

Transformational Leadership and Creative Self-Efficacy on Educators' Creativity: Can Innovation Climate be the Mediating?

Nailah Adiebah¹, Handrio Adhi Pradana²

¹*Correspondence Author: handrio.pradana@uui.ac.id

¹ Management Department, Faculty of Business and Economics, Universitas Islam Indonesia, Yogyakarta, Indonesia

² Management Department, Faculty of Business and Economics, Universitas Islam Indonesia, Yogyakarta, Indonesia

INFO

Article History

Received:

2022-04-02

Revised:

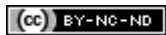
2022-05-13

Accepted:

2022-06-23

ABSTRACT

The aim of this research is to examine the effect of Transformational Leadership, Creative-Self Efficacy, Innovation Climate, and Employee Creativity. Data from this study was obtained by distributing questionnaires to 301 educators who work in Formal Educational Institutions from Kindergarten to Higher Education levels spread across several cities in Indonesia. This study uses quantitative methods, namely multiple regression analysis and Baron and Kenny's analysis technique processed by SPSS 21 software. The results showed that Transformational Leadership and Creative Self-Efficacy have a positive and significant effect on Employee Creativity and Innovation Climate. Innovation Climate was proved to partially mediate the relationship between Transformational Leadership, Creative Self-Efficacy, and Employee Creativity. Contributions to the development of the concepts of leadership, self-efficacy, and creativity as well as practical implications are described in the discussion section of this paper.



This work is licensed under [Attribution-NonCommercial-NoDerivatives 4.0 International](https://creativecommons.org/licenses/by-nc-nd/4.0/)

Keywords: Transformational Leadership; Creative-Self Efficacy; Innovation Climate; Educators' Creativity.

INTRODUCTION

The creativity possessed by educators is one of the competitive advantages for themselves and for the organization. Creative employees are a valuable resource for organizations to survive in today's competitive environment (Suifan et al., 2018). With creativity, educators are able to help organizations to compete with other organizations in producing quality students. Educators are required to think quickly and critically in analyzing and completing a job. Creativity allows employees to improve organizational performance, where creativity can be used to find new technologies, processes, techniques, or product ideas (Ibrahim et al., 2016). Creativity possessed by educators can affect organizational performance. The role of educators is very important to build the image of the organization. Creative educators are educators who are able to create innovative ideas, so that organizations can provide quality services that are different from other organizations.

The creativity possessed by educators is related to the role of a leader in the organization. According to Erkutlu (2008), transformational leadership refers to leaders who can move their subordinates beyond personal interests through ideal influence, inspiration, intellectual stimulation, or individual consideration, so as to increase their maturity, ideals, and concern for their achievements and self-actualization as well as well-being of the organization and society. Research by Jaiswal and Dhar (2015) and Suifan et al. (2018) shows that transformational leadership has a positive effect on employee creativity. Another study by Mittal and Dhar (2015) also shows that transformational leadership affects individual creativity.

In addition to the role of leader, creativity possessed by educators is also determined by creative self-efficacy. According to Yang and Cheng (2009), creative self-efficacy describes a person's belief in his/her ability to produce creativity. Creative self-efficacy is based on one's knowledge and skills that enable creativity (Gong et al., 2009). The results of the study by Gong et al. (2009) show that creative self-efficacy of employees has a positive effect on employee creativity. Research by Richter et al. (2012) shows that creative self-efficacy has a significant relationship with individual creativity. Another study by Rauniyar et al. (2017) also shows that creative self-efficacy has a positive relationship and has been shown to enhance creativity.

Another problem that needs to be investigated regarding the creativity possessed by educators is the climate of innovation. Innovation climate is a shared understanding of employees regarding practices, procedures and behaviors that offer the formation, formulation, and realization of new ideas in the organization (Van Der Vegt et al., 2005). The climate of innovation created within the organization can not be separated from the role of a leader. Research by Zuraik and Kelly (2019) and Zhang et al. (2018) shows that transformational leadership positively influences the innovation climate. The results of another study from Moolenaar et al. (2010) showed that transformational leadership was positively related to an innovative climate in school organizations. Not only that, the innovation climate in the organization can also affect self-esteem of educators in their creativity. Slåtten's research (2014) shows that creative self-efficacy has a positive relationship to innovative activities. The results of the study of Alameri et al. (2019) also show that creative self-efficacy has a positive and significant relationship to the innovation climate. Research by Ahlin et al. (2014) showed a significant moderating effect of entrepreneurial self-efficacy has a positive relationship to the company's innovation process.

Innovation climate can also increase the creativity of educators. The innovation climate that exists in the organization can help educators to continue to innovate and come up with new ideas related to the learning process. Research by Sanda and Arthur (2017) shows that the climate for innovation has a significant relationship to creativity. The results of Ghosh's (2015) research also show that the climate of creativity has a positive and significant effect on creativity. However, research by Wang and Ma (2013) shows that the psychological climate for innovation has an insignificant relationship with sales creativity. Several research results that reveal different findings regarding the effect of the psychological climate of innovation on creativity performance encourage the authors to find gaps in understanding the relationship between transformational leadership, creative self-efficacy and creativity. This study proposes a mediating role for the innovation climate which is expected to explain more clearly the effect of transformational leadership and creative self-efficacy on creativity (Ghosh, 2015; Suifan et al., 2018; Zuraik & Kelly, 2019).

The motive of this research is to examine the innovation climate that mediates between transformational leadership, creative self-efficacy and employee creativity. It is used to address some inconsistent research results on the effect of leadership and self-efficacy on creativity. Authors believe that this model is able to explain how the factors of supervision and encouragement of individual efficacy lead to the creative performance expected by the organization.

The object of research is in the field of education, that is Formal Educational Institutions. In facing the era of globalization, formal educational institutions as organizations that shape the characteristics of students through the learning process must be determined by several factors such as role of leaders, self-efficacy, and organizational climate. As a means to shape the characteristics and develop the potential possessed by students, formal educational institutions must provide good services by making interesting learning methods in accordance with the established curriculum and utilizing technology in the learning process so that students can understand well toward materials delivered. For this reason, the creativity of educators in these organizations is needed in order to provide an interesting and high quality learning process for students. Based on the description of the background, the purpose of this study is to examine the effect of transformational leadership, creative self-efficacy, and innovation climate on the creativity of educators in formal

educational institutions either directly or indirectly.

LITERATURE REVIEW

Transformational Leadership

According to Robbins and Judge (2013), transformational leaders inspire employees to reduce self-interest for the benefit of the organization and this can have a good effect on employees. Meanwhile, McShane and Glinow (2018) stated that transformational leadership is a leadership perspective that explains how leaders can change a team or organization by creating, communicating, and modeling a vision for the organization or work unit, and inspiring employees to achieve those visions. According to Robbins and Judge (2018), transformational leaders are leaders who inspire followers to transcend their personal interests for the benefit of the organization and are able to have a deep and extraordinary effect on their followers, which then the followers will respond it with high commitment toward organizations.

According to the concept proposed by McShane and Glinow (2018), there are several components in transformational leadership. These components include: (1) idealized influence (II), leaders behave in a way that allows themselves to be role models for their employees; (2) inspirational motivation (IM), leaders have behavior that can motivate and inspire those around them by providing understanding and challenges to his/her employees; (3) intellectual stimulation (IS), leaders spur the efforts of his/her employees to be innovative and creative by questioning assumptions, reassembling problems, and approaching these problems using new ways; (4) individualized consideration (IC), leaders pays special attention to the needs of each individual employee for achievement and growth by acting as a coach or mentor.

Creative Self-Efficacy

Yang and Cheng (2009) emphasize that creative self-efficacy describes a person's belief in his/her ability to produce creativity. Gong et al. (2009) state that creative self-efficacy is based on a person's knowledge and skills that enable his/her creativity. Tierney and Farmer (2002) revealed that there are four sources of creative self-efficacy, including: (1) role of knowledge, the source of knowledge comes from work experience and formal education; (2) role of job self-efficacy, the view of employees' beliefs about jobs and the ability to do the jobs; (3) the role of supervisory behavior, leader gives self-confident to employees in their abilities and creativity; (4) the role of job complexity, the assessment of employees regarding tasks or jobs that involve their own abilities.

Innovation Climate

According to Van Der Vegt et al. (2005), innovation climate is a shared understanding of employees about practices, procedures, and behaviors that proposed the formation, formulation, and realization of new ideas in the organization. Meanwhile, Robbins and Judge (2018) stress that employees who work in an environment that respects and recognizes their creative work are very valuable. According to McShane and Glinow (2018), there are three organizational conditions that encourage creativity, including: (1) learning orientation and motivation, a workplace that supports creativity can be seen from the learning orientation within an organization; (2) adequate communication and resources, creative organizations will provide a level of security and comfort for employees to implement their creativity, as well as provide explanations about it; (3) support from leaders and co-workers, creativity will increase with the support given by leaders and co-workers, as well as it seems like force of job demand that emerge from job design that motivate employee to work more effective.

Creativity

McShane and Glinow (2018) argue that creativity refers to the development of original ideas that have a contribution in the social sphere. Robbins and Judge (2013) classify that the characteristics of creative people are independent, have a sense of self-confident, willing to take risks, have an internal locus of control, a sense of tolerance for ambiguity, low need for structure, and perseverance. The understanding put forward by McShane and Glinow (2018) states that

creative people have four main characteristics. These characteristics are (1) intelligence, creative people have above average intelligence to combine and filter information, analyze ideas, and apply their ideas; (2) perseverance, based on one's need for achievement, it has strong motivation to finish the task, and represent high level of self-esteem and optimism; (3) expertise, this is needed by creative people to find and acquire new knowledge; (4) imagination, openness to experience to measure one's curiosity, low need for affiliation so that they are not ashamed when they make mistakes, and they have strong values of self-stimulation to shape their minds to be more opened to a lot of changes.

Hypothesis Development

Transformational Leadership affects Educators' Creativity

According to Martens (2011), creativity means creating a work that is unusual, unique, varied, original, has a new point of view, opposes existing models, and brings benefit into a field that did not exist before. The creativity possessed by educators will appear if they get support from their leaders. A leader must encourage his/her employees to do the job in a different way. The support provided by the leader can make employees feel more confident and challenged to continue to think in creative ways. The results of research by Jaiswal and Dhar (2015), Mittal and Dhar (2015), and Suifan et al. (2018) show that transformational leadership has a positive relationship to employee creativity.

H1: There is a positive and significant effect of transformational leadership on employee creativity

Creative Self-Efficacy affects Educators' Creativity

According to Tierney and Farmer (2002), creative self-efficacy is the belief that a person has the ability to produce something creative. Educators who have high confidence and self-confident are able to create creative and innovative ideas. The creativity possessed by educators will continue to grow if they feel confident in their abilities and knowledge. The results of research by Gong et al. (2009), Rauniyar et al. (2017), and Richter et al. (2012) show that creative self-efficacy has a positive relationship to individual creativity.

H2: There is a positive and significant effect of creative self-efficacy on employee creativity

Innovation Climate affects Educators' Creativity

According to Zuraik and Kelly (2019), climate is one of the organizational dimensions that can play a role in the development and support of innovation. A good innovation climate is needed within the organization to be able to increase employee creativity. The creativity of educators will emerge if the climate in the organization can support them to continue to innovate. This statement is supported by the results of research by Sanda and Arthur (2017) and Ghosh (2015) showing that the innovation climate has a significant positive relationship with employee creativity. Meanwhile, research by Wang and Ma (2013) states that the psychological climate for innovation has an insignificant relationship with sales creativity.

H3 : There is a positive and significant influence of the innovation climate on employee creativity

Transformational Leadership affects Innovation Climate

Leaders can provide support to their employees by creating a good innovation climate within the organization. Leaders can create a climate of innovation by providing security and comfort for subordinates to continue to be creative. A leader will try to create a good climate in the organization so that subordinates can think innovatively. This statement is supported by the results of research by Zuraik and Kelly (2019) showing that CEO with transformational style has a positive effect on the innovation climate. Then, research by Zhang et al. (2018) states that transformational leadership has a positive effect on the innovation climate, and the results of another study by Moolenaar et al. (2010) show that transformational leadership is positively related to the innovation climate of school organizations.

H4 : There is a positive and significant influence of transformational leadership on the innovation

climate

Creative Self-Efficacy affects Innovation Climate

The climate of innovation within the organization can affect educators' self-confidence in their creativity. Educators will be motivated and feel valued if the atmosphere in the organization supports them to continue to think creatively and innovatively. This statement is supported by the results of Slåtten's (2014) research showing that creative self-efficacy has a positive relationship to innovative activities. Another study by Ahlin et al. (2014) stated that the moderating effect of entrepreneurial self-efficacy has a positive relationship to the company's innovation process, and the results of the study of Alameri et al. (2019) show that creative self-efficacy has a positive and significant relationship to innovation organization.

H5 : There is a positive and significant effect of creative self-efficacy on the innovation climate

Innovation Climate Mediates the Relationship between Transformational Leadership and Educators' Creativity

A leader must be able to motivate his/her subordinates to continue to think creatively. In addition, leaders can provide support to employees. This support can be provided by creating a good work environment, in the form of security and comfort that can be felt by employees. This can make employees feel comfortable and motivated to continue to create new innovative ideas. This statement is in accordance with the results of research by Jaiswal and Dhar (2015) which states that the innovation climate mediates the relationship between transformational leadership and employee creativity. The results of research conducted by Khalili (2016) state that the innovation climate moderates the relationship between transformational leadership and employee creativity.

H6: Innovation climate mediates the relationship between transformational leadership and educator creativity

Innovation Climate Mediates the Relationship between Creative Self-Efficacy and Educators' Creativity

A person's self-confidence in his/her creativity can continue to grow along with an environment that supports the formation of innovations. Organizations that have a good climate for innovation, employees will feel challenged to continue to bring out their creative abilities for the survival of the organization. Employees also feel valued and motivated to create other new creations if the organization's innovation climate supports them to create and implement their creative ideas. The above statement is supported by the research of Chang et al. (2016) which states that perceived school support for creativity and creative self-efficacy significantly predicts individual creativity. The results of another study from He et al. (2019) stated that organizational innovation climate has a significant positive moderating effect on employee innovation behavior.

H7: The climate of innovation mediates the relationship between creative self-efficacy and educator creativity

RESEARCH METHODS

This research was conducted at Formal Educational Institutions from Kindergarten to Higher Education level in several cities and regencies in Indonesia, such as Cirebon, Banjar, Palu, Kuningan, Indramayu, Jakarta, Majalengka, Surakarta, Semarang, Tangerang, Magetan, Sumedang, West Bandung, Cianjur, and Bogor. This study focuses on educators who work in several different levels of formal education because it aims to obtain broad understanding and generalizations of the data.

The population in this research is educators who work in all formal education institutions in those several cities and regencies in Indonesia. However, not all of the population were used as research respondents. Only educators who meet the criteria can be sampled in this study. The criteria for respondents in this study are educators who work in formal education institutions that

have a national standard curriculum. Therefore, there are 301 respondents who are valid and in accordance with these criteria. This research uses quantitative methods. Data was collected by distributing questionnaires. The questionnaire was distributed online in the form of a google form by distributing form links to each individual respondent via text messages that were sent directly to relatives who work as educators, which were then distributed to colleagues in the same profession. Then the answers given by the respondents were assessed using a Likert Scale, which is a scale designed to test how strongly the respondents agree with the statements given using a scale of 1 (strongly disagree) – 5 (strongly agree) points. The research model formed can be described **Figure 1**.

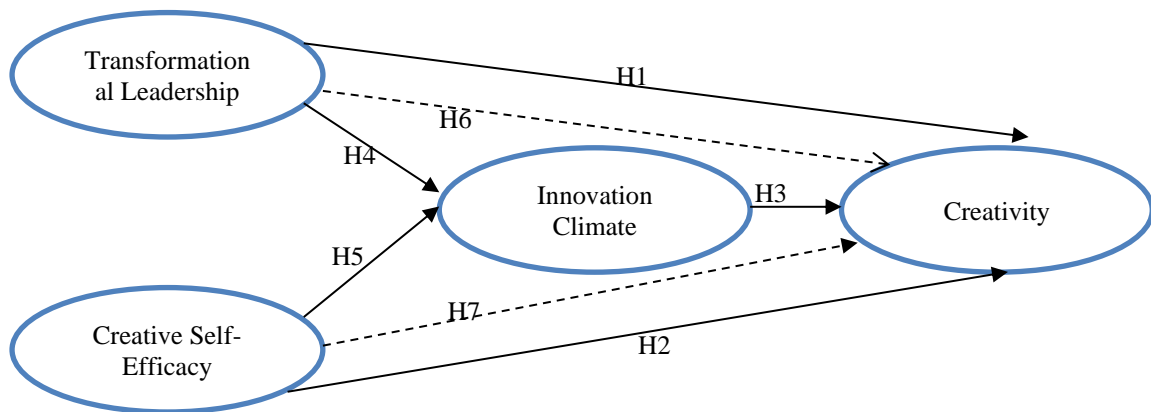


Figure 1. Research Model

To test hypothesis 6 and hypothesis 7 regarding the innovation climate as a mediator, this study uses the Baron and Kenny analysis with the mediating effect testing procedure as the **Figure 2**.

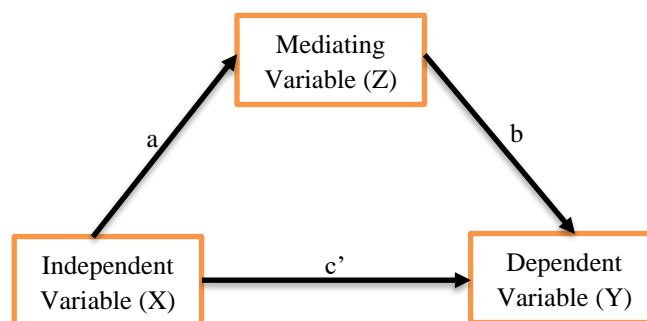


Figure 2. Model of Baron and Kenny Analysis for Mediating Effect

Variable Z can be valued to be a mediating variable if it meets the following criteria: (1) X significantly affects Y, it means that path c has significant results with p value < 0.05; (2) X significantly affects Z, it means that path a has a significant result with a p value < 0.05; (3) Z significantly affects Y, it means path b has a significant result with p value < 0.05. Then, if the coefficient c' is not significant (p > 0.05), then perfect mediation occurs. However, if the coefficient c' is significant (p < 0.05), so partial mediation occurs.

The operational definition of each variable in this study has a different number of items, which transformational leadership has sixteen statement items, creative self-efficacy has thirteen statement items, innovation climate has sixteen statement items, and employee creativity has four statement items. The **Table 1**. shows some examples of the statement items for each variable:

Table 1. An Examples of Indicators in each Variables

No.	Variables	Measurements/Item Indicators
1	Transformational Leadership (Jaiswal & Dhar, 2015)	<ul style="list-style-type: none"> • My supervisor has strong goals • My supervisor speaks optimistically about the future • My supervisor looks for a different perspective when solving problems • My supervisor suggests new ways of doing work • My supervisor helps team members to develop their potential, etc
2	Creative Self-Efficacy (Yang & Cheng, 2009)	<ul style="list-style-type: none"> • I can be a good source of creative ideas • I am not afraid to take work-related risks • I have lots of new and innovative ideas • I will use new ways to achieve goals • I will apply new and practical ideas to improve performance, etc
3	Innovation Climate (Jaiswal & Dhar, 2015)	<ul style="list-style-type: none"> • Creativity is encouraged in this organization • The organization is open and responsive to change • The organization is described as a flexible company and constantly adapts to changes • Employees' ability to work creatively is appreciated by superiors • Employees here usually get credit for different ideas, etc
4	Creativity (Jaiswal & Dhar, 2015)	<ul style="list-style-type: none"> • I look for new ideas and ways to solve problems • I show originality in my work • I generate new ideas related to work that can be carried out • I identify new opportunities and ways of getting work done, etc

RESULTS AND DISCUSSION

Descriptive Analysis

Respondents who were collected and processed amounted to 301 respondents who are educators in Formal Educational Institutions.

Table 2. Characteristics of Respondents

Category	Description	Frequency	Percentage (%)
Formal educational level	Kindergarten	17	5.65
	Primary school	28	9.30
	Junior high school	216	71.76
	Senior high school	36	11.96
	College/university	4	1.33
Gender	Male	110	36.54
	Female	191	63.46
Age (years)	≤ 30	44	14.62
	31 - 40	56	18.60
	41 - 50	92	30.57
Marriage	> 50	109	36.21
	Married	271	90.03
Education	Single	30	9.97
	Diploma	3	1
	Bachelor	263	87.38
	Master	33	10.96
Employment status	Others	2	0.66
	Permanent	222	73.75
	Contractual	79	26.25
Tenure (years)	< 5	43	14.29
	5 - 10	34	11.30
	11 - 15	70	23.26
	> 15	154	51.16

Source: primary data processed, 2021

The profile of respondents in general is dominated by the following characteristics, education level at junior high school (71.76%); female gender (63.46%); age more than 50 years (36.21%); married (90.03%); Bachelor's last education (87.38%); status as permanent employee or civil servant/ASN (73.75%); and tenure/working period of more than 15 years (51.16%).

Based on the results **Table 2.** of the analysis of 301 respondents obtained, descriptive analysis of the transformational leadership variable (X1) has an average of 4.07 and the value is included in the high category. The creative self-efficacy variable (X2) has an average value of 3.70 and is included in the high category. The average value of the innovation climate variable (Z) is 3.77 and is included in the high category. Likewise, the average value of the employee creativity variable (Y) which is included in the high category with a value of 3.91.

Confirmatory Factor Analysis

In this study, the items and indicators of the research variables were 49 items. After testing the validity with the Confirmatory Factor Analysis (CFA) method, several indicator items were obtained that had to be removed because they did not meet the extraction pattern aspect and the loading factor value was low below 0.5.

Table 3. Analysis Factor and Reliability Result^a

Construct & Indicator ^b	Reliability ^c	Loading factor			
		KT	EK	II	KK
Transformational Leadership (KT)	(.929)				
KT1		.566			
KT2		.682			
KT3		.689			
KT4		.758			
KT5		.800			
KT6		.746			
KT7		.742			
KT8		.727			
KT12		.527			
Creative Self-Efficacy (EK)	(.941)				
EK1			.631		
EK3			.614		
EK4			.566		
EK5			.721		
EK6			.746		
EK7			.768		
EK8			.618		
EK9			.697		
EK10			.716		
EK11			.681		
EK12			.632		
EK13			.690		
Innovation Climate (II)	(.981)				
II1				.640	
II2				.704	
II3				.635	
II6				.674	
II10				.697	
II11				.614	
II12				.737	
II14				.501	
II15				.758	
Employee Creativity (KK)	(.796)				
KK1					.579
KK2					.616
KK3					.715
KK4					.503

Total explained variance of the four constructs 66.168%.

^aRotated component matrix.

Extraction method: Principal component analysis.

Rotation method: Varimax with kaiser normalization.

^bIteration with 6 times.

^cCronbach's alpha value is in the reliability column.

The 15 items deleted include KT9, KT10, KT11, KT13, KT14, KT15, KT16 for transformational leadership constructs, EK2 for creative self-efficacy, II4, II5, II7, II8, II9, II13, and II16 for the innovation climate so that remaining 34 items for further analysis. There are several instrument sizes so that an instrument can be considered valid. The first is the Kaiser-Mayer-Olkin Measure of Sampling Adequacy (KMO MSA) and Bartlett's test scores above 0.50 and this study has a KMO value of 0.959. Furthermore, the value of Bartlett's test with chi-squares of 7177,055 significant at 0.000 has fulfilled the requirements.

Based on **Table 3**, it can be concluded that the validity instrument has met the requirements and is adequate to continue structural testing. This can be seen from the indicator items that have been extracted into four factors perfectly with a loading factor value above 0.50. In addition, the total variance explained has also been above the minimum limit of 50%. This shows that the research instrument used can indeed be extracted and form unidimensional properties of the latent variables in the research model.

The reliability test in this study used the Cronbach's Alpha method with a limit value of 0.60 to be stated as a reliable instrument. In Table 3, the Cronbach's Alpha value of all constructs is already above 0.60 so that the reliability instrument is considered to have met the criteria and requirements as a reliable and consistent instrument to be used.

Normality and Multicollinearity Test

Furthermore, the data feasibility assumption test is carried out by testing the normality of the data and multicollinearity. The normality of the data was carried out using the one-sample Kolmogorov-Smirnov method for each construct. The research data is categorized as normally distributed if the Asymp.Sig (2-tailed) value is more than 0.05. In this study, the significance value is 0.613 so that the research data has met the normal distribution requirements.

Multicollinearity test is used to identify whether there is a high correlation between several independent variables in a study. If the correlation is high, it indicates that in fact some of the independent variables being modeled have the same characteristics. A good regression model is one that has a low correlation between the independent variables and the dependent variable. Based on **Table 4**, each construct shows a tolerance value > 0.10 and a VIF value < 10. Therefore, it can be indicated that in this research model there is no symptom of multinolnarity. This means that each independent variable in the model is different from one another.

Table 4. Multicollinearity Result^a

Model	Collinearity Statistic	
	Tolerance	VIF
Transformational Leadership	.458	2.182
Creative Self-Efficacy	.514	1.947
Innovation Climate	.423	2.366

^aDependent variable: Creativity

Hypothesis Testing and Mediation Effects

After the test results of the measurement model instrumentation meet the required criteria and requirements, the next structural model will be tested with multiple regression analysis and the stages of mediating effects from Baron & Kenny (1986). The results of hypothesis testing will be presented in the stages of the Baron & Kenny mediating effect because it includes multiple linear regression analysis as follows: (1) Positive and significant influence of transformational leadership and creative self-efficacy on employee creativity

Table 5. First Step Linear Regression Result

Model	Coefficient B	Standart error	t-value	Sig.
(Constant)	3.048	.645	4.725	.000***
Transformational Leadership	.124	.021	5.884	.000***
Creative Self-Efficacy	.182	.016	11.655	.000***

Dependent variable : employee creativity

* p < 0.05; ** p < 0.01; *** p < 0.000

Based on **Table 5**, transformational leadership and creative self-efficacy have a positive and significant influence on employee creativity. This is indicated by the value of the coefficient B = 0.124; 0.182 with t-value = 5.884; 11.655 and both were significant at p < 0.000. Therefore, **hypotheses 1 and 2 are proven to be supported**. The coefficient of determination of this first model is 0.585. This means that there is a contribution of 58.5% of the independent variables which can explain the dependent variable variance. The remaining 41.5% is explained by other factors outside the estimated model. In addition, the first stage of the mediation effect has also been completed so that it can be continued in the second step. (2) Positive and significant influence of transformational leadership and creative self-efficacy on the innovation climate

Table 6. Second Step Linear Regression Result

Model	Coefficient B	Standart error	t-value	Sig.
(Constant)	7.109	1.576	4.510	.000***
Transformational Leadership	.731	.042	17.207	.000***
Creative Self-Efficacy	.509	.033	15.229	.000***

Dependent variable : Innovation climate

* p < 0.05; ** p < 0.01; *** p < 0.000

Based on **Table 6**, transformational leadership and creative self-efficacy have a positive and significant influence on the innovation climate. This is indicated by the value of the coefficient B = 0.731; 0.509 with t value = 17.207; 15.229 and both were significant at p < 0.000. Therefore, **hypotheses 4 and 5 are proven to be supported**. The coefficient of determination of this second model is 0.498. This means that there is a contribution of 49.8% of the independent variables which can explain the dependent variable variance. The remaining 50.2% is explained by other factors outside the estimated model. In addition, the second stage of the mediation effect has also been fulfilled so that it can be continued in the third stage. (3) Positive and significant influence of the innovation climate on employee creativity

Table 7. Third Step Linear Regression Result

Model	Coefficient B	Standart error	t-value	Sig.
(Constant)	1.846	.173	10.696	.000***
Innovation Climate	.549	.045	12.160	.000***

Dependent variabel : employee creativity

* p < 0.05; ** p < 0.01; *** p < 0.000

Based on **Table 7**, the innovation climate has a positive and significant influence on employee creativity. This is indicated by the value of the coefficient B = 0.549 with a value of t = 12.160 and significant at p < 0.000. Therefore, **hypothesis 3 is proven to be supported**. The coefficient of determination of this third model is 0.331. This means that there is a 33.1% contribution of the independent variable which can explain the dependent variable variance. The remaining 66.9% is explained by other factors outside the estimated model. In addition, the third procedure stage of the mediating effect has also been fulfilled so that it can proceed to the stage of determining the mediating effect of the innovation climate for the relationship between

transformational leadership, creative self-efficacy, and employee creativity.

(4a) Significant positive effect of the mediating effect of innovation climate on the relationship between transformational leadership and employee creativity

Table 8. Linear Regression Result of Mediating Effect I

Model	Coefficient B	Standart error	t-value	Sig.
(Constant)	4.737	.737	6.426	.000***
Transformational Leadership	.195	.027	7.190	.000***
Innovation Climate	.111	.026	4.250	.000***

Dependent variable : employee creativity

* p < 0.05; ** p < 0.01; *** p < 0.000

Based on **Table 8.** transformational leadership and innovation climate have a positive and significant influence on employee creativity. This is indicated by the value of the coefficient B = 0.195; 0.111 with t-value = 7.190; 4.250 and both were significant at p < 0.000. Based on the analysis of Baron & Kenny (1986) regarding the mediating effect where the coefficient value c' = 0.111; p < 0.000 then there is a partial mediation effect because the level of acceptance of the innovation climate variable is regressed along with transformational leadership remains positive and significant. Therefore, **hypothesis 6 is proven to be accepted.** (4b) Significant positive effect of the mediating effect of the innovation climate on the relationship between creative self-efficacy and employee creativity

Table 9. Linear Regression Result of Mediating Effect II

Model	Coefficient B	Standart error	t-value	Sig.
(Constant)	4.256	.623	6.833	.000***
Creative Self-Efficacy	.204	.017	12.091	.000***
Innovation Climate	.069	.022	3.130	.002**

Dependent variable : employee creativity

* p < 0.05; ** p < 0.01; *** p < 0.000

Based on **Table 9.** creative self-efficacy and innovation climate have a positive and significant influence on employee creativity. This is indicated by the value of the coefficient B = 0.204; 0.069 with t-value = 12.091; 3.130 and significant at p < 0.000; p < 0.01. Based on the analysis of Baron & Kenny (1986) regarding the mediating effect where the coefficient value c' = 0.069; p < 0.01 then there is a partial mediation effect because the level of acceptance of the innovation climate variable is regressed along with creative self-efficacy remains positive and significant. Therefore, **hypothesis 7 is proven to be accepted.**

Transformational Leadership affects Educators' Creativity

Based on the results of the analysis that has been done, transformational leadership has a positive and significant influence on employee creativity. This is evidenced by a significance value of 0.000. Thus, it can be concluded that the first hypothesis which reads "There is a positive and significant influence between transformational leadership and educator creativity" is proven. The results of this study are in line with research that has been conducted by Jaiswal and Dhar (2015), Mittal and Dhar (2015), and Suifan et al. (2018) where their research results show that transformational leadership has a positive and significant relationship to employee creativity.

Therefore, it can be concluded that transformational leadership is proven to increase the creativity of educators. This can be interpreted that the existence of strong transformational leadership will increase the creativity of the educators. Thus, if in an organization, in this case a Formal Educational Institution, has a principal or the equivalent wants to increase the creativity of educators, then they can apply a transformational leadership style.

Creative Self-Efficacy affects Educators' Creativity

Based on the results of the analysis that has been done, creative self-efficacy has a positive and significant influence on the creativity of educators. This is evidenced by a significance value of 0.000. Thus, it can be concluded that the second hypothesis which reads "There is a positive and significant influence between creative self-efficacy and educator creativity" is proven. The results of this study are in line with the research of Gong et al. (2009); Richter et al. (2012); and Rauniyar et al. (2017) where the results of their research show that creative self-efficacy has a positive and significant relationship to employee creativity.

Therefore, it can be concluded that creative self-efficacy is proven to increase the creativity of educators. That is, if an organization has employees who are confident and believe in their own ability to think creatively, then the employee is able to increase their own creativity by creating new ideas for the organization.

Innovation Climate affects Educators' Creativity

Based on the results of the analysis that has been done, the climate of innovation has a positive and significant influence on the creativity of educators. This is evidenced by a significance value of 0.000. Thus, it can be concluded that the third hypothesis which reads "There is a positive and significant influence between the innovation climate and the creativity of educators" is proven. This research is in line with the results of Sanda and Arthur (2017); Jaiswal and Dhar (2015); and Ghosh (2015) state that the innovation climate has a positive and significant influence on employee creativity. However, this study is not the same as the research conducted by Wang and Ma (2013) because his research shows the results that the innovation climate has an insignificant effect on employee creativity.

Based on the description above, it can be concluded that the climate of innovation can increase the creativity of educators. This means that a strong climate of innovation will increase the creativity of educators. Thus, if an organization wants to have creative employees, the organization must be able to provide a good and supportive work environment for employees to encourage their creativity so that they can create new innovations.

Transformational Leadership affects Innovation Climate

Based on the results of the analysis that has been done, transformational leadership has a positive and significant influence on the innovation climate. This is evidenced by a significance value of 0.000. Thus, it can be concluded that the fourth hypothesis which reads "There is a positive and significant influence between transformational leadership and innovation climate" is proven. The results of this study are in line with the research of Zuraik and Kelly (2019); Zhang et al. (2018); and Moolenaar et al. (2010) whose results show that there is a positive and significant relationship between transformational leadership and innovation climate.

Thus, it can be concluded that transformational leadership is proven to improve the innovation climate. This means that a strong transformational leadership variable will increase the innovation climate. So, if an organization wants to create a good work environment and support its employees, then they can apply a transformational leadership style.

Creative Self-Efficacy affects Innovation Climate

Based on the results of the analysis that has been done, creative self-efficacy has a positive and significant influence on the innovation climate. This is evidenced by a significance value of 0.000. Thus, it can be concluded that the fifth hypothesis which reads "There is a positive and significant influence between creative self-efficacy and innovation climate" is proven. The results of this study are in line with the results of Slåtten's research (2014); Ahlin et al. (2014); and Alameri et al. (2019), which showed that creative self-efficacy has a positive and significant relationship to the innovation climate (Pradana & Uliani, 2021).

Therefore, it can be concluded that creative self-efficacy is proven to improve the innovation climate. So, if the organization has employees who have high confidence in their creativity, the

environment within the organization will be competitive and innovative. This is because there is competition between employees to be able to apply the creativity they have in the organization.

Mediating effect of Innovation Climate on the relationship between Transformational Leadership and Educators' Creativity

Based on the results of the analysis that has been obtained, it is known that paths a and b are accepted because the p value <0.05 , which means it is significant. The coefficient c' also shows a p value <0.05 , which means that there is a direct and indirect influence between transformational leadership and educator creativity through an innovation climate. The purpose of the indirect influence between transformational leadership and educator creativity through innovation climate is that the innovation climate mediates the relationship between transformational leadership and educator creativity. That is, educator creativity can emerge if a leader is able to implement his ability to create an innovative organizational climate and environment. Thus, it can be concluded that the innovation climate partially mediates the relationship between transformational leadership and educator creativity, so that the sixth hypothesis is proven.

The results of this study are in line with the results of research by Jaiswal and Dhar (2015), where the results show that the innovation climate mediates the relationship between transformational leadership and employee creativity. Another study by Khalili (2016) stated that the innovation climate moderates the relationship between transformational leadership and employee creativity.

Mediating effect of Innovation Climate on the relationship between Creative Self-Efficacy and Educators' Creativity

Based on the results of the analysis that has been obtained, it is known that paths a and b are accepted because the p value <0.05 , which means it is significant. The coefficient c' also shows a p value <0.05 , which means that there is a direct and indirect influence between transformational leadership and educator creativity through an innovation climate. The purpose of the indirect influence between creative self-efficacy and educator creativity through an innovation climate is that the innovation climate mediates the relationship between creative self-efficacy and educator creativity. This means that educators who have high confidence in their creativity can optimize their ability to get new ideas, and these conditions can create an innovative organizational climate, so that it can motivate educators to continue to improve and develop their creativity. Thus, it can be concluded that the innovation climate partially mediates the relationship between creative self-efficacy and educator creativity, so that the seventh hypothesis is proven.

This study is in line with the research of Chang et al. (2016), which showed that perceived school support for creativity and creative self-efficacy significantly predicts individual creativity. Another study conducted by He et al. (2019) stated that organizational innovation climate has a significant positive moderating effect on employee innovation behavior.

CONCLUSION

This study has the following conclusions: (1) transformational leadership has a positive and significant influence on the creativity of educators; (2) creative self-efficacy has a positive and significant influence on educator creativity; (3) the climate of innovation has a positive and significant influence on the creativity of educators; (4) transformational leadership has a positive and significant impact on the innovation climate; (5) creative self-efficacy has a positive and significant influence on the innovation climate; (6) the innovation climate partially mediates the relationship between transformational leadership and educator creativity; and (7) the innovation climate partially mediates the relationship between creative self-efficacy and educator creativity.

Based on the results of the analysis and research that has been done, the following are some suggestions to bring out the creativity of educators, including: (1) a school principal needs to take good approaches to educators in his organization by communicating and encouraging them to always work in accordance with the vision, mission, and values of the organization. In addition,

leaders must also be able to provide equal opportunities and opportunities for every educator to be able to work and participate optimally. A leader must also be able to provide a sense of security and comfort by supporting and defending his educators if they encounter a problem; (2) it is better for educators to make lesson plans at the beginning of each semester so that they can predict teaching and learning activities that will take place in the future. The plan is made so that the learning that is carried out later can take place in a fun, efficient, and can motivate students to continue learning.

This can also make educators have confidence that the teaching work they do can be done well. In addition, the existence of this plan can also make educators more confident in their abilities and creativity, so that they can easily implement it during the teaching and learning process; (3) organizations can provide comfortable facilities and support educators to be able to continue to think creatively. If there are facilities that are not feasible, the organization must immediately repair it. In addition, organizations must treat their teaching staff well and must be fair so that they do not feel social jealousy; (4) to identify whether the creativity possessed by educators has increased or not, the organization can do this by providing an assessment form to students regarding the learning that has been done. The aim is to find out the opinions of students about the abilities and methods of educators in the teaching and learning process, whether it is fun and can motivate students or not. From here the evaluation process occurs and it is hoped that the quality of content and learning methods can improve.

REFERENCES

- Ahlin, B., Drnovšek, M., & Hisrich, R. D. (2014). Entrepreneurs' Creativity And Firm Innovation: The Moderating Role Of Entrepreneurial Self-Efficacy. *Small Business Economics*, 43(1), 101–117. <https://doi.org/10.1007/s11187-013-9531-7>
- Alameri, M., Ameen, A., Khalifa, G. S. A., Alrajawy, I., & Bhaumik, A. (2019). The Mediating Effect of Creative Self-Efficacy on the Relation between Empowering Leadership and Organizational Innovation. *Test Engineering and Management*, 81, 1938–1946.
- Chang, S.H., Wang, C.L., & Lee, J.C. (2016). Do Award-Winning Experiences Benefit Students' Creative Self-Efficacy And Creativity? The Moderated Mediation Effects Of Perceived School Support For Creativity. *Learning and Individual Differences*, 51, 291–298. <https://doi.org/http://dx.doi.org/10.1016/j.lindif.2016.09.011>
- Erkutlu, H. (2008). The Impact Of Transformational Leadership On Organizational And Leadership Effectiveness: The Turkish Case. *Journal of Management Development*, 27(7), 708–726. <https://doi.org/10.1108/02621710810883616>
- Ghosh, K. (2015). Developing Organizational Creativity And Innovation: Toward A Model Of Self-Leadership, Employee Creativity, Creativity Climate And Workplace Innovative Orientation. *Management Research Review*, 38(11), 1126–1148. <https://doi.org/10.1108/MRR-01-2014-0017>
- Gong, Y., Huang, J.C., & Farh, J.L. (2009). Employee Learning Orientation, Transformational Leadership, And Employee Creativity: The Mediating Role Of Employee Creative Self-Efficacy. *Academy of Management Journal*, 52(4), 765–778. <https://doi.org/10.5465/amj.2009.43670890>
- He, P. X., Wu, T. J., Zhao, H. D., & Yang, Y. (2019). How To Motivate Employees For Sustained Innovation Behavior In Job Stressors? A Cross-Level Analysis Of Organizational Innovation Climate. *International Journal of Environmental Research and Public Health*, 16(23). <https://doi.org/10.3390/ijerph16234608>

- Ibrahim, H. I., Isa, A., & Shahbudin, A. S. M. (2016). Organizational Support and Creativity: The Role of Developmental Experiences as a Moderator. *Procedia Economics and Finance*, 35(October 2015), 509–514. [https://doi.org/10.1016/s2212-5671\(16\)00063-0](https://doi.org/10.1016/s2212-5671(16)00063-0)
- Jaiswal, N. K., & Dhar, R. L. (2015). Transformational Leadership, Innovation Climate, Creative Self-Efficacy And Employee Creativity: A Multilevel Study. *International Journal of Hospitality Management*, 51, 30–41. <https://doi.org/10.1016/j.ijhm.2015.07.002>
- Khalili, A. (2016). Linking Transformational Leadership, Creativity, Innovation, And Innovation-Supportive Climate. *Management Decision*, 54(9), 2277–2293. <https://doi.org/10.1108/MD-03-2016-0196>
- Martens, Y. (2011). Creative Workplace: Instrumental And Symbolic Support For Creativity. *Facilities*, 29(1), 63–79. <https://doi.org/10.1108/026327711111101331>
- McShane, S. L., & Glinow, M. A. Von. (2018). *Organizational Behavior*, 8th ed., United Kingdom: McGraw-Hill Education.
- Mittal, S., & Dhar, R. L. (2015). Transformational Leadership And Employee Creativity: Mediating Role Of Creative Self-Efficacy And Moderating Role Of Knowledge Sharing. *Management Decision*, 53(5), 894–910. <https://doi.org/10.1108/MD-07-2014-0464>
- Moolenaar, N. M., Daly, A. J., & Slegers, P. J. C. (2010). Occupying The Principal Position: Examining Relationships Between Transformational Leadership, Social Network Position, And Schools' Innovative Climate. *Educational Administration Quarterly*, 46(5), 623–670. <https://doi.org/10.1177/0013161X10378689>
- Pradana, H.A., & Uliani, Z. (2021). Fostering Or Hindering Creativity At Work? Moderating Role Of Proactive Personality Toward Support And Meaningfulness. *Jurnal Aplikasi Bisnis Dan Manajemen (JABM)*, 7(3), 559-570. <https://doi.org/10.17358/jabm.7.3.559>
- Rauniyar, K., Ding, D., & Rauniyar, N. (2017). Understanding the Role of Creative Self-Efficacy and Power Distance Orientation for Examining the Consequences of Abusive Supervision on Employee Creativity: A Case Study from Nepal. *Open Journal of Leadership*, 06, 61–81. <https://doi.org/10.4236/ojl.2017.62004>
- Richter, A. W., Hirst, G., van Knippenberg, D., & Baer, M. (2012). Creative Self-Efficacy And Individual Creativity In Team Contexts: Cross-Level Interactions With Team Informational Resources. *Journal of Applied Psychology*, 97(6), 1282–1290. <https://doi.org/10.1037/a0029359>
- Robbins, S. P., & Judge, T. A. (2013). *Organizational Behavior* (15th ed.). New Jersey: Pearson.
- Robbins, S. P., & Judge, T. A. (2018). *Essentials of Organizational Behavior* (Global). United States: Pearson.
- Sanda, A., & Arthur, N. A. D. (2017). Relational Impact Of Authentic And Transactional Leadership Styles On Employee Creativity: The Role Of Work-Related Flow And Climate For Innovation. *African Journal of Economic and Management Studies*, 8(3), 274–295. <https://doi.org/10.1108/AJEMS-07-2016-0098>
- Slåtten, T. (2014). Determinants and Effect of Employee's Creative Self-Efficacy on Innovative Activities. *International Journal of Hospitality Management*, 6(4), 326–347.

<https://doi.org/10.1108/IJQS-03-2013-0013>

- Suifan, T. S., Abdallah, A. B., & Al Janini, M. (2018). The Impact Of Transformational Leadership On Employees' Creativity: The Mediating Role Of Perceived Organizational Support. *Management Research Review*, 41(1), 113–132. <https://doi.org/10.1108/MRR-02-2017-0032>
- Tierney, P., & Farmer, S. M. (2002). Creative Self-Efficacy: Its Potential Antecedents And Relationship To Creative Performance. *Academy of Management Journal*, 45(6), 1137–1148. <https://doi.org/10.2307/3069429>
- Van Der Vegt, G. S., Van Vliert, E. D. E., & Huang, X. (2005). Location-Level Links Between Diversity And Innovative Climate Depend On National Power Distance. *Academy of Management Journal*, 48(6), 1171–1182. <https://doi.org/10.5465/AMJ.2005.19573116>
- Wang, G., & Ma, X. (2013). The Effect Of Psychological Climate For Innovation On Salespeople's Creativity And Turnover Intention. *Journal of Personal Selling and Sales Management*, 33(4), 373–387. <https://doi.org/10.2753/PSS0885-3134330402>
- Yang, H. L., & Cheng, H. H. (2009). Creative Self-Efficacy And Its Factors: An Empirical Study Of Information System Analysts And Programmers. *Computers in Human Behavior*, 25(2), 429–438. <https://doi.org/10.1016/j.chb.2008.10.005>
- Zhang, Y., Zheng, J., & Darko, A. (2018). How Does Transformational Leadership Promote Innovation In Construction? The Mediating Role Of Innovation Climate And The Multilevel Moderation Role Of Project Requirements. *Sustainability*, 10(5). <https://doi.org/10.3390/su10051506>
- Zuraik, A., & Kelly, L. (2019). The Role Of CEO Transformational Leadership And Innovation Climate In Exploration And Exploitation. *European Journal of Innovation Management*, 22(1), 84–104. <https://doi.org/10.1108/EJIM-10-2017-0142>