. This means that the hypothesis which states management information system (X_2) directly influence job satisfaction lecturer (X_4) may be accepted as verified. In the calculation in the analysis so clearly provides evidence that management information systems provide a significant influence on job satisfaction of lecturers. That means

that information systems must always be developed within an organization so that they are able to make a positive contribution to the spirit of information system innovation in a college. These findings provide understanding that management information systems in tertiary institutions must be more sophisticated and meet all stakeholder needs. This means that the better the management information system in an institution will increasingly affect user satisfaction in this case lecturers in the tertiary institution. The following are some characteristics of management information systems adopted from (Turban, 2010) 1) operating on structured tasks, namely in an environment that has clearly defined the following: operating procedures, decision making rules, and flows information. 2) increasing efficiency by reducing costs, 3) provide reports and ease of access that is useful for decision making, but not directly (managers use reports and information and make their own conclusions for making decision). Higher education should implement a management information system in its operational activities to support activities on campus, because in this era all things have been merged and connected with a computerized network system, therefore the application of the information system in higher education has become a necessity for the college itself. As an organization that involves a lot of certain human resources, universities need a strong and reliable management information system (SIM). Lecturers, students, staff and leaders are the core human resources that enable the creation of sustainable 'educational services' production activities. The quality of human resources and their production always requires maintenance and improvement so that the effectiveness, efficiency, and quality of the services it produces can be controlled and maintained its quality.

3. The direct effect of transformational leadership (X_1) and management information systems (X_2) on job satisfaction of lecturers (X_4). Without the results of data analysis manually obtained path coefficient $X_1 X_2$ against X_4 ($R_{4.21}$) = 0.860, with a real level $\alpha = 0, 05$ and $dk = 85$ obtained the value of $F_{table} = 3.95$. The calculation results get the $F_{calculated}$ value = 2.69. Based on these criteria it turns out that the $F_{calculated}$ value (2.69) < F_{table} (3.95), so that H_0 is rejected and H_1 is accepted. This means that the research hypothesis which states that there is an influence of transformational leadership (X_1) and management information systems (X_2) on job satisfaction of lecturers (X_4) can be accepted because it is tested for its truth. Seeing the results of the analysis above, it can be stated emphatically that transformational leadership and management information systems have a significant simultaneous effect on job satisfaction of lecturers. This implies that the transformational leadership of a leader is able to have a positive effect on job satisfaction of lecturers.

4. The direct influence of transformational leadership (X_1) on organizational climate (X_3)
Based on the results of data analysis manually obtained path coefficients X_1 against X_3 (ρ_{31}) = 0, 4269, with a real level $\alpha = 0, 05$ and $dk = 85$ obtained the value of $t_{table} = 1.988$. The calculation results get the value of $t_{count} = 10, 49$. From the results turned out the value of $t_{arithmetic}$ (10.49) > t_{table} (1.988), so that H_0 is received and H_1 rejected. This would mean that the hypothesis which states transformational leadership (X_1) directly influence the organizational climate

(X_3) is accepted as truth-tested. Based on the processed data through path analysis, can be explained the influence of transformational leadership (X_1) of the organizational climate (X_3) by 31, 97%, while the remaining 68.03% influenced by other variables. It turns out that good transformational leadership influences the organizational climate of an organization. In other words, based on the results of this research it is proven that organizational climate can be influenced by transformational leadership patterns that are applied in the organizations they lead. In Johns Jacob's view revealed that transformational leadership is the influence of leaders on subordinates by feeling the existence of trust, pride, loyalty, respect for superiors and having the motivation to do more (www.leadershipreview.org, 2007). While Bass, the leadership process that affects the transformational-two-way process, the leader transforms followers and followers transform leaders (Wirawan, 2013; Andriani et al, 2018). Transformational leadership as leadership that motivates their followers in the direction of established goals by clarifying roles and task demands.

5. The direct influence of management information systems (X_2) on organizational climate (X_3).

The results of data analysis manually obtained path coefficient X_2 to X_3 (ρ_{32}) = 0, 5129, with a real level $\alpha = 0, 05$ and $dk = 85$ obtained the value of $t_{table} = 1.988$. The calculation results get the value of $t_{count} = 11.58$. Berdasarkan these criteria obtained value of $t_{arithmetic}$ (11.58) > t_{table} (1.988), so that H_0 is rejected and H_1 accepted. This means that the hypothesis which states the management information system (X_2) directly influence the organizational climate (X_3) unacceptable because verified. The existence of a good management information system in an institution will create a good organizational climate and stimulate the enthusiasm of the people in the institution. Syaiful Sagala understands the organizational climate by stating that the organizational climate (Organizational climate) is a relative quality of input from the organization's environment which is an experience experienced by members of the organization influencing their behavior. Organizational climate is a series of nature of the work environment, which is assessed directly or indirectly by employees who are the main force in influencing employee behavior (Sagala, 2009). According to Fred Luthans the definition of organizational climate is "Organizational climate. This is an overall "feeling" that is conveyed by the physical layout, the way participants interact, and the way members of the organization conduct themselves with customers or other outsiders (Luthans, 2011).

6. The direct influence of transformational leadership (X_1) and management information systems (X_2) on Organizational Climate (X_3)

The results of the path analysis on the sixth hypothesis are found that transformational leadership (X_1) and management information systems (X_2) have a significant influence on organizational climate (X_3). It can be noted from the results of data analysis manually obtained path coefficient $X_1 X_2$ to X_3 ($R_{3.21}$) = 0.833, with a real level $\alpha = 0, 05$ and $dk = 88$ obtained F_{table} value = 1,988. The calculation results get the $F_{calculated}$ value = 208.25. Based on these criteria it turns out that the $F_{calculated}$ value (208.25) > F_{table} (3.955), so that H_0 is rejected and H_1 is accepted. This means that the research

hypothesis which states that transformational leadership (X_1) and management information systems (X_2) to the organizational climate (X_3) can be accepted because it is tested for its truth. The results of path analysis above proves that transformational leadership and information management systems jointly capable of providing a significant impact on the organizational climate in college. Thus transformational leadership and information management systems to give effect to the Organization climate in a college. Leaders of higher education feel challenged to be faster and more responsive in taking initiative, creative, and even innovative so that it makes it easier to influence college personnel to jointly achieve the goals of higher education in line with the plans that have been set together.

7. The direct influence of organizational climate (X_3) on job satisfaction of lecturers (X_4)

The results of path analysis on the seventh hypothesis is found that organizational climate (X_3) have a significant impact on job satisfaction lecturer (X_4). It can be noted from the results of manually analyzing data obtained path coefficients X_3 to X_4 (ρ_{43}) = 0.830, with a real level $\alpha = 0,05$ and $dk = 88$ obtained value of $t_{table} = 1.988$. The result of the calculation to get the value of $t_{arithmetic} = 13.82$. Based on these criteria turned out to be the value of $t_{arithmetic} (13.82) > t_{table} (1.988)$, so that H_0 is rejected and H_1 accepted. This means that the hypothesis which states organizational climate (X_3) effect on job satisfaction lecturer (X_4) may be accepted as verified.

8. The direct Effects of Transformational Leadership (X_1), Management Information Systems (X_2) And Organizational Climate (X_3) toward Lecturer Job Satisfaction (X_4).

The results of the path analysis on the eighth hypothesis are found that there is a direct influence of transformational leadership (X_1) management information systems (X_2) and organizational climate (X_3) on job satisfaction of lecturers (X_4). It can be noted from the results of manually analyzing data obtained path coefficients $X_1 X_2 X_3$ against X_4 ($\rho_{4,321}$) = 0,837, with a real level $\alpha = 0,05$ and $dk = 88$ obtained the value of $F_{table} = 3,95$. The calculation results get the $F_{calculated}$ value = 101,86. Based on these criteria it turns out that the F_{count} value (101.86) $> F_{table} (3.95)$, so that H_0 is rejected and H_1 is accepted. This means that the hypothesis which states there is a direct effect of transformational leadership (X_1) a management information system (X_2) and organizational climate (X_3) to job satisfaction lecturer (X_4) may be accepted as verified. the simultaneous influence between transformational leadership variables, management information systems and organizational climate together on lecturer job satisfaction variables seen from the value of $R^2_{4,321}$ (R_{Square}) of = 0.705. The influence of other variables outside the model against faculty job satisfaction variables (X_4) is $s_2 = 1 - R^2_{4,321} = 1 - 0705 = 0295$. Based on the two path coefficient calculations above, transformational leadership variables (X_1), management information systems (X_2) and organizational climate (X_3) together affect lecturer job satisfaction (X_4) by 70.50% while the remaining 29,50% is influenced by other variables.

9. The influence of transformational leadership (X_1) on job satisfaction of lecturers (X_4) through the organizational climate (X_3).

The results of path analysis on the ninth hypothesis is found

that there are significant transformational leadership (X_1) to job satisfaction lecturer (X_4) through organizational climate (X_3). It can be noted from the results of manually analyzing data obtained path coefficients $X_1 X_3$ against X_4 ($\rho_{4,31}$) = 0,4021, with a real level $\alpha = 0,05$ and $dk = 88$ obtained values of $t_{table} = 1.988$. The result of the calculation to get the value of $t_{count} = 4,0489$. Based on these criteria turned out to be the value of $t_{arithmetic} (4.0489) > t_{table} (1.988)$, so that H_0 is rejected and H_1 is accepted. This means that the research hypothesis which states that there is an influence of transformational leadership (X_1) on lecturer job satisfaction (X_4) through the organizational climate (X_3) can be accepted because it has been tested for its truth. Based on the results of the analysis it can be understood that the magnitude of the influence of transformational leadership (X_1) on lecturer job satisfaction (X_4) through the organizational climate is 63.57%, while the remaining 36.43% is influenced by other variables.

10. The effect of management information systems (X_2) on job satisfaction lecturer (X_4) through organizational climate (X_3)

Hypothesis analysis results states that there are significant effect on management information system (X_2) on job satisfaction lecturer (X_4) through organizational climate (X_3). Based on the results of data analysis manually obtained path coefficients X_2 against X_4 (ρ_{42}) = 0,3601, with a real level $\alpha = 0,05$ and $dk = 85$ obtained the value of $t_{table} = 1.988$. The result of the calculation to get the value of $t_{arithmetic} = 12.88$. Based on these criteria it turns out that the value of $t_{arithmetic} (12.88) > t_{table} (1.9888)$, so that H_0 is rejected and H_1 is accepted. This means that the hypothesis which states management information system (X_2) directly influence job satisfaction lecturer (X_4) through organizational climate (X_3) may be accepted as verified. the effect of management information systems (X_2) on job satisfaction lecturer (X_4) through organizational climate (X_3) is amounted to 61.27%, while the remaining 38,73% are influenced by other variables.

CONCLUSION

Based on the discussion above, the conclusion of this research is stated as follow:

1. Transformational leadership has a positive and significant direct effect on job satisfaction of lecturers.
2. Management information system has a positive and significant direct effect on job satisfaction of lecturers.
3. Transformational leadership and management information systems simultaneously have a significant effect on job satisfaction of lecturers.
4. Transformational leadership has a positive and significant direct effect on the organizational climate.
5. Management information systems have a positive and significant direct effect on organizational climate.
6. Transformational leadership and management information systems simultaneously influence the organizational climate.
7. Organizational climate has a positive and significant direct effect on job satisfaction of lecturers.
8. Transformational leadership, management information systems, and organizational climate simultaneously influence lecturer job satisfaction.
9. Transformational leadership has an indirect effect on job satisfaction of lecturers through the organizational climate.

10. Management information system has an indirect effect on job satisfaction of lecturers through the organizational climate.

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