

# **A CORRELATION STUDY OF CREATIVITY TRAITS AND ACADEMIC PERFORMANCE OF HIGHER EDUCATION STUDENTS**

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## **ABSTRACT**

*In today's competitive age and changing atmosphere, Creativity in Corporate sector comes to the term of the challenges and innovation. Creativity is the elementary device for advancement of any society and community. Creativity is not the capability to create out of nothing, but the talent to generate new ideas, by combining, changing or reapplying existing ideas. The paper examines the creativity traits among the higher education students and also to find out the relationship between creativity traits and academic performance among higher education students. The data was collected by standardized questionnaire on 5 point Likert Scale developed by (Purohit (1997)) with 306 students of higher education (Management, Engineering, Biotechnology). The result shows that Management students are more creative as compare to Engineering and Biotechnology. The result also shows that there is no significant relationship between Creativity traits and academic performance of the higher education students' i.e. a creative person may not necessarily be a high achiever in education.*

**Keywords: Creativity Traits, Academic Performance, Higher Education**

## **I. INTRODUCTION**

Creativity is the ability to make something new and it generates new ideas, new concepts, new designs and new opportunities while innovation helps to add values to new products. Creativity means different images comes in our mind. According to Akinboye (2003), without creativity, a person is not able to access the fullness of information and resources available but is locked up in old habits, structures, patterns, concepts and perceptions. This is why creativity, generative perception, constructive and design thinking plus innovation should form the basis of any education for sustainable development. There are optimistic people who express usual thoughts, who are motivating and inspiring others. People are imaginative, inventive risk takers and competitors. But their quality is different in extent from one person to another. The creativity depends upon on their originality and creativity. 'Winners do not do different things, but they do things differently' (Haldar, 2009). Creativity is the ability of a person to solve a problem in creative manner. With the use of creative knowledge, can solve specific problems. A person needs opportunity to be creative and apply creativity. Creativity energies the group of ideas, which we need regularly. For creativity people must have desire to create something new, and people need to have the talent to carry out and emerge this wish and drive.

Creativity is defined as the creative human attributes and qualities concerned with imagination, inventiveness, improvisation, insight, institution and curiosity – the natural 'artful' genius and talent of people (Lloyd 2007). According to Kesim," The Dictionary definition of the word "Creativity" is "the ability to create" or "the ability

to produce something new through imaginative skill".(Kesim 2009,p.81).The National Advisory committee on Creative and Cultural education (NACCCE) present a definition of Creativity as “ imaginative activity fashioned so as to produced outcomes that are both original and of value”. This definition expresses five characteristics of creativity , Using imagination , a fashion process ,Pursuing purpose ,Being original ,Judging value ( Kesim,2009,p.81).

## II. DIMENSIONS OF CREATIVITY

<b>Challenges</b>	A creative person approaches challenges and difficulties energetically and with enjoyment.
<b>Freedom</b>	A creative person prefers to be independent and happy to take initiatives and give voice to his/her ideas.
<b>Liveliness</b>	A creative person is busy most of the time. He mostly remains excited and happy.
<b>Openness</b>	A creative person tends to be trusting and considers mistakes as something to learn from.
<b>Conflicts</b>	A creative person looks for a helpful win-win compromise, which needs willingness to communicate with understanding and empathy.
<b>Risk Taking</b>	A creative person takes responsibility readily and doesn't hesitate to act on new ideas. (Purohit, 1997).

## III. ACADEMIC PERFORMANCE

Education is the general form of learning in which the knowledge, skills, and behaviors of a group of people are shared from one generation to other through teaching, training or research. Academic performance is the important part of the education. The term academic performance refers to how the student deals with their studies and how they cope with or accomplish different tasks given to them by their teachers. Academic performance is the outcome of education and it explores at which extent a student, teacher or institutions has achieved their educational goals. Academic performance reflects the student ability and the students who are academically successful have higher self-esteem, and they have lower level of depression and anxiety and academically successful students have higher self-confidence as compare to others. Academic success is important because it will help to students to tackle the technology demanding occupations of the future. At the targeted organization, the academic performance of a student is assessed through various parameters which include continuous assessment, mid-term exam and end term exam. So for the study have taken all the three parameters into action which are comprehensive and attempts to capture the holistic development of students.

## IV. ROLE OF CREATIVITY IN EDUCATION

Education means of self-realization and self-expression. It helps to carrying out the best in a person; it helps to encourage physical, emotional and intellectual development of the student. Creativity plays an important role in education because it motivates to students to so work in a creative and different in manners. It gives opportunities to enhance capacity for awareness in one's self and in others also. Creativity enhances and helps to

students in presentation and communication skills, listening skills and storytelling. Creativity builds self-confidence, initiative, determination and ability to persuade. In 21<sup>st</sup> century leadership increasingly demands the passionate creativity among the higher education students. Creativity also focuses on participation of students, how they perceived the task and how creatively they performed the task. A creative idea must lead to achievement of a certain objectives.

### V. LITERATURE REVIEW

Creativity measures the ability to accomplish goals and helpful to make students more creative and make more evaluative and decision maker.

**5.1 Stephen and David (2006)** conducted research study on to develop a building block of creativity among the students and helped to find out the alternative ways of thinking about schooling and leadership. The study found that creativity and innovation leads to entrepreneurialism and encouragement to challenge new technology.

**5.2 Wennberg and Berglund (2006)** conducted a study to explore the creativity between two groups of entrepreneurship students and engineering students. In order to achieve the objective personality test and open ended interviews were used. The study found that both the groups have creative potential but engineering students cancelled this into practical and incremental efforts whereas the business students were more speculative and had clear market focus.

**5.3 Lloyd and Kerr (2008)** suggested that management education needs to consider a trend in learning design to create advance pedagogical process this study required skills for training to facilitating transformational learning. This study founded that artful learning enhance the capacity for awareness of creativity and helps to develop managers and leaders.

**5.4 Shaheen (2010)** conducted a research study to know the changing role of education in creativity with the use of evidence and document in implementation of creativity. The study found that creativity helps in education and thinking of creative ideas which effects on society. Creativity becomes a part of the educational agenda.

**5.5 Larry and Livingston (2010)** attempted to analyze the approaches to creativity in education context and organize the intellectual community into new patterns of interaction according to time allocation. The study helped to access the information data, knowledge and opinion. The study founded that creativity is not a teaching activity it understand and build up by own self.

**5.6 Yakasai et.al (2010)** attempted to investigate the extent to which the level of creativity and emotional intelligence influenced the academic achievement of students. The sample size included 235 subjects and three instruments: CGPA (Cumulative grade point), SCIF (Information format), WLEIS (Wong and Law emotional intelligence scale) and NHCT (Nicolas Holt Creativity Test) were used to collect data. The study found that no significant relationship between creativity and CGPA scores of the higher National Diploma HND business administration students of Polytechnics in the South Western States of Nigeria and there was no significant difference between male and female students' academic achievement, creativity and emotional intelligence.

**5.7 Ogunsanya et.al (2010)** attempted to investigate the relationship between student's creativity and academic achievement as measured by the CGPA scores. The study selected the 235 students of Hindi Business administration of Polytechnics. To measure the students' creativity Nicolas Holt Creativity Test (NHCT) and

Student CGPA information format (SCIF) were used to collect the data. In order to achieve the research objectives the researcher has applied T-test with the help of SPSS. The study found that low negative significant relationship between Creativity and CGPA scores and also found that higher the students creativity, the lower the CGPA scores. A creative person may not necessarily be a high achiever in the school.

**5.8 Pimpa and Rojanapanich (2011)** attempted to analyze the factor affected contemporary education. The study also observed the modern culture factor and concept of gender which helps in development of creativity among young students. The study found that young students are willing to participate in creative education and social activities and it also helped to students to express themselves and clear their doubt.

**5.9 Facca et al (2012)** depicted the relationship between creativity and entrepreneurship and this study also focused on effectiveness of including divergent thinking exercise in the entrepreneurship classroom. The study found that the students were more creative who enrolled in the entrepreneurship class and better on divergent thinking as compared to those who did not enrolled. The study also found that it helped to generate a greater range of ideas.

**5.10 Muhammad et.al (2012)** aimed to explore the relationship between creative thinking and academic achievements of the secondary school students. The study selected the 256 students using simple random sampling. In order to achieve the objective correlation and one way ANOVA techniques were used with the help of SPSS. The study found that significant relationship between Creative thinking and academic achievement and also found that significant relationship between creative thinking and students' academic achievements on different aspects of test of creative thinking.

**5.11 Chen and Chen (2012)** depicted that how to promote creativity in higher education. This study also found that creativity strategy which helps to encouraged improving and enhancing creativity in higher education. This study found that creative strategies helped to improve and enhance the creativity and also helped in fulfillment of goal of efficiency with innovation.

**5.10 Shuaib (2013)** conducted a research study on creative education which includes active cognitive process like creating, problem- solving, reasoning, decision making and evaluation. The study found that best academician is required in creative education. This study also found that proposed learning and teaching method that academician in creative education can use in teaching and learning process.

**5.11 Riasati and Baghaei (2013)** attempted to investigate the relationship between teachers Creativity and Students academic performance. To investigate the relationship data were collected through Torrance Test of Creative Thinking (TTCT) and to measure the students' academic performance the final scores was taken as the academic achievement. The study found that teacher's creativity level and student's academic performance are interrelated and also found that creativity can make difference in students' achievement and creativity can incorporate through creative techniques and strategies into their teaching practices.

### 5.12 Objectives of the study

- To study the Creativity Traits among the higher education students.
- To study the relationship of Creativity Traits on academic performance of higher education students.

## VI. HYPOTHESIS OF THE STUDY

**H0:** There is no significant relationship between Creativity Traits and Academic Performance of higher Education students.

## VII. METHODOLOGY

### 7.1 Sources of Data

The data has been collected by the students of higher education (Management, Engineering, and Biotechnology) in the university. It includes 306 students which are studying in higher education (Management, Engineering, and Biotechnology). For secondary sources the electronic data ProQuest, JStor, Google Scholar has been used.

### 7.2 Research Design

A descriptive research has been conducted to study the Creativity trait among the higher education students and also to study the relationship among Creativity traits and academic performance of the higher education students.

### 7.3 Target Population

The Target population in the study focuses on 306 students which are studying in the higher education (Management, Engineering, and Biotechnology) in the university. The questionnaire was distributed to 306 students and given their responses. The study included both male and female students who are studying in higher education (Management, Engineering, and Biotechnology).

### 7.4 Sampling Technique

In order to attain the objective of the study sample are selected on the basis of simple random sampling from the higher education students of the university.

### 7.5 Tools of data collection

In order to achieve the objectives a standardized questionnaire developed by Purohit, 1997, has been used to take the responses of the students. To study the Creativity traits among the higher education students. The creativity trait questionnaire has 24 statements which measures the level of creativity in terms of the challenge, freedom, liveliness, openness, conflict and risk-taking among the higher education students.

### 7.6 Data Collection Procedure

For the purpose of data collection the information given by the researcher and after that the questionnaire was distributed among the students and then administrates the complete questionnaire of Creativity according to standardized instruction and norms. After getting the responses identify the Creativity trait among the higher education students with the help of their -rating.

### 7.7 Statistical tool

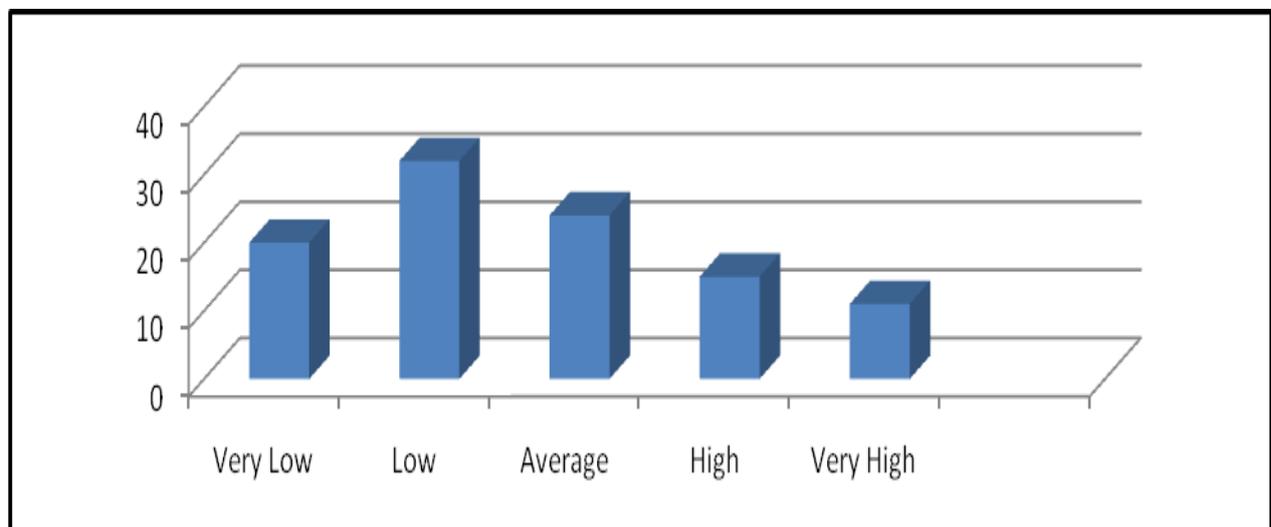
To achieve the objective or to know about the Creativity trait among the higher education students Descriptive statistics was used with help of SPSS software and to find out the relationship among academic performance and creativity trait among the students the correlation was used.

**7.8 Result and Analysis**

**Table 1.1 Table Represents the Creativity level of Management Students**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Low	24	23.5	23.5	23.5
	Low	23	22.5	22.5	46.1
	Average	27	26.5	26.5	72.5
	High	12	11.8	11.8	84.3
	Very High	16	15.7	15.7	100.0
	Total	102	100.0	100.0	

**Figure 1.1 Graphical Representation of the Creativity level of Management Students**



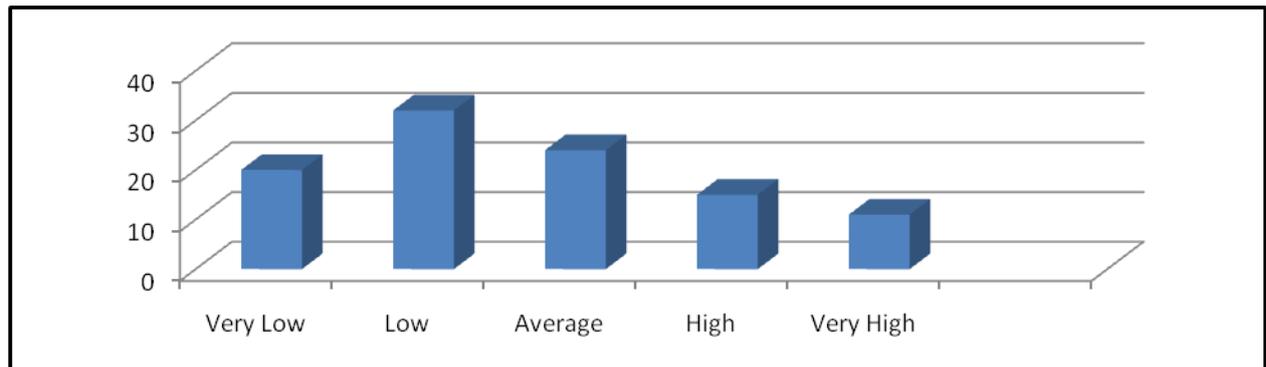
From the above table it is clear that out of 102 students 24 students have very low creativity score and 23 students have low creativity score in creativity assessment test. 27 students are average on their creativity score and whereas 12 students are high on their creativity score. In the creativity assessment test 16 students are very high on their creativity level. From the above table it is clear that few students have very high creativity level and majority of the students are average on their creativity level.

**Table 1.2 Table Represents the Creativity level of Engineering Students**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very low	34	33.3	33.3	33.3
	low	21	20.6	20.6	53.9

Average	26	25.5	25.5	79.4
High	13	12.7	12.7	92.2
Very High	8	7.8	7.8	100.0
Total	102	100.0	100.0	

**Figure 1.2 Graphical Representation of the Creativity level of Engineering Students**

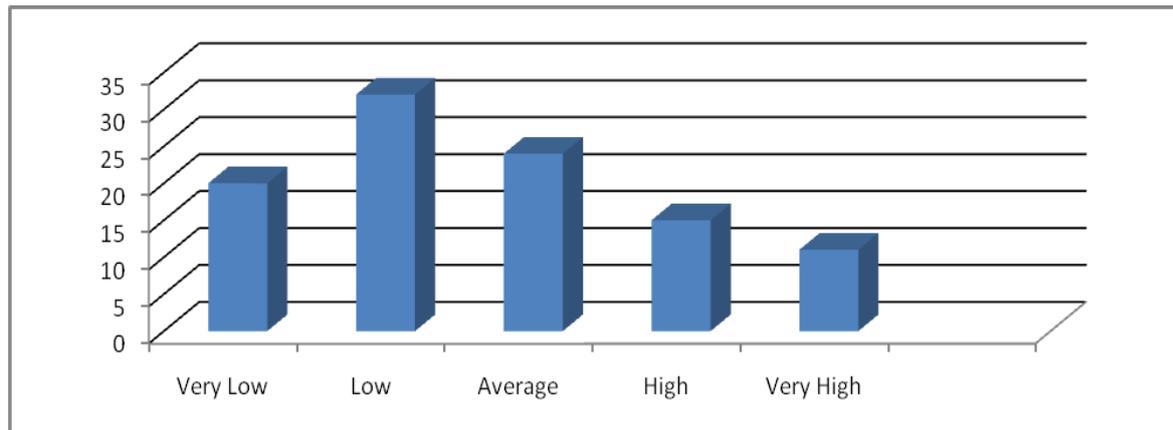


From the above table it is clear that out of 102 students 34 students have very low creativity score and 21 students have low creativity score in creativity assessment test. 26 students are average on their creativity score and whereas 13 students are high on their creativity score. In the creativity assessment test 8 students are very high on their creativity level. From the above table it is clear that few students have very high creativity level and majority of the students are very low on their creativity level.

**Table 1.3 Table Represents the Creativity level of Biotechnology Students**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Low	20	19.6	19.6	19.6
	Low	32	31.4	31.4	51.0
	Average	24	23.5	23.5	74.5
	High	15	14.7	14.7	89.2
	Very High	11	10.8	10.8	100.0
	Total	102	100.0	100.0	

**Figure 1.3 Graphical Representation of the Creativity level of Biotechnology Students**



From the above table it is clear that out of 102 students 20 students have very low creativity score and 32 students have low creativity score in creativity assessment test. 24 students are average on their creativity score and whereas 15 students are high on their creativity score. In the creativity assessment test 11 students are very high on their creativity level. From the above table it is clear that few students have very high creativity level and majority of the students are very low on their creativity level.

**Table 1.4 Table Represents the Relationship among Creativity trait and academic performance of Management Students**

		CGPA	Creativity Score
CGPA	Pearson Correlation	1	-.088
	Sig. (2-tailed)		.379
	N	102	102
Creativity Score	Pearson Correlation	-.088	1
	Sig. (2-tailed)	.379	
	N	102	102

From this above table it is clear there is negative correlation among the creativity trait and academic performance of the students. The value of  $r = -.088$  which shows that negative correlation value. This shows that there is a relationship among academic performance and creativity trait but negative relationship this shows that there is inversely relationship among creativity trait and academic performance. A creative person may not necessarily be a high achiever in education. From this above table it is clear that the student who is good in academic who must have Creative trait and vice versa. From this it is clear that to become creative person not compulsory that he/she must be good in academic.

**Table 1.5 Table Represents the Relationship among Creativity trait and academic performance of Engineering Students**

		Creativity Score	CGPA
Creativity Score	Pearson Correlation	1	-.026
	Sig. (2-tailed)		.795
	N	102	102
CGPA	Pearson Correlation	-.026	1
	Sig. (2-tailed)	.795	
	N	102	102

From this above table it is clear there is negative correlation among the creativity trait and academic performance of the students. The value of  $r = -.026$  which shows that negative correlation value. This shows that there is a relationship among academic performance and creativity trait but negative relationship this shows that there is inversely relationship among creativity trait and academic performance. A creative person may not necessarily be a high achiever in education. From this above table it is clear that the student who is good in academic who must have Creative trait and vice versa. From this it is clear that to become creative person not compulsory that he/she must be good in academic.

**Table 1.6 Table Represents the Relationship among Creativity trait and academic performance of Biotechnology Students**

		CGPA	Creativity-score
CGPA	Pearson Correlation	1	-.090
	Sig. (2-tailed)		.367
	N	102	102
Creativity-score	Pearson Correlation	-.090	1
	Sig. (2-tailed)	.367	
	N	102	102

From the above table it is clear there is negative correlation among the creativity trait and academic performance of the students. The value of  $r = -.090$  which shows that negative correlation value. This shows that there is a relationship among academic performance and creativity trait but negative relationship this shows that there is inversely relationship among creativity trait and academic performance. A creative person may not necessarily be a high achiever in education. From this above table it is clear that it is not compulsory the student who is good in academic who must have Creative trait and vice versa.

### VIII. CONCLUSION

The study concludes that Management students are more creative than Engineering, and Biotechnology students. Engineering students are Very Low on creativity as compare to Management and Biotechnology. **Wennberg and Berglund (2006)** study found that both the groups have creative potential but engineering students cancelled this into practical and incremental efforts whereas the business students were more speculative and had clear market focus. **Facca et al (2012)** study found that the students were more creative who enrolled in the entrepreneurship class and better on divergent thinking. The result indicates that there is no significant relationship among the Creativity traits and academic performance of the Higher education students ( $r = -.088, -.026, -.090$ ). The Null Hypothesis Accepted. **Yakasai et.al (2010)** study found that no significant relationship between creativity and CGPA scores of the higher National Diploma HND business administration students of Polytechnics in the South Western States of Nigeria.

### IX. LIMITATION OF THE STUDY

- 1) The sample size was limited.
- 2) Due to time constraints, only 102 students were ready to response through questionnaire. Hence, there may be need to cover more students to have a realistic approach towards findings.

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