

PROMOTING STUDENTS' CREATIVITY AT RESEARCH UNIVERSITIES IN MALAYSIA

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ABSTRACT

Creativity is an important element in the development of educational organizations. Although many variables influence students' creativity in universities, there is reason to suspect that leadership behaviours' of lecturers represent a particularly powerful influence. In this study, we examined leadership behaviours contributing to enhancing students' creativity. Findings of this study indicated that leadership behaviours of lectures such as idealized influence, intellectual stimulation, inspirational motivation, technical skills, and involvement may influence students' creativity both directly and indirectly. Their leadership behaviours may nurture or stifle students' creative potential. The implications of these findings for theory and practice are discussed.

Field of Research: *Students' creativity, leadership, change management*

1. INTRODUCTION

Since the 1990s, creativity has been recognized as an important skill that should be developed at educational institutions (Craft & Jeffrey, 2008) . In fact, creativity is an important factor in the success and competitive advantage of educational organizations. Creativity could better enable students to engage with the demands of 21st century learning. Moreover, Rourke (2005) stated that creativity enables individuals to structure rewarding and fulfilling lives; stimulates learning and enhances literacy; is a driving force of economic growth; and is essential to tackle the social, cultural and environmental issues facing communities in the future. It would seem that creativity should be a priority in the education of students.

There are several definitions of creativity in the literature. Much of the empirical research has defined creativity as the generation of ideas or products that are useful, valuable, and original (Amabile, 1996). According to Sternberg (2006), creative work requires applying and balancing three abilities (synthetic ability, analytic ability and practical ability) that can all be developed. Based on these definitions, creativity can be defined as the ability of a person to generate novel and interesting ideas; to analyse and evaluate ideas; and to translate theory into practice and abstract ideas into practical accomplishments. Lecturers play an important role in encouraging and developing creativity by teaching

students to find a balance among synthetic, analytic, and practical thinking. Many teachers and lecturers want to encourage creativity in their students, but they do not know how to do. They do not know that their action and the way that they direct and support students in their creative endeavours can mobilize or stifle creative thinking (Andriopoulos & Dawson, 2009)

Many researchers emphasize the importance of leadership in mobilizing creativity and change in educational organizations (Andriopoulos & Dawson, 2009; Shin & Zhou, 2003). The behaviour of a leader may nurture or stifle employees' creative potential. Gumusluoglu and Ilsev (2009) believe that supportive supervisory management style can enhance creativity more than controlling one because it enhances individual motivation. A controlling style does not allow the creative processes to flow because it provides a tightly constructed set of rules and guidelines in which members have little freedom (Andriopoulos & Dawson, 2009). Gumusluoglu and Ilsev (2009)' empirical study indicated that group members' creativity will be enhanced if they see the leader as trying to be supportive of creativity. According to Bass et al. (2003), transformational leaders pay attention to the concerns and developmental needs of their followers, encourage them to examine old problems in new ways. Moreover, they are able to inspire and move followers to higher level of needs and aspirations. Interestingly, these kinds of leaders have a great effect on their followers and can influence on creativity and innovation. Several researchers have examined the effect of transformational leadership on followers' performance (Dvir, Eden, Avolio, & Shamir, 2002; Howell & Avolio, 1993), but only a handful of studies have examined the effects of transformational behaviours (intellectual stimulation, inspirational motivation, idealized influence, and individualized consideration) on students' creativity.

In addition, some scholars have argued that lecturers' level of expertise and their creative problem solving skills can be a significant factor in developing students' creative work (Barnowe, 1975 cited in Mumford, Connelly, & Gaddis, 2003). Moreover, Andriopoulos and Dawson (2009) stated that communication is essential to the creative process because the cross- fertilization of different ideas lead to more and better ideas. Another social aspect that has significant impact on creativity is the extent to which lecturers encourage students' involvement in the creative process. Many researchers believe that students need autonomy to experiment with new ideas and concepts (Shalley & Gilson, 2004). However, available researches have not examined all these variables in a model to identify best predictors of students' creativity. This model will contribute significantly to the existing knowledge about factors contribute significantly in enhancing students' creative work. Also, this study will show that lecturers should teach students in a way that develop their synthetic, analytic and practical thinking. In fact, having knowledge is no longer enough to get ahead in a competitive global market, but having the ability to analyse, create, innovate, and solve problems is the sought-after skill for today's and tomorrow's students. Therefore, based on this study lecturers will find that how to encourage creativity in their students. Furthermore, gaining an understanding of the variables that foster students' creativity will be useful for lecturers, policy makers, and providers of professional development program for lecturers. This study aims to examine leadership behaviors contributing to enhancing students' creativity. A model developed for this purpose. Based on this model leadership behaviours (intellectual stimulation, inspirational motivation, idealized influence, individualized consideration, expertise, communication and information exchange, involvement, and autonomy) positively relates to students' creative.

2. REVIEW OF THE LITERATURE

According to Gumusluoglu and Ilsev (Gumusluoglu & Ilsev, 2009), “transformational leadership behaviors closely match the determinants of innovation and creativity at the workplace, some of which are vision, support for innovation, autonomy, encouragement, recognition, and challenge” (P.462). In fact, these behaviors are as instrumental for promoting creativity (Sosik, Kahai, & Avolio, 1998). Transformational leadership comprise of five different dimensions: idealized influence (attributed), idealized influence (behavior), intellectual stimulation, inspirational motivation, and individualized consideration (Bass & Riggio, 2006). “Idealized influence (attribute) demonstrates attributes of principals that motivate respect and pride and display a sense of power and confidence; idealized influence (behavior) refers to the principals’ behavior to communicate values, purpose, and importance of mission; inspirational motivation refers to leaders that motivate and inspire others by challenging them to exert effort; Intellectual stimulation stimulates followers' efforts to be innovative and creative by questioning assumptions, reframing problems, and approaching old situations in new ways; and individualized consideration focuses on development and mentoring of followers and attends to individual needs” (Bass & Riggio, 2006). Gumusluoglu and Ilsev (2009) conducted a study on 163 R&D personnel and managers at 43 micro- and small-sized Turkish software development companies and found that transformational leadership has important effects on creativity at both the individual and organizational levels. Sternberg (2006) stated that creativity needs a balance among synthetic, analytic and practical abilities. Lecturers as transformational leaders have a responsibility to encourage and develop students’ creativity by teaching students to find a balance among synthetic, and practical thinking (Sternberg, 2006).

According to Mumford et al. (2003), lecturers’ level of expertise and technical skills appears to be a significant predictor of creative performance. They should be able to evaluate students’ ideas and provide evaluative feedback. Moreover, they should be competent facilitators assisting their students in the achievement of school objectives. Communication and information exchange is an effective social skill that can enhance students’ creativity (Andriopoulos & Dawson, 2009). Communication is vital to the creative process. Students tend to make more connections when they are exposed to a diverse range of sources and this will eventually lead them to be more creative (Andriopoulos & Dawson, 2009). The communication is the main point for the good relationship. Lecturers must be a good communicator and a creative person to inspire and motivate students to collaborate in creative work (Reppa, Botsari, Kounenou, & Psycharis, 2010)

Furthermore, Mumford et al. (2003) stated that the critical issue confronting lecturers is to find way of encouraging involvement. The extent to which leaders encourage employees’ involvement in the creative process is very important. Lecturers should direct students' motivation and curiosity to the problem at hand (Mumford, Scott, Gaddis, & Strange, 2002). Students' involvement will increase when the lecturers encourage them to participate in defining the problems to be pursued and the approach to be used in addressing these problems. In addition to participation, however, it appears that involvement will increase when creative people are asked to work in groups with peers (due to social facilitation) (Farris, 1972). Moreover, many researchers believe that individual's autonomy is an essential prerequisite for creativity (Houtz et al., 2003). People who are empowered also are more likely to be intrinsically motivated, which in turn promotes creative endeavors (Jung & Sosik, 2002). Consistent with this view, Zhou (1998) also found that individuals generated the most creative ideas when they worked in a high task autonomy work environment.

3. THE STUDY

The aim of this study was to identify the relationship between leadership behaviours that enhance students' creativity in research universities in Malaysia. The following questions are specifically to be answered by this study:

1. What is the relationship between leadership behaviours and students' creativity?
2. How many percent of the variation in students' creativity can be explained by lecturers' leadership behaviours?
3. What is the relative importance of each elements of leadership behaviours in predicting students' creativity?

4. METHOD

This study was an exploratory research to find the causal relationships between variables. In fact, an exploratory study can be described as finding out what is happening, and asking questions and assessing phenomena in a new light; also these type of research is most useful when there would be limited research regarding the population of study (Creswell, Plano Clark, Gutmann, & Hanson, 2003). 520 postgraduate students (Master and PhD programme) in the faculty of education of three selected research universities in Malaysia (UM, UPM, UKM) participated in the study. For obtaining the required information, two set of questionnaire was used to measure the leadership behaviours of lecturers and students' creativity. Questionnaires were distributed amongst 520 randomly selected postgraduate students of the three research Universities in October 2011.

To carry out this study, first approval was obtained from the University of Malaya and in a letter researcher was introduced to faculty of education of UPM, UKM, and UM. Researcher attended these universities and a total of 550 questionnaires were distributed among postgraduate students. The purpose and significance of this study was explained for them. They were assured that their responses are confidential and their responses will be used only for research. Completed questionnaires were gathered by research assistant at the end of these sessions. 520 completed surveys were returned of 550 questionnaires that had been distributed, yielding a 91.4% return rate. Respondents returned a total of 520 questionnaire and all were used in the analysis. Descriptive statistics (mean, percentage and frequency) and inferential statistics (correlation analysis and multiple regression) were used in this study. Descriptive statistics were utilized to describe level of students' creativity in three research universities (UKM, UPM, UM) in Malaysia. Moreover, Pearson correlation coefficient was used to identify the relationship between eight elements of leadership behaviors of lecturers and students' creativity. Also, multiple regression was used to determine the percentage of variance in students' creativity that can be explained by independent variables. Furthermore, this analysis was used to determine the relative importance of each independent variable in explaining students' creativity.

5. FINDINGS AND DISCUSSION

5.1 The Relationship between Creativity and Independent Variables

In this study, Pearson correlation analysis was used to identify the relationship between students' creativity and independent variables. Results of this analysis helped researcher to understand the strength and direction of the linear relationship between two variables. Besides, preliminary analyses such as normality, linearity and homoscedasticity were examined to ensure no violation of the assumptions of correlation analysis. The correlation matrix shows a number of significant relationships between creativity and the independent variables (Table 1).

Table 1: Summary of the correlation matrix of independent variables and creativity

Variable	Pearson Correlation	Sig. (2-tailed)
Creativity	1	
Idealized influence (attributed)	.575**	0.000
Idealized influence (behavior)	.575**	0.000
Inspirational motivation	.596**	0.000
Intellectual stimulation	.597**	0.000
Individualized considerations	.616**	0.000
Communication	.617	0.000
Expertise	.580	0.000
Involvement	.641	0.000

According to Table 1, there was a positive and moderate relationship between each elements of leadership and students' creativity. The study results indicated that lecturers or supervisors who display supportive leadership behaviors, their students are more creative. In fact, "supportive supervisory management style is more likely to contribute creativity than a controlling one since it enhances individual motivation" (Andriopoulos & Dawson, 2009). Lecturers should provide an open forum in which students feel free to roam with new ideas and suggestions. They should create an environment conducive to the generation and implementation of novel and useful ideas. This can be achieved by concentrating on enhancing the factors that nurture students' creativity.

6. THE PROPORTION OF THE VARIANCE IN STUDENTS' CREATIVITY THAT CAN BE EXPLAINED BY THE INDEPENDENT VARIABLES

To identify the percentage of variance in students' creativity that can be explained by the elements of leadership behaviours a multiple regression analysis was performed. Tables 2 and 3 show the summary of the multiple regression results.

According to Table 2, elements of leadership behaviours (Involvement, individualized consideration, Communication, idealized influence (behavior, attributes)) explained about 60% of the variance in students' creativity ($R^2=0.60$). It is a very good result. Also, for the final model, the F value was 124.93. The P values was statistically "highly significant ($p = 0.0001$). Thus, it can be deduced that the data fit to the model at 0.05 level of significance. In other words, this model can be considered as a good description of the relationship between five elements of leadership behaviors and students' creativity. Therefore, this is a suitable and stable model and shows the variables that can enhance students' creativity.

As can be seen from the Table 3, five variables were found significant in predicting students' creativity. The five predictor variables were involvement ($t = 4.409$, $p= 0.001$), individualized consideration ($t = 6.679$, $p=0.001$), communication ($t = 5.648$, $p= 0.001$), idealized influence (behavior) ($t = 5.648$, $p= 0.001$), and idealized influence (attributed) ($t=3.055$, $p= 0.002$). All five variables are equally significant in explaining students' creativity but have different effect on this variable. Therefore, in accordance with the conceptual model suggested in this study, all five constructs should be considered in an integrated manner.

Table 2: Summary ANOVA table

Source	Sum of Square	df	Mean Square	F	R ²	Adjusted R ²	R	P
Regression	9977.225	5	1995.44	124.93	0.593	0.589	0.77	0.000
Error	6837.542	514	13.303					
Total	16814.767	519						

Table 3: Multiple regression on dependent variable

	Unstandardized Coefficients		Standardized Coefficients	t	Sig
	B	Std Error	Beta		
Constant	12.483	1.499		8.331	.000
Involvement	.382	.087	.203	4.409	.000
individualized consideration	.688	.103	.263	6.679	.000
Communication	.420	.074	.250	5.648	.000
Idealized influence (behavior)	.385	.120	.129	5.648	.001
Idealized influence (attributes)	.377	.124	.125	3.055	.002

7. CONCLUSION

This study identified the effect of leadership behaviours of lecturers on students' creativity. Findings of this study indicated that there is a positive and significant relationship between students' creativity and each of the elements of leadership behaviours of lecturers. In fact, lecturers should help their students to correctly define their project and identify the requirements and resources for generating and developing new ideas. Also, their persuasive skills are very important to mobilizing creative efforts (Mumford & Licuanan, 2004). Supervisors should persuade their students about the value of their project and encourage students' involvement in the creative process. In this way, students tend to focus all their energy and time on their jobs. Also, supervisors should allow students to choose the project that they wish to work on, or to strive to provide them with projects that they find attractive and challenging. In other words, it is important to determine an appropriate level of autonomy for students in the pursuit of an efficient level of creative performance (Shalley & Gilson, 2004). Lecturers should have technical and creative problem solving skills to enhance students' creativity. They need to be competent facilitators to help their students in completing their task. Also, they should spend time to evaluate student' work and provide evaluative feedback.

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