

# Factors affecting creativity of university lecturers in Vietnam

## Factores que afectan la creatividad de los profesores universitarios en Vietnam

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### ABSTRACT:

The study aims to identify factors affecting the creativity of university lecturers in Vietnam. Research data were collected from 310 lecturers working at universities using the quota sampling method. Structural Equation Modeling (SEM) was applied. Five factors impact the creativity of lecturers: Organizational support, Work motivation, Intrinsic motivation, Occupational stress, and Job autonomy. In particular, occupational stress negatively affected the creativity of lecturers. Besides, this study proposes several administrative implications to promote the creativity of Vietnamese university lecturers.

**Keywords:** creativity, lecturer, university, Vietnam

### RESUMEN:

El estudio tiene como objetivo identificar los factores que afectan la creatividad de los profesores universitarios en Vietnam. Los datos de la investigación se obtuvieron de 310 profesores que trabajan en universidades utilizando el método de muestreo de cuotas. Se aplicó el modelado de ecuaciones estructurales (SEM). Cinco factores impactan la creatividad de los profesores: apoyo organizacional, motivación laboral, motivación intrínseca, estrés ocupacional y autonomía laboral. En particular, el estrés laboral afectó negativamente la creatividad de los profesores. Además, este estudio propone varias implicaciones administrativas para promover la creatividad de los profesores universitarios vietnamitas.

**Palabras clave:** creatividad, profesor, universidad, Vietnam

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## 1. Introduction

Education plays an essential role in every nation at every age. In nowadays society, education and training are considered necessary policies in many countries around the world. Vietnam is not an exception. Education at the university lecture hall is regarded as a qualified human resource output. University education plays a role as a "feeder system" of all fields in life. It provides human resources for management, design, teaching and research purposes. In addition to this, university education brings opportunities for lifelong learning, allowing people to update knowledge and skills regularly according to the needs of society.

According to Marks (2013), to bring comprehensive lessons for students, teachers have to follow specific standards and improve their professional qualifications as well as the convey knowledge method. Moreover, to

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develop an educational basis, people need innovation, and every change begins with creative ideas (Amabile, 1996). Creativity and innovation are recognized as crucial elements of the sustainable competitive advantage that organizations apply to adapt to the rapidly changing environment (Lin and Liu, 2012). Thereby, university lecturers play an essential role to ensure quality as well as the effectiveness of teaching. Lecturers have to innovate in teaching and researching constantly. From the above problem, the study "Factors affecting the creativity of university lecturers in Vietnam" was implemented.

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## 2. Theoretical framework and hypotheses

### 2.1. Theoretical framework

According to Amabile (1996), creativity is a production of new and useful ideas in a particular area. These areas can be science, art, business, and daily activities (Amabile, 1997). Moreover, producing creative ideas is the first stage, and their implementation is the second stage (Amabile, 1996; Oldham and Cummings, 1996; Shalley and Zhou, 2008). To be considered as creativity, the idea has to be different from other previous opinions; however, the creative design does not have to be completely new, but it has to be valuable and consistent with the specific goals. Studies from Amabile (1996, 1997), Shalley and Zhou (2008) said that creativity is an individual product and innovation is the application of the product at the organizational level. Accordingly, two important factors used for evaluating a creative activity are the novelty and the usefulness it contributes to the organization. The terms "novel", "suitable", and "acceptable" are widely used in the theory of Diliello and Houghton (2006). Therefore, individual or group creativity is believed as the source of innovation. Both personal and environmental characteristics influence creativity.

### 2.2. Hypotheses

According to previous studies, the creativity of individuals in the organization is affected by internal factors such as motivation, knowledge, skills, working style; and also by external factors such as organizational support, resources, and management activities. Moreover, other authors have demonstrated elements such as leadership style, organizational commitment, and personal values that have a specific impact on individual creativity (Tierney et al., 1999, Houghton and Diliello, 2010).

An organization has to improve efficiency and make a difference to maintain competitive advantages. The organization in general and each individual, in particular, have to enhance their capacity; thereby creativity is a practical and effective solution. Houghton and Diliello (2010) claimed that every support and supervision from the organization helps promote the creative capacity of each employee. George and Zhou (2001) argued that organizational support could be interpreted as employees' perceptions of the encouragement, respect, reward, and recognition for their creativity from their leaders. Therefore, this study proposes the hypothesis H1 as follows:

*H1: The organizational support positively affects the creativity of university lecturers.*

In agreement with Bui and Pham (2009), work motivation is an internal factor that encourages workers to work to create high productivity actively. The motivation may express through the readiness, effort, and passion for achieving the goals of the organization and the workers themselves. Besides, the study of Nguyen (2013) confirmed that work motivation could bring creativity to the organization. Employees with work motivation often feel more comfortable and passionate about assigned tasks. Therefore, they always show creativity at work, which helps the organization to innovate, adapt to changes and make the changes. Based on the above discussion, the following hypothesis is stated:

*H2: Work motivation positively affects the creativity of university lecturers.*

Intrinsic motivation is said as an essential element to predict creativity (Amabile, 1996; Shalley et al., 2004). Intrinsic motivation is an individual's level of interest and participation in a job to achieve the job benefit. According to Amabile (1988), in a specific context, an individual performing a job had an impact on their intrinsic motivation, thus affecting their creativity. Workers create inherent motivation when they want to seek joy, satisfaction, self-expression, and challenges in their job (Amabile, 1996). Therefore, the study proposes hypothesis H3 is as follows:

*H3: Intrinsic motivation positively affects the creativity of university lecturers.*

Creativity creates opportunities and breakthroughs for employees and organizations. However, changes also create barriers. In a study in 1981, Kimberley and Michael pointed out that boundaries of creativity in organizations are internal conflicts, harsh criticism towards new ideas, and pressure (Truong, 2011). The force includes both occupational stress, requirements of innovation, and drawbacks from the change. However, besides the above negative aspects, innovation and creativity bring positive sides such as better self-control, a higher level of trying to achieve the targets. Thus, the study suggests hypothesis H4 as follows:

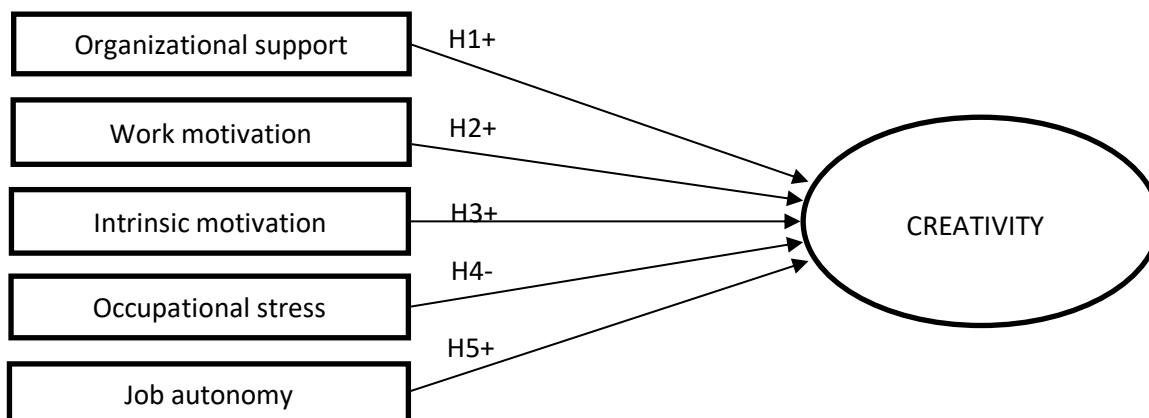
*H4: Occupational stress negatively affects the creativity of university lecturers.*

As reported by Tierney and Farmer (2002), job autonomy was defined as the belief of employees in their ability to perform well based on their knowledge and skills. Job autonomy affects the level of interest as well as the creative activities of workers (Tierney and Farmer, 2004). To improve the efficiency of creativity, it requires employees to have the ability to perform well (Eder, 2007). Creativity always goes along with potential risks; however, to overcome obstacles and maintain creativity, employees need to show the effort and a good spirit. Hence, job autonomy is the basis and motivation for creativity. As a result, hypothesis H5 is presented as follows:

*H5: Job autonomy positively affects the creativity of university lecturers.*

Based on the literature review, the research used group discussion method (qualitative research) with ten lecturers working at public and private universities to identify the factors affecting the creativity of university lecturers. The research model was stated as follows:

**Figure 1**  
The proposed research model



**Table 1**  
Interpretation of observed variables in the research model

Factor	Sign	Observed variable	Scale	Reference resources
Organizational support	ORS1	Creativity is promoted quickly;	Likert 1-5	George and Zhou, 2001; Eder and Sawyer, 2008; Houghton and Diliello, 2010
	ORS2	All ideas are recorded and evaluated equally;		
	ORS3	Employees are encouraged to solve problems creatively;		
	ORS4	A suitable mechanism is set to encourage and promote creative ideas.		
Work motivation	WM1	Employees feel comfortable with assigned tasks;	Likert 1-5	Bui and Pham, 2009; Dinibutun, 2012
	WM2	Employees are ready to complete the tasks;		
	WM3	The job facilitates professional competency;		
	WM4	The job creates a desire for creativity.		
Intrinsic motivation	IM1	Want to seek solutions for complicated problems;	Likert 1-5	Amabile, 1993; Amabile, 1996; Amabile, 1988; Shalley et al., 2004
	IM2	Want to find out new ideas for work;		
	IM3	Want to create new processes to complete the tasks;		
	IM4	Want to improve current procedures.		
Occupational stress	OCS1	Workload makes it difficult for creative activities;	Likert 1-5	Kimberly and Evanisko, 1981; Truong, 2011; Dinibutun, 2012
	OCS2	Job rules do not facilitate creativity;		
	OCS3	Time pressure does not support creativity at work.		
Job autonomy	JA1	Be confident in the ability to perform assigned tasks;	Likert 1-5	Tierney and Farmer, 2002; Tierney and Farmer, 2004; Eder, 2007
	JA2	Master the skills and professional knowledge to complete the tasks;		
	JA3	Always actively perform the assigned tasks.		
Creativity	CRE1	Many new ideas at work;	Likert 1-5	Amabile, 1997; Shalley et al., 2004; Houghton and Delillo, 2010
	CRE2	Many products are made up of personal ideas;		
	CRE3	Products made up of ideas are used effectively at work;		
	CRE4	Employees are always creative at work.		

Source: Author's synthesis, 2019

### 3. Methodology

To test research hypotheses, the analytical methods used include the reliability test of scale by Cronbach's Alpha coefficient, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Structural Equation Modeling (SEM). Therefore, the sample size needs to reach the requirements of these methods. Hair et al. (1998) suggested that the EFA method requires the minimum sample size of 50, preferably 100 and the rate between observations over each measured variable is 5:1, meaning that every determined variable needs at least five considerations.

The Structural Equation Modeling (SEM) requires a large sample size because it relies on the distribution theory of patterns (Raykov and Widaman, 1995). To the SEM method ensure reliability, the sample size has to be between 100 and 200 (Hoyle, 1995). According to Hoelter (1983), the limited sample size in SEM should be 200. Quota sampling method was used to collect data. Respondents are lecturers working at universities in Vietnam. The total number of the respondent is 310. In which, 66.13% of lecturers are working at public universities, and 33.87% of lecturers are from private universities. Among them, 32.9% have doctoral degrees, 59.7% are lecturers with a master's degree, and 7.4% of lecturers have a university degree. During the survey, demographic criteria were taken into consideration to ensure the representativeness of the research data.

## 4. Research results and discussions

### 4.1. Scale reliability test

This research used Cronbach's Alpha to test the internal consistency and correlation among variables in the research model. The results displayed in Table 2 shows that all the scales have high-reliability coefficients (above 0.6), and all these variables have "Corrected item-total Correlation" higher than 0.3. This proves that all the variables ensure reliability (Nunnally, 1978; Peterson, 1994; Slater, 1995). Thus, all the variables can be used for the next stage: Exploratory Factor Analysis.

**Table 2**  
Results of Cronbach's Alpha analysis

Factor	Observed variable	Minimum Corrected Item-Total Correlation	Cronbach's Alpha
Organizational support (ORS)	4	0.787	0.917
Work motivation (WM)	4	0.725	0.887
Intrinsic motivation (IM)	4	0.720	0.886
Occupational stress (OCS)	3	0.807	0.925
Job autonomy (JA)	3	0.747	0.886
Creativity (CRE)	4	0.773	0.914

Source: Survey data, 2019

### 4.2. Exploratory Factor Analysis (EFA)

With the observed variables, the study conducted EFA analysis to test the convergent validity and discriminant validity of the scales. The analytical results are guaranteed as follows: (1) Reliability of the variables (Factor loading)  $> 0.5$ ; (2) Research model's suitability test  $0.5 < KMO = 0.882 < 1$ ; (3) Bartlett's test for correlation of variables with Sig coefficient.  $= 0.00 < 0.05$ ; (4) Cumulative variance test  $= 78.04\% > 50\%$  (Gerbing and Anderson, 1988). As a result, the results have formed six factors with the coefficient Eigenvalue  $= 1.225$ . There is no disturbance among factors, so the factors' names have remained the same as in the proposed research model.

**Table 3**  
Factors formed from the Exploratory Factor Analysis (EFA)

Sign	Observed variable	Factor
F1	4 variables: ORS1, ORS2, ORS3, ORS4	Organizational support
F2	4 variables: WM1, WM2, WM3, WM4	Work motivation
F3	4 variables: IM1, IM2, IM3, IM4	Intrinsic motivation
F4	3 variables: OCS1, OCS2, OCS3	Occupational stress
F5	3 variables: JA1, JA2, JA3	Job autonomy
F6	4 variables: CRE1, CRE2, CRE3, CRE4	Creativity

Source: Survey data, 2019

### 4.3. Confirmation Factor Analysis (CFA)

After EFA, CFA analysis was used for these six factors. The analysis result suggests that the model is suitable for the market data because the indicators are eligible: Chi-square = 376.865; P-value = 0.000 with 193 degrees of freedom; and Chi-square CMIN/df = 1.953 < 2 (Carmines, 1981). Besides, TLI = 0.964 and CFI = 0.970 are greater than 0.9; RMSEA = 0.056 ≤ 0.08 (Bentler and Bonett, 1980). The result of the CFA test also shows that the correlation coefficients among factors are less than 1, so the model is unidirectional. The standardized regression weights of all factors are greater than 0.5, and the regression weights are statistically significant, so the model reaches convergent validity. Also, the correlation coefficients and the standard deviation are < 0.9, so the research model achieves discriminant validity. Results of  $P_c$  and  $P_{vc}$  values show that the value of  $P_c$  (minimum is 0.86) and  $P_{vc}$  (minimum is 0.64) of the factors are satisfactory (Joreskog, 1971; Fornell and Larcker, 1981). The  $\alpha$  coefficient of all factors is greater than 0.6 (Nunnally and Bernstein, 1994). Thus, the result is consistent with market data; convergent validity; unidimensionality; discriminant validity, and reliability.

**Table 4**  
Results of scales' analysis

Factor	Composite Reliability ( $P_c$ )	Variance Extracted ( $P_{vc}$ )
Organizational support (ORS)	0.89	0.70
Work motivation (WM)	0.88	0.66
Intrinsic motivation (IM)	0.86	0.64
Occupational stress (OCS)	0.90	0.74
Job autonomy (JA)	0.88	0.70
Creativity (CRE)	0.90	0.71

Source: Survey data, 2019

### 4.4. Structural equation modelling (SEM)

After confirmation factor analysis (CFA), structural equation modelling (SEM) was used to test the hypotheses of the study. The analytical results are presented in Table 5 as follows:

**Table 5**  
Examining the relationship among factors

Relationship	Regression weight			Standardized regression weight	P-value
	Estimated value	Standard Error S.E.	Critical Ratio C.R.		
CRE <--- ORS	0.178	0.067	2.647	0.188	***
CRE <--- WM	0.275	0.099	2.783	0.253	***
CRE <--- IM	0.369	0.073	5.066	0.326	***
CRE <--- OCS	-0.091	0.043	-2.097	-0.095	***
CRE <--- JA	0.206	0.074	2.777	0.183	***

Source: Survey data, 2019

The estimated value indicates the level of impact of each factor on the creativity of university lecturers, the higher the absolute value, the stronger the impact level. Table 5 claims that the estimated values of the variables are statistically significant, proving that all factors in the model have an impact on the creativity of lecturers. It is explained as follows:

The organizational support affects the creativity of university lecturers with a standardized regression weight of 0.188 at 1% significance level. The support from the organization plays a crucial role and positively influences the

creativity of lecturers. That the organization has a good policy to support creativity and create a dynamic and fair working environment will help boost the creativity of lecturers. This result is similar to the researches of George and Zhou (2001), Eder and Sawyer (2008), Houghton and Diliello (2010).

The work motivation has a standardized coefficient of 0.253 with 1% significance level, which positively impacts the creativity of lecturers. Challenging work and the organization's encouragement will encourage the creativity of the lecturers. This result is consistent with the research results of Dinibutun (2012).

The intrinsic motivation has a standardized coefficient of 0.326 with 1% significance level, which indicates that inherent motivation positively influences the creativity of lecturers. That lecturers who love to find out new solutions and new ideas as well as improve working procedures will promote creativity at work and enhance the results of assigned tasks. This is in agreement with the results of Tierney et al. (1999), Eder and Sawyer (2008).

The occupational stress harms the creativity of university lecturers with a standardized coefficient of -0.095 and 1% significance level. The survey has shown that the time constraint and the rigid job make the creativity of lecturers be placed in limitation. On the contrary, if the assignments are appropriate to the lecturers' capabilities, and does not set out many principles, the lecturers' creativity will be further advanced. This result is similar to the study of Kimberly and Evanisko (1981) and Dinibutun (2012).

Finally, job autonomy has a standardized coefficient of 0.183 with 1% significance level, which means that job autonomy has a positive impact on the creativity of university lecturers. Those with skills, confidence, and proactivity at work have a high level of creativity. This agrees with the results of research by Tierney and Farmer (2002), Tierney and Farmer (2004), Eder (2007).

## 5. Conclusion and administrative implications

The study has demonstrated 5 factors affecting the creativity of university lecturers in Vietnam, which are Organizational support, Work motivation, Intrinsic motivation, Occupational stress, and Job autonomy. In particular, occupational stress negatively affects the creativity of lecturers. Thereby, the study suggests some implications to promote the creativity of university lecturers as follows:

Firstly, enhance the organization's supporting policy. Organizational support is an essential component. Lecturers will actively encourage creativity in their work when the organization supports their creativity. This helps decrease risks and increase useful ideas (George and Zhou, 2001). Therefore, universities should consider: (1) developing policies to encourage lecturers to accept challenges and enhance creativity at work; to come up with novel and useful ideas for the organization. (2) evaluating reasonably and supportively; provide lecturers with practical suggestions for their creative ideas. (3) developing policies for recognizing, praising, and rewarding the creativity; ensure to promote the plan to each lecturer. (4) form a group work program; encourage complementary debates for more creative and rational ideas.

Secondly, improve work motivation. According to Bui and Pham (2009), work motivation is an internal factor that motivates workers to work to achieve high productivity and efficiency actively. The motivation is expressed through the willingness, effort, and passion at work to meet the organization's goals. Therefore, the university manager should focus on helping lecturers improve work motivation and creativity. Consequently, the manager should consider: (1) ensure a stable and fair source of income for lecturers because this is an essential element to motivate lectures. (2) Focus on training programs, social and cultural activities because personal development is the aim that every lecturer pursues to develop themselves. (3) Help lecturers participate in social activities because this helps them widen practical knowledge, absorb ideas from the community, thereby promoting creativity in teaching and researching.

Lastly, improve intrinsic motivation and job autonomy. According to Amabile et al. (1996), Woodman et al. (1993), Zhou and Shalley (2003), rewards, appreciation, and compliment intensify confidence and intrinsic motivation. Accordingly, to positively impact internal motivation and job autonomy of lecturers, university managers should (1) issue reward policies (material and spiritual) for useful ideas. Besides, universities need to build a system to receive and evaluate innovative ideas from lecturers; (2) positively assess and feedback the lecturers' creative plans. Managers need to listen to all comments from lecturers and reply reasonably. Furthermore, the manager should regularly state the problems that the organization is facing so that all lecturers can contribute solutions; (3) create open management policies, so each lecturer has the opportunity to promote creativity in their assigned work.

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