

Factors Fostering Students' Creativity at Capiz State University: Input to Teaching Strategies

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ABSTRACT

The tide of technological and economic change is sweeping every corner of the world and is getting bigger and faster every day. If the Philippines aims to keep pace with these changes, it must be able to cultivate creativity among its would-be entrepreneurs and labor force. This difficult task is the very purpose academic institutions exist. Part of their mission is to inculcate creativity among students. As such, academic institutions must provide a climate which will allow the students to take risks and not being afraid to commit mistakes and fail in the process. Instructional, research, and extension activities must be geared towards the development of the personality traits and attitude of creative individuals. The present study attempts to investigate the commonly cited factors that foster students' creativity in an academic organization. The students' responses in the questionnaire were analyzed to determine the degree of contribution of the factors in fostering their creativity. The factors are: (1) self-confidence; (2) risk taking; (3) use of the abstract; (4) use of systematic analysis; (5) task achievement; and (6) physical environment. The results of this study suggest that the respondents perceive physical environment as the most influential factor that fosters their creativity. The least significant factor identified is the use of the abstract. A significant difference was found in perceptions of the factors that foster creativity when respondents are grouped based on their current general weighted average.

Keywords: Physical environment, risk-taking, self-confidence, task achievement, use of the abstract, use of systematic analysis

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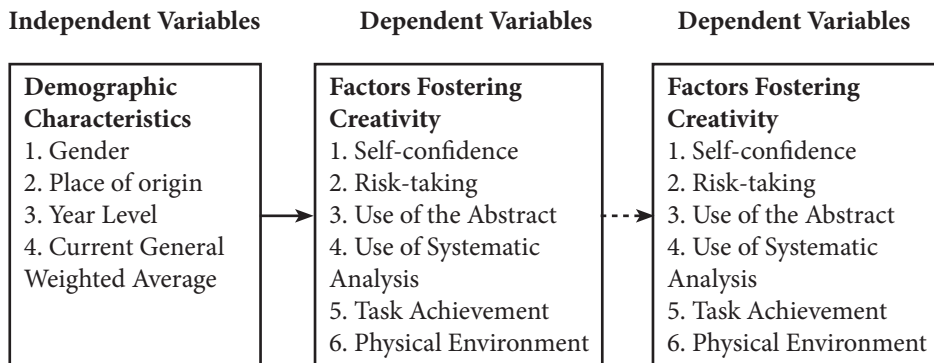
INTRODUCTION

A lot of researches have tried to study and uncover creativity. Yet, creativity has never been universally defined. However, “the production of novel thoughts, solutions, or products based on previous experience and knowledge” (Gandini cited in Carter, 1992) seems to elucidate on the construct.

Creativity is a much needed element in relation to education and learning regardless of the field the students are enrolled in. Especially in the BS Entrepreneurship program, creativity is essential particularly during the ideation process and opportunity identification before the students could come up with a feasible business venture. Mostert (2007) reveals that idea generation requires having a creative mind. Moreover, Starko (1995) suggests that learning is a creative process that involves students making information relevant by linking prior knowledge and new knowledge in an individually meaningful format. She attributes this meaningfulness to the individual’s creativity. Unfortunately, not all schools in the country support the students’ creative expression. In fact, some teachers have the tendency to suppress creativity among their students. Shaughnessy (1991) notes that creative students often lose their creative potential. If the school environment is ill-equipped to develop or support students’ creativity, then the school is not preparing its students for a productive life in the society.

This study investigated the factors fostering the creativity of the BS Entrepreneurship students of the College of Business Administration at Capiz State University – Main Campus during the second semester of academic year 2013 – 2014. Specifically, it sought to answer the following questions: (1) What is the degree of contribution of the factors namely: self-confidence, risk-taking, use of the abstract, use of systematic analysis, task achievement and physical environment to the BS Entrepreneurship students in fostering their creativity as evaluated by them? (2) Are there significant differences on the degree of contribution of these factors in fostering the creativity of the BS Entrepreneurship students when grouped according to gender, age, place of origin and weighted general average?

CONCEPTUAL FRAMEWORK



METHODOLOGY

The descriptive research design was used in this study. The target population was the students enrolled in the BS Entrepreneurship Program at Capiz State University – Main Campus during the second semester of academic year 2013-2014 (N = 244). Using the Sloven's formula with 5% degree of error, the researcher considered 151 students as respondents of the study.

Statistics revealed that out of the 151 respondents, females were predominant because they comprised 87.4% of the total number of respondents compared to 12.6% males. Sixty percent of the respondents live in Roxas City. Majority of the respondents are in their third year followed by the second year students (34%). Most of them have a current general weighted average of 2.0 – 2.49 (49%). No respondent incurred a current general weighted average of 3.0 and below. Appendix 1 displays the distribution of the respondents according to their demographic characteristics namely; gender, place of origin, year level and current general weighted average.

A survey questionnaire consisting of two parts was prepared for this study. Part I of the instrument solicited information about the selected demographic characteristics of the respondents. Part II was devised by the researcher and included items to solicit information about the students' perceived degree of contribution of factors that

foster creativity based on existing literature. The said factors are (1) self-confidence; (2) risk taking; (3) use of the abstract; (4) use of systematic analysis; (5) task achievement and (6) physical environment. All in all, there were 36 statements by which the respondents have to rate themselves based on a four-point Likert scale. Each construct had six items. Appendix 2 presents the survey items for each construct of the factors that foster creativity.

Face and content validity of the instrument was established for this study by Prof. Rowena Cristina dela Cruz, Prof. Ian Arcega, and Prof. Ma. Dorothee Villarruz. Revisions were made after the session. A reliability test was also taken into account. The common measure of reliability is the Cronbach's alpha and the usual criterion is a Cronbach's alpha coefficient of .70 (Harris & Ogbonna, 2001). A Cronbach's alpha coefficient of .70 and above indicated a high degree of internal consistency among the data collected (Harris & Ogbonna; Hsu et al., 2003). The pilot test was conducted to 30 third year students taking up BSBA at the same institution who were chosen randomly. A Cronbach's alpha of .94 was derived from the pilot test.

The data gathered were computer generated using the Statistical Package for Social Sciences (SPSS) version 14 for Windows. Mean and standard deviation were used to analyze the data. To determine the difference between two variables, t-test and ANOVA were applied. In establishing the factors that foster the respondents' creativity, the score with its equivalent scoring interval and verbal interpretation was used.

The following guide was utilized.

Score	Scoring Interval	Verbal Interpretation
4	3.26 - 4.00	Superior Contribution
3	2.51 - 3.25	High Contribution
2	1.76 - 2.50	Moderate Contribution
1	1.00 - 1.75	Minor Contribution

RESULTS AND DISCUSSIONS

When respondents are grouped together, the physical environment ($M = 2.71$), risk-taking ($M = 2.68$), and use of systematic analysis ($M = 2.68$) garnered the three highest grand means. Task achievement ($M = 2.65$), self-confidence ($M = 2.61$), and use of the abstract ($M = 2.57$) got the three lowest grand means. However, the six constructs were evaluated as having high contribution in fostering their creativity.

The overall results indicate that the respondents considered the physical environment as the most influential factor that fosters their creativity. Appendix 3a presents the factors fostering creativity as evaluated by all the respondents.

Amabile (1988) proposed that individual creativity may be affected by even very minor aspects of the immediate social environment. In addition, two major researches were conducted in Europe (Ekvall, 1991, 1996) and in the United States (Isaksen, 1995) which investigated the stimulants of creativity in organizations. The results suggested that the employees are able to be challenged by their goals, and tasks; take initiatives; feel that new ideas are met with support; put forward new ideas and views; and take risks in a creative climate. Similarly, Lee and Tan (2015) found that organizational support and innovative climate develop employee's creativity in a collective endeavor and involves collaborations and interactions with others and help achieve his/her better performance at work.

For the male respondents, the constructs with the highest grand means are risk taking ($M = 2.83$), self-confidence ($M = 2.68$) and use of systematic analysis ($M = 2.62$) while for the female respondents they were the physical environment ($M = 2.72$), use of systematic analysis ($M = 2.69$) and task achievement ($M = 2.68$). The three lowest grand means went to physical environment ($M = 2.61$), use of the abstract ($M = 2.57$), task achievement ($M = 2.46$) for the male respondents and risk taking ($M = 2.66$), self-confidence ($M = 2.60$), and use of the abstract ($M = 2.57$) for the female respondents. Only task achievement ($M = 2.46$) was evaluated by the female respondents as having moderate contribution. Other constructs were evaluated as

having high contribution in fostering the creativity of the male and female respondents. Appendix 3b shows the constructs with their corresponding grand means when respondents are grouped according to gender.

This is consistent with a study by Spiel and Von Korff (1998) who found out that creativity for males mainly focus on the aspect of 'novelty'. Furthermore, creativity focuses on the development of new, uncommon, or unique ideas which is a factor under risk taking. Creative individuals are typically adventure seekers and unafraid to venture the unknown. In a large-scale study of teachers in primary, secondary and further education by Fryer (1996), he noted that women teachers are far more likely to see creativity as a product of experience. Hence, the female respondents in this research saw the physical environment particularly their school as a major factor contributing to their creativity. However, these differences between the male and female genders are not statistically significant at any meaningful level of significance. For respondents who live in Roxas City, the constructs with the three highest grand means are physical environment ($M = 2.71$), risk taking ($M = 2.68$), and self-confidence ($M = 2.64$) and the constructs with three lowest grand means are task achievement ($M = 2.63$), use of systematic analysis ($M = 2.59$) and use of the abstract ($M = 2.54$). All the six constructs were evaluated as having high contribution in fostering their creativity.

For the respondents who live outside of Roxas City, use of systematic analysis ($M = 2.82$), physical environment ($M = 2.69$), and task achievement ($M = 2.69$) got the three highest grand means while risk taking ($M = 2.68$), use of the abstract ($M = 2.61$) and self-confidence ($M = 2.55$) received the three lowest grand means. All the constructs were rated as having high contribution. Appendix 3c presents the constructs with their grand means when respondents are grouped according to place of origin.

The physical environment was included in the three highest grand means for both the respondents within and outside of Roxas City. However, for the self-confidence construct, it was in the three highest grand means for the respondents within Roxas City and in the three lowest grand means for those who live outside of Roxas City. This

is congruent to the study by Peterson (1978) who found adolescents from large urban communities thought more highly about themselves than did adolescents from rural communities. Likewise, Barcinas (1989) concluded that urban students have higher educational and occupational aspirations than rural students. Although, the differences in responses between the respondents who live within or outside Roxas City are not statistically significant at any meaningful level of significance.

For respondents who are in their first year, the constructs with the three highest grand means are physical environment ($M = 2.63$), use of systematic analysis ($M = 2.61$), and task achievement ($M = 2.59$), and the constructs with three lowest grand means are risk taking ($M = 2.56$), self-confidence ($M = 2.49$) and use of the abstract ($M = 2.48$). Among the six constructs, only self-confidence ($M = 2.49$) and use of the abstract ($M = 2.48$) were evaluated as having moderate contribution in fostering their creativity.

For the second year respondents, physical environment ($M = 2.79$), self-confidence ($M = 2.75$) and risk taking ($M = 2.71$) got the three highest grand means while task achievement ($M = 2.67$), use of systematic analysis ($M = 2.59$) and use of the abstract ($M = 2.58$) received the three lowest grand means. All the six constructs were evaluated by the respondents as having high contribution in fostering their creativity.

For respondents in their third year, the constructs with the three highest grand means are use of systematic analysis ($M = 2.81$) followed by risk taking ($M = 2.74$) and task achievement ($M = 2.69$). The constructs with three lowest grand means are physical environment ($M = 2.68$), use of the abstract ($M = 2.61$) and self-confidence ($M = 2.56$). All the six constructs were evaluated as having high contribution in fostering their creativity. Appendix 3d presents the constructs when respondents are grouped according to year level.

First year and second year respondents viewed the physical environment as the most important factor that foster their creativity. In this regard, the school particularly the curriculum must be able to address this since they look up to their school to develop their creative thought

processes. The respondents in their third year were less dependent in the physical environment and rated systematic analysis, risk taking and task achievement as the three greatest factors fostering their creativity. This is in agreement with Seifert and Vornberg (2002) who suggested that typically younger students can interact in instructional settings while older students may be involved in formal meetings such as advisory committees or participating in site-based decision teams. The differences in the responses among the respondents' year levels are not statistically significant at any meaningful level of significance.

For respondents with current general weighted average higher than 2.0, the constructs with the three highest grand means are use of systematic analysis ($M = 2.89$), physical environment ($M = 2.81$), and risk taking ($M = 2.77$), and the constructs with three lowest grand means are task achievement ($M = 2.76$), self-confidence ($M = 2.73$) and use of the abstract ($M = 2.68$). All the six constructs were evaluated as having high contribution in fostering their creativity.

For respondents with current general weighted average of 2.00 to 2.49, risk taking ($M = 2.68$), use of systematic analysis ($M = 2.68$) and task achievement ($M = 2.68$) got the three highest grand means while physical environment ($M = 2.67$), self-confidence ($M = 2.62$) and use of the abstract ($M = 2.59$) received the three lowest grand means. All the six constructs were evaluated by the respondents as having high contribution in fostering their creativity.

For respondents with current general weighted average of 2.50 to 2.99, the constructs with the three highest grand means are risk taking ($M = 2.59$) followed by physical environment ($M = 2.55$) and task achievement ($M = 2.51$). The constructs with three lowest grand means are use of systematic analysis ($M = 2.49$), self-confidence ($M = 2.46$) and use of the abstract ($M = 2.43$). Risk taking, physical environment, task achievement and use of systematic analysis are constructs which were evaluated as having high contribution in fostering the students' creativity. Self-confidence and use of the abstract were rated as having moderate contribution by the students.

No respondent indicated that their current weighted general average is 3.0 and below. Appendix 3e displays the constructs when respondents are grouped according to their current general weighted average.

The use of the abstract received the lowest grand means among the three groups of respondents based on their current general weighted average. According to the website aspminds.com, "it is hard for many people to understand the difference in concrete and abstract thinking." Hence, "parents and educators should become familiar with the compensations they can implement and procedures to gradually improve the students' ability to think abstractly."

The difference in the responses when the respondents are grouped according to their current general weighted average is statistically significant with a p-value of 0.02. The result implies that the respondents' evaluation of the degree of contribution of factors fostering their creativity was influenced by their academic achievement. The result is consistent with the study conducted by Palaniappan (2009) who revealed that there is a positive relationship between creativity and academic achievement. However, it does not conform to the conclusion made by Kim (2005) that there is a "negligible relationship between creativity and IQ scores that even students with low IQ scores can be creative."

CONCLUSIONS

This paper is an attempt to determine the factors that foster creativity in an academic setting through a survey questionnaire. It was found that the respondents consider the physical environment as the most influential factor that fosters their creativity. Behaviorist approaches to creativity place emphasis on the significance of the environment in influencing the behavior of the individual. Hence, creativity can be learned and then assimilated into an individual's personality traits and thought processes given the right stimulus and reinforcement. The use of the abstract was found to be the least significant factor. As the case may be, faculty should incorporate classroom activities and design co-curricular activities that would strengthen students' abstract thinking and reasoning skills.

No significant differences were found in perceptions in the degree of contribution of the factors that foster creativity across demographic characteristics of gender, place of origin, and year level. However, there is a significant difference when the respondents are grouped according to their current general weighted average.

RECOMMENDATIONS

It is recommended that curriculum mapping be undertaken by the College of Business Administration for its BS Entrepreneurship program and if possible, in all the curricular programs of the University. Aims of this endeavor are to address any gap/problem in the curriculum and identify teaching styles and instructional methods and strategies that are considered a supportive environment for creativity in a college classroom. Enhancement of students' abstract thinking and reasoning should be given extra attention.

It is also recommended that training-workshops be conducted in an effort to assist faculty of the College particularly those handling entrepreneurship core subjects in developing innovative methods and techniques needed to enhance students' proficiency in the factors that foster creativity.

Curriculum-based programs which include co-curricular activities should undergo proper planning and evaluation to be able to satisfy the needs of the students since they represent another important element of this supportive environment. They must be designed and implemented in ways that would reinforce the students' perception of creativity as a process that can be learned and developed within the four walls of the classroom. There must be a focus on abstract thinking and divergent thinking through various classroom activities as a perspective influencing the students' view of creativity and the creative process.

As well, the Office of the Student Affairs with the help of the faculty should monitor the kind of extra-curricular activities that are available for the students. In this way, the cultivation of factors that foster students' creativity is maximized within the campus community.

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