

The Effect of Organization's Innovative Climate on Student's Creative Self-Efficacy and Innovative Behavior

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Abstract

This study aims to explore the relationship between the organizational innovation climate of school on student's creative self-efficacy and innovative behavior. The results of this study provide more methods to all university of technology to create a climate for innovation and practices, and enhance students' innovative behavior. According to the research purposes, the questionnaire survey was conducted. The objects were college students in the University of Technology. 927 samples were selected by stratified proportion sampling² method, and 803 were returned. 47 invalid questionnaires were deducted and the amount of valid questionnaires was 756. The return rate accounted for (81.55%). The research findings are: 1) As for the organizational-innovation climate of school, the best dimension is students' "organizational support"; 2) As for creational self-efficacy,

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the students' performs well; 3) As for Innovative-Behavior, the students perform best in "innovative idea generation" ; 4) The organizational-innovation climate of school had a significant positive influence on student's creative self-efficacy and innovative behavior; and 5) student's creative self-efficacy and innovative behavior had a significant positive influence.

JEL classification numbers: A3

Keywords: Organizational-innovation climate of school, Organizational-innovation climate, Creative self-efficacy, Innovation behavior

1 Introduction

In recent years, with school-aged population decreasing yearly, schools encounter obstacles in operation and development, and must attract students by innovation and transformation for sustainable operation. Thus, how can schools create an educational climate filled with "freedom, respect, support, liberation, and innovation" through organizational innovative climate to become vigorous environments? This is an issue reflected by schools. Previous studies have found that environmental factors of organizational climate can trigger or hinder individual performances of creative behaviors [1, 2, 3].

In changeable external environments, vocational and technological institutes must make continuous progress and create a campus culture of innovative climate through creative strategies in order for teachers and students on campus to learn and grow. The research questions remain: how to create an innovative climate and creative environment in schools and enhance the students' creative thinking capability? How to allow students to perceive the climate of the schools and be influenced by innovative behavior? McEvoy and Welker (2000) suggested that organizational innovative climate influences interactions among the faculty, teachers, and students, and affects their support of the schools [4]. If the teachers influence the students by instructional methods, will the students be affected by organizational climate of the schools? Based on the above, this study aims to determine if organizational innovative climate of a school influences students' creative self-efficacy and innovative behavior.

This study intends to recognize the effects of the organizational-innovation climate of school on students' creative self-efficacy and innovative behavior. The purposes of this study are as follows:

1. To recognize the effect of the organizational-innovation climate of school on students' creative self-efficacy and innovative behavior.
2. To recognize the effect of students' creative self-efficacy on innovative behavior.
3. To probe into students' perceived correlation among the organizational-innovation climate of school, their creative self-efficacy, and innovative behavior.

2 Literature Review

2.1 The organizational-innovation climate of school

Schools are systematic organizations, and during development, the organizational innovation climate of school is critical, as it will enhance organizational efficacy. A positive school climate will also influence students' learning effectiveness [5]. According to Wu and Lin (2003), innovation of schools can develop school characteristics, enhance school efficacy, and accomplish educational objectives [6]. Hoy and Miskel (2005) suggested that the organizational climate of schools defines the overall characteristics of the schools, as perceived by school members, including administration personnel, teachers, and students [7]. It is the overall inertia of schools, as recognized by school members, and can influence the members' attitudes and behaviors regarding the accomplishments of instructional and school goals. Based on Halpin and Croft (1962), the organizational-innovation climate of school refers to the characteristics upon the interactions between principals and teachers, among the teachers, and between the teachers and the students, and is measured by members' perceptions [8, 9]. Chin (1997) suggested that organizational innovative climate of schools means the school members' perceptions and descriptions of the workplace, and suggests its incentive innovation, work resources, and innovative management skills [10]. Li (2006) indicated that the organizational climate of a school is the educational personnel's subjective perceptions and descriptions of the organizational system. It is

collective phenomenon and all educational personnel share the perceived experience [11].

Based on the above, it can be generalized that the organizational-innovation climate of school is the individual perception of the school members within the organizations and the perceived experience shared by all members. Moreover, organizational climate can enhance organizational efficacy and influence students' learning effectiveness."

2.2 Creative self-efficacy

Bandura (1997) suggested that self-efficacy is based on specific situations and fields. Therefore, in different activity fields, the required capabilities and skills are different. In other words, self-efficacy regarding different tasks is different [12]. For instance, students with high self-efficacy in mathematics do not necessarily have high self-efficacy in English. In addition, according to Bandura's social learning theory, the information sources of self-efficacy are performance accomplishment, vicarious experiences, verbal persuasion, and emotional arousal, as shown below [13, 14, 15].

2.2.1 Performance accomplishment

The individuals' behavioral performance is the most influential information source since it is obtained from the individuals' personal experience. The individuals' major experiences are based on past successes and failures, and have the most influence on the individuals' self-efficacy. The individuals thus develop the confidence to deal with similar situations. Success and failure might influence a person's evaluation on similar job capability in the future. When individuals encounter similar challenges, they will adjust their setting of goals [16].

2.2.2 Vicarious experience

Vicarious experience means to obtain related self-recognition by observing others' behavior and outcomes, and it is very important regarding the formation of self-efficacy. When individuals recognize the success acquired by other people with similar levels, it will enhance the judgment of self-efficacy, increase confidence, and increase their confidence in their capability to accomplish similar

behavior. Bandura suggested that learning tends to be based on the observations of others' successful experiences, thus, allowing us to learn things we have never done.

2.2.3 Verbal persuasion

Another information source of self-efficacy is others' encouragement, evaluation, suggestions, and advice. Verbal persuasion is the measure to enhance self-recognition of one's capabilities. Chambliss and Murray (1979) suggested that verbal persuasion is effective on individuals that believe in the effect of their actions [17]. Therefore, to some degree, the enhancement of verbal persuasion on self-efficacy can guide individuals to pursue success, and result in the development of self-efficacy.

2.2.4 Physiological and affective state

Physical states and emotion (e.g., anxiety and depression) are usually treated as indicators of the ability to practice certain behavior. Individual performance can be negatively influenced by inferior physical states or agitation. A high degree of anxiety and fear might reduce an individual's confidence. However, proper anxiety can enhance the motivation to accomplish tasks. Therefore, the individuals' emotional and physical states will sometimes influence self-efficacy.

Hong (2004) suggested that fields of creativity require specific skills and knowledge. With the uniqueness of the constructs of creativity, in the field, self-efficacy is different from the common definition [18]. Tierney and Farmer (2002) combined the self-efficacy theory with Amabile's (1988) creativity theory and proposed the concept of "creative self-efficacy" [19, 20]. They treated creative self-efficacy as the application of self-efficacy in a specific field. Creative self-efficacy thus means the individuals' self-evaluation of the capability and confidence to produce creative works through specific tasks [19]. Creative self-efficacy reflects the individuals' self-belief or expectation regarding performance in creative activities [21]. Ford (1996) suggested that self-efficacy can trigger the major motives of individuals' creativity and can influence their future creative behavior and performance. Therefore, self-efficacy is critical in the individuals' learning activities [22].

Based on the above, it is concluded that creative self-efficacy is the students'

creative capability found in all activities, and can effectively influence their creative performance and enhance personal creativity and competitiveness.”

2.3 Innovative behavior

“Innovation” was derived from *Novus* in Latin. It originally referred to the introduction of new things or concepts [11]. “Innovation” was first proposed by Schumpeter (1930), who suggested that through innovation, corporate organizations can invest in assets and create value [23, 24]. Rogers (1995) defined innovation as “new concepts, techniques, or entities perceived by individuals or units during adoption” [25]. Drucker (1986) indicated that innovation means reform, which has impact on external environments [26]. Kanter (1988) suggested that, the difference between innovative behavior and creativity is that creativity is unique, useful, and results in new concepts, and is defined as invention [27]. Innovation is related to the production, adoption, and execution of useful concepts. At the individual level, innovation starts from an individual’s creative ideas. Thus, at work and with new tasks or challenges, individuals can adjust their jobs or workplace through innovative behavior in order to effectively accomplish selected goals [26, 27, 28]. Janssen (2000) suggested that innovative behavior means that employees have the intention to create, cite, and use new ideas [29]. The purpose is to lead to higher performance of employees, organizations, and groups. According to Van der Vegt and Janssen (2003), innovation is a discontinuous activity, where individuals are allowed to develop ideas at any time and to promote and practice the ideas [30].

Based on the above, this study generalizes innovative behavior, as follows: “the individuals reconstruct their concepts and ideas to solve problems, and finally, carry out creativity activities.”

2.4 Research related to organizational innovative climate of schools, creative self-efficacy, and innovative behavior

Many studies have found that organizational climate influences organizational innovation. At the individual level, there are few studies on the effect of organizational climate on the individuals’ innovative behavior [31]. Amabile

(1988), Isaksen (2007) and Kanter (1988) suggested that organizational climate can guide members to innovation through concentration and action [20, 27, 32]. They also pointed out that with rich resources of organizational innovative climate, individuals can effectively fulfill their creativity [33]. Guo (2004) suggested that the supervisors' encouragement of organizational innovative climate positively influences the employees' creative thinking capability and innovative behavior [34]. According to Triadic Reciprocal Determinism, organizational innovative climate influences the individuals' confidence in creative activities. In the creative process, when individuals perceive better organizational innovative climate, they will become interested and more confident in the accomplishment of the tasks [14, 33]. In other words, the individuals' confidence in innovative activities is partially influenced by organizational innovative climate. Wen and Chen (2008) suggested that organizational support, supervisors' encouragement, and rich resources of organizational innovative climate will positively influence innovative behavior [35].

Hong (2004) found that there is a positive correlation between the individuals' creative self-efficacy and innovative behavior [18]. The individuals' creative self-efficacy influences their innovative behavior. Creative self-efficacy not only positively influences innovative behavior, but also positively predicts the individuals' creative performance. As suggested by Tierney and Farmer (2002), creative self-efficacy significantly and positively influence the individuals' creative performance [19].

Based on the above, the organizational innovative climate of a school influences creative self-efficacy and innovative behavior. Therefore, this study probes into university students' perceived effects of organizational innovative climate of the school, creative self-efficacy, and innovative behavior.

3 Research Design and Implementation

Upon literature review on the effect of the organizational-innovation climate of school on students' creative self-efficacy and innovative behavior, this study developed the research framework and hypotheses. This study conducted questionnaire survey on the students of a university, and analyzed the effects of

the organizational-innovation climate of school on students' creative self-efficacy and innovative behavior.

3.1 Research framework

According to related literature, research motives, and purposes, this study constructs the research frameworks, as shown in Figure 1.

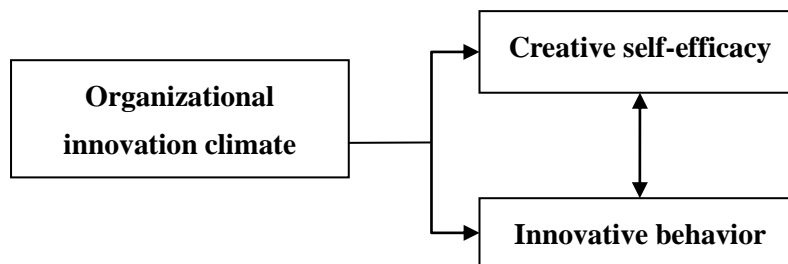


Figure 1: Research framework

3.2 Variables

Variables include the organizational-innovation climate of school, creative self-efficacy, and innovative behavior, as shown below:

3.2.1 The organizational-innovation climate of school

The scale is revised according to the “scale of organizational innovative climate” of Chang (2005b) and Peng (2003), and includes “organizational support”, “teachers’ encouragement” and “rich resources” [1, 36]. There are 15 items with 5 levels where subjects evaluate their satisfaction. “Strongly agree”, “agree”, “no comment”, “disagree”, “strongly disagree” denote the scores from 5 to 1, respectively.

3.2.2 Creative self-efficacy

The scale is revised according to the scale of creative self-efficacy, as designed by Carmeli and Schaubroeck (2007). Cronbach’s α of the scale is .87 and is a single dimension [37]. There are 8 items and 5 levels. The subjects evaluate their satisfaction. “Totally agree”, “agree”, “no comment”, “disagree” and “totally disagree” denote the scores from 5 to 1, respectively.

3.2.3 Innovative behavior

The scale is revised according to the “scale of innovative behavior”, as proposed by Janssen (2000), and includes “output of innovative ideas”, “promotion of innovative ideas”, and “implementation of innovative ideas” [29]. There are 9 items. Cronbach’s α of the scale is .95 and there are 5 levels. The subjects evaluate their satisfaction. “Strongly agree”, “agree”, “no comment”, “disagree”, and “strongly disagree” denote the scores from 5 to 1, respectively.

3.3 Research subjects

The population is university students in the Day school of University, with a total of 7066 subjects. This study adopts questionnaire survey and the sampling is based on proportionate stratified random sampling. The sampling is based on confidence level of (95%) and sample error of (3%). There are 927 samples. Actual samples and returns are as shown in Table 1.

Table 1: Sample distribution of university students in Far East University

College	Number of people	Sampling percentage	Number samples (person)	Actual retrieved samples (person)
Engineering	1,588	22.47%	208	198
Electrical and Engineering	1,609	22.77%	211	196
Commerce and Management	1,992	28.19%	261	231
Hospitality and Leisure	1,877	26.56%	246	178
Total	7,066	100%	927	803

3.4 Research tools

3.4.1 Questionnaire content

The questionnaire includes 4 parts. The first part is the organizational innovative climate of the school and is a revision of the scale designed by Chang (2005b) and Peng (2003). The second part is creative self-efficacy, according to the scale of

Carmeli and Schaubroeck (2007). The third part is innovative behavior, based on the scale of Janssen (2000). The fourth part is basic information.

3.4.2 Reliability and validity of questionnaire

Numbers of items in the scales are 15, 8, 9, and 3, respectively. Item analysis, factor loading, and reliability analysis are conducted by PASW Statistics. There are 35 items. Based on factor loading $>.45$ and Cronbach's α , the researcher judges internal consistency.

3.4.2.1 “The organizational-innovation climate of school”

(1) Item analysis

Upon retrieval of questionnaires, this study conducts item analysis on critical values and correlation coefficients by statistical methods, and eliminates items with critical values of <3.00 and correlation coefficients of $<.400$. It means the homogeneity between the items and overall scale is not high and should be deleted [38]. According to data analysis, 1 item is deleted and 17 are retained. Critical values of scale of organizational innovative climate of the school are 4.384-8.516 and correlation coefficients are .546-.758.

(2) Factor analysis

This study constructs the validity of scales by factor analysis, which includes at least three items. By rotation of Varimax, 3 factors with eigenvalues above 1 are extracted, while the factors that do not belong to the original dimensions are eliminated. According to the results of the factor analysis, accumulated explanatory variance is (59.936%). Formal “scale of the organizational-innovation climate of school” is thus constructed. There are 3 factors extracted from the scale, according to the meanings of items; namely, “organizational support”, “teachers' encouragement”, and “rich resources”.

(3) Reliability analysis

Reliability analysis refers to the measurement of the reliability of the scales, and indicates the stability of consistency of the measurement results. In internal consistency test of the questionnaire, reliability test of Cronbach's α is commonly adopted. When the sub-scales of the pretest questionnaire have $\alpha > 0.7$, it has high reliability. Total scale is at least 0.8 [38]. Reliability of total scale of “organizational innovative climate of the school” is .893. Reliability of the

sub-scales is .758-.814. The overall α of the scale is high, and thus, the reliability is good.

3.4.2.2. “Creative self-efficacy”

(1) Item analysis

By statistical methods, this study conducts item analysis on critical values and correlation coefficients, and eliminates items with critical values <3.00 and correlation coefficients $<.400$. It means that homogeneity between the items and total scale is not high and the items should be deleted [38]. According to data analysis results, no items are eliminated and 8 items are retained. Critical values of creative self-efficacy are 4.585-8.478 and correlation coefficients are .633-.829.

(2) Factor analysis

This study constructs validity of scale by factor analysis, which includes at least 3 items. By rotation of Varimax, 3 factors with eigenvalue >1 are extracted, and the factors that do not belong to the dimension are deleted. Based on the results of factor analysis, accumulated explained variance is (53.712%), thus, formal “creative self-efficacy” is established.

(3) Reliability analysis

Reliability analysis means to measure the reliability of the scale, and indicates stability or consistency of the measured results. In internal consistency of questionnaires, reliability test of Cronbach’s α is commonly adopted. Sub-scales of pretest questionnaire have $\alpha > 0.7$, and has a high reliability. Total scale is at least 0.8 [38]. According to statistical result, reliability of the total scale of “creative self-efficacy” is .874, overall α is high and the reliability is good.

3.4.2.3. “Innovative behavior”

(1) Item analysis

After retrieving the questionnaires, this study conducts item analysis on critical values and correlation coefficients by statistical methods, and eliminates items with critical values of <3.00 and correlation coefficients $<.400$. It means that homogeneity between the items and overall scale is not high and the items should be deleted [38]. According to data analysis result, no items are eliminated, and 9 items are retained. Critical values of innovative behavior are 4.298-9.122 and correlation coefficients are .524-.761.

(2) Factor analysis

This study constructs validity of scale by factor analysis. The factors include at least 3 items. By rotation of Varimax, 3 factors with eigenvalues of >1 are extracted, and the factors that do not belong to the dimension are deleted. According to outcome of factor analysis, accumulated explained variance is (63.813%). Thus, a formal “scale of innovative behavior” is constructed. There are 3 factors extracted from the scale, and according to the meanings of items; they are named “output of innovative ideas”, “promotion of innovative ideas”, and “implementation of innovative ideas”.

(3) Reliability analysis

Reliability analysis means to measure the reliability of the scale. It indicates the stability or consistency of the measurement outcomes. In internal consistency test of the questionnaire, reliability test of Cronbach's α s is commonly adopted. Sub-scales of pretest questionnaire have $\alpha > 0.7$, and have high reliability. Total scale is at least 0.8 [38]. The findings demonstrate that reliability of the total scale of “innovative behavior” is .821. Reliability of the sub-scales is .629-.709. The overall α of the scale is high, and thus, the reliability is good.

3.5 Data processing

After the questionnaire survey, this study retrieved 803 samples, and encoded and inputted the 756 valid samples. Data analysis and processing were based on PASW Statistics. The statistical methods adopted are introduced below:

3.5.1 Descriptive statistics

By frequency distribution, this study recognized the distribution of university students' background variables, means of use, and standard deviations in order to introduce the university students' current “organizational innovative climate of the school”, “creative self-efficacy”, and “innovative behavior”.

3.5.2 Pearson product-moment correlation

By Pearson product-moment correlation, this study probes into the correlation among “organizational innovative climate of the school”, “creative self-efficacy”, and “innovative behavior”.

3.5.3 Simple regression analysis

By simple regression analysis, this study determines the prediction of organizational innovative climate of the school on the students' innovative behavior, the prediction of organizational innovative climate of the school on the students' creative self-efficacy, and the prediction of the students' creative self-efficacy on innovative behavior.

4 Results and Discussion

4.1 Analysis of sample characteristics

- 1) Gender: Regarding genders, there are 490 males (64.8%) and 266 females (35.2%).
- 2) College: Regarding colleges, 175 subjects are in College of Engineering (23.1%), 188 subjects are in College of Electrical and Computer Engineering (24.9%), 227 subjects are in College of Commerce and Management (30.0%), and 166 subjects are in College of Hospitality and Leisure (22.0%).
- 3) Grade: Regarding grades, there are 220 freshmen (19.1%), 224 sophomores (29.6%), 166 juniors (22.0%), and 146 seniors (19.3%).

The above is shown in Table 2.

Table 2: Analysis of samples' basic information

Background variables	Items	Number of people	Percentage (%)
Gender	Male	490	64.8
	Female	266	35.2
College	College of Engineering	175	23.1
	College of Electrical and Computer Engineering	188	24.9
	College of Commerce and Management	227	30.0
	College of Hospitality and Leisure	166	22.0
Grade	Freshman	220	19.1
	Sophomore	224	29.6
	Junior	166	22.0
	Senior	146	19.3
Total		756	100%

4.2 Performance of the organizational-innovation climate of school, creative self-efficacy and innovative behavior

4.2.1 Performance of the organizational-innovation climate of school

According to the subjects' responses, this study analyzes the performance of university students on the organizational-innovation climate of school. The score of 3.70 denotes medium and high levels. The scores of the dimensions are 3.57~3.76. Generally speaking, the performance of university students in the dimensions of the organizational-innovation climate of school is satisfying. Except for "rich resources", which is insignificant, the overall scale and the dimensions are significant. The performance of "organizational support" is first; followed by "teachers' encouragement" and "rich resources", as shown in Table 3.

Table 3: Performance analysis on the students on organizational innovative climate of the school

Dimensions	Number of items	Mean	Standard deviation	t value (test value is 3.5)	Ranking
Organizational support	6	3.76	.61	11.69*	1
Teachers' encouragement	5	3.72	.63	9.65*	2
Rich resources	4	3.57	.64	2.99	3
Total	15	3.70	.54	9.99*	

* $p < .05$

4.2.2 Performance of creative self-efficacy

According to the subjects' responses, this study analyzes students' creative self-efficacy. The score of overall creative self-efficacy is 3.66, and is a medium to high level. University students perform well in creative self-efficacy. Overall significance level is significant, as shown in Table 4.

Table 4: Performance analysis of the students' creative self-efficacy

Dimension	Number of items	Mean	Standard deviation	t value (test value is 3.5)
Total	8	3.66	.54	8.39*

* $p < .05$

4.2.3 Performance of innovative behavior

According to the subjects' responses, this study analyzes university students' innovative behavior. Score of university students' innovative behavior is 3.60, and is a medium to high level. The scores of the dimensions are 3.46~3.69. University students perform well in the dimensions of innovative behavior. Except for "promotion of innovative ideas", which is insignificant, the overall scale and dimensions are significant. Performance of "output of innovative ideas" is first; followed by "implementation of innovative ideas" and "promotion of innovative ideas", as shown in Table 5.

Table 5: Performance analysis of the students' innovative behavior

Dimensions	Number of items	Mean	Standard deviation	t value (test value is 3.5)	Ranking
Output of innovative ideas	3	3.69	.59	9.08*	1
Promotion of innovative ideas	3	3.46	.63	-1.57	3
Implementation of innovative ideas	3	3.65	.62	6.84*	2
Total	9	3.60	.54	5.31*	

* $p < .05$

4.3 Relationship among the organizational-innovation climate of school, creative self-efficacy and innovative behavior

4.3.1 Correlation between the organizational-innovation climate of school and creative self-efficacy

According to analytical results, correlation of university students on the organizational-innovation climate of school and creative self-efficacy is significant ($p < .001$), and correlation coefficients is .744. Thus, there is a significant and positive correlation between the variables. Regarding correlation of university students in the dimensions of the organizational-innovation climate of school and creative self-efficacy, correlation between the variables is significant ($p < .001$). Correlation coefficient between overall the organizational-innovation climate of school and overall creative self-efficacy is .744 ($p < .05$); correlation coefficients between overall creative self-efficacy and the dimensions of the organizational-innovation climate of school are .481-.512 ($p < .05$). The statistical results above are as shown in Table 6. According to analytical results, when university students of overall organizational innovation climate of school are higher, their creative self-efficacy will be higher.

Table 6: Correlation between dimensions of the organizational-innovation climate of school and creative self-efficacy

Variable	the organizational-innovation climate of school			
	Organizational support	Teachers' encouragement	Rich resources	Total
Creative self-efficacy	.481***	.512***	.504***	.744***

*** $p < .001$

4.3.2 Correlation between the organizational-innovation climate of school and innovative behavior

According to analytical results, correlation of university students on the organizational-innovation climate of school and innovative behavior is significant ($p < .001$), and correlation coefficients is .577. Thus, there is a significant and

positive correlation among the variables. Regarding the correlation of university students in dimensions of the organizational-innovation climate of school and innovative behavior, it is significant ($p < .001$). Correlation coefficient between overall the organizational-innovation climate of school and overall innovative behavior is .577 ($p < .05$); correlation coefficients between overall the organizational-innovation climate of school and dimensions of innovative behavior are .482-.534 ($p < .05$); correlation coefficients between overall innovative behavior and dimensions of the organizational-innovation climate of school are .487-.519 ($p < .05$). The statistical analysis results are as shown in Table 7. Based on the analysis, when university students' overall the organizational-innovation climate of school is higher, innovative behavior will be higher. When university students' dimensions of organizational innovative climate of the school are higher, the dimensions of innovative behavior will be higher.

Table 7: Correlation between the organizational-innovation climate of school and innovative behavior

Variables	the organizational-innovation climate of school			
	Organizational support	Teachers' encouragement	Rich resources	Total
Output of innovative ideas	.429***	.423***	.457***	.502***
Promotion of innovative ideas	.389***	.422***	.450***	.482***
Implementation of innovative ideas	.466***	.459***	.461***	.534***
Total	.487***	.495***	.519***	.577***

*** $p < .001$

4.3.3 Correlation between creative self-efficacy and innovative behavior

According to analytical results, correlation of university students on creative self-efficacy and innovative behavior is significant ($p < .001$), and correlation coefficient is .744. Thus, there is a significant and positive correlation between the variables. Regarding the correlation between dimensions of university students' innovative behavior and creative self-efficacy, it is significant ($p < .001$). Correlation coefficient between overall innovative behavior and overall creative

self-efficacy is .744 ($p < .05$); correlation coefficients between overall creative self-efficacy and dimensions of innovative behavior are .645-.671 ($p < .05$). The statistical results are as shown in Table 8. According to the results, when university students' overall creative self-efficacy is higher, innovative behavior will be higher.

Table 8: Correlation between creative self-efficacy and innovative behavior

Variables	Innovative behavior			Total
	Output of innovative ideas	Promotion of innovative ideas	Implementation of innovative ideas	
Creative self-efficacy	.671***	.645***	.646***	.744***

*** $p < .001$

4.4 Effects of organizational innovative climate of the school, creative self-efficacy, and innovative behavior

4.4.1 Prediction of organizational innovative climate of the school and creative self-efficacy

According to analytical results, multiple correlation coefficients of teachers' encouragement, rich resources, organizational support, and organizational innovative climate of the school is .580, and determination coefficient is (33.7%), which is significant. It means that the 3 independent variables in the regression model can explain (33.7%) variance of organizational innovative climate of the school, as shown in Table 9.

Regarding the explanatory variance of individual variables, prediction of "teachers' encouragement" is the best, with an explanatory variance of (26.2%), followed by "rich resources" and "organizational support", with increased explanatory variances of (6.2%) and (1.3%). According to normalized regression coefficients, "teachers' encouragement", "rich resources", and "organizational support" are positive, meaning that the three variables positively influence students on organizational innovative climate of the school. In other words, the more "teachers' encouragement", "rich resources", and "organizational support" are, the higher the

students' creative self-efficacy will be. Therefore, when the students on organizational support, teachers' encouragement, and rich resources of organizational innovative climate of the school are higher, their creative self-efficacy will be higher.

Table 9: Prediction of organizational innovative climate of the school on creative self-efficacy

Order of the variables	Creative self-efficacy					
	R	R ²	ΔR	B	β	F value
Interval (constant)				12.460		
Teachers' encouragement	.512	.262	.262	.372	.275	267.711***
Rich resources	.569	.324	.062	.399	.237	180.476***
Organizational support	.580	.337	.013	.188	.160	127.274***

*** $p < .001$

4.4.2 Prediction of organizational innovative climate of the school on innovative behavior

Based on analytical result, the multiple correlation coefficient of rich resources, teachers' encouragement, organizational support, and organizational innovative climate of the school is .581, and the determination coefficient is (33.8%), which are significant. It means that the 3 independent variables in the regression model can explain (33.8%) variance of organizational innovative climate of the school, as shown in Table 10.

Regarding the explained variance of individual variables, prediction of "rich resources" is the best, and explained variance is (27%), followed by "teachers' encouragement" and "organizational support". The increased explained variances are (5.4%) and (1.5%). According to normalized regression coefficients, "teachers' encouragement", "rich resources", and "organizational support" are positive. It means that the 3 variables positively influence students on the organizational innovative climate of the school. In other words, when "teachers' encouragement", "rich resources and "organizational support" are higher, the students' innovative behavior is also higher. Thus, when the students on organizational support, teachers' encouragement, and rich resources of organizational innovative climate of the school are higher, their innovative behavior will be higher.

Table 10: Predication analysis of the organizational-innovation climate of school on innovative behavior

Order of the variables	Innovative behavior					
	R	R ²	ΔR	B	β	F value
Interval (constant)				13.450		
Rich resources	.519	.270	.270	.512	.270	278.191***
Teachers' encouragement	.569	.323	.054	.352	.231	179.847***
Organizational support	.581	.338	.015	.227	.171	127.927***

*** $p < .001$

5 Conclusions and Suggestions

5.1 Conclusions

Based on the findings, this study obtains the conclusions below by treating the students of the University as subjects:

- 1) Regarding the organizational-innovation climate of school, the students perceive "organizational support" as the highest and "rich resources" as the lowest.
- 2) Regarding creative self-efficacy, the students' overall performance is satisfactory.
- 3) Regarding innovative behavior, the students' performance of "output of innovative ideas" is the best, while "promotion of innovative ideas" is the worst.
- 4) The organizational-innovation climate of school positively influences students' creative self-efficacy and innovative behavior. Likewise, [20], [27] and [32] suggested that organizational innovative climate can guide members to innovation, and the individuals will effectively carry out innovative ideas.
- 5) The students' creative self-efficacy positively influences innovative behavior, which is consistent with [18]. In other words, creative self-efficacy can effectively enhance innovative behavior.

5.2 Suggestions

1. In order to effectively implement organizational innovation, the school should enhance support for students, as it can increase the students' innovative motive and identification with the school through a reward system.
2. The school provides more resources to allow the students to freely create more ideas and carry them out.
3. During instruction, the school should allow students to expand their imagination, and add more creative training courses in curriculum planning in order to enhance students' creative thinking capabilities.
4. The school should host various creative proposals or competitions, and encourage students to participate in creative competitions, both in and out of the school, in order to establish confidence and problem-solving capabilities.
5. Students' participation in creative exhibitions, both in and out of school, will help trigger creative thoughts, cultivate added expertise, and expand international visions.

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