



ORIGINAL RESEARCH PAPER

Education

ANALYSIS OF CREATIVITY AND ITS IMPACT ON ACADEMIC ACHIEVEMENT OF PLUS TWO STUDENTS

KEY WORDS: Creativity; Academic Achievement; Higher Secondary Students; Education.

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ABSTRACT

Creativity is a special type ability which is referred as divergent thinking. It is almost found in every individual. Creative children perform the task very well compared to others. This study is an attempt to investigate the influence of creativity on academic achievement of secondary school students. The study adopted a descriptive survey method of research. Participants were 150 senior secondary school students randomly selected from four schools in Bankura district of West Bengal state (72 boys & 78 girls) belongs from urban and rural areas. For the study, the students from XI, and XII standards were selected. Creativity Scale constructed and standardized by Dr. Roma Pal (1986). Academic achievement was assessed by the total marks of students in their Matriculation Examination. There is a no significant difference in academic achievement of male and female senior secondary school students in relation to their Creativity. There is a no significant difference in academic achievement of rural and urban senior secondary school students. It was found that there is significant positive relationship between creativity and academic achievement.

INTRODUCTION:

Every day, we face new changes in all aspects of life and creativity is not only a means for adapting with changes but also a stimulus for producing knowledge in different fields of study. Moreover, creativity as one of the key factors in academic achievement requires special attention. But the contradiction in the results of the research pertaining to the more influential type of creativity in academic achievement necessitates researchers and experts to focus more accurately on cognitive and trait creativity and their impacts on academic achievement.

Concept of creativity occupies a very important place in educational psychology. According to Simpson creativity involves new forms of thinking away from the traditional forms. Creativity is important because it is a key ingredient of the innovative process and without it innovation is impossible. Every child has the ability to create something new in their activities. It is the duty of the teacher to identify the creative abilities of the students and provide opportunities to express them. A healthy favourable atmosphere to be provided for creative thinking and expression which nourishes the creativity among children. Creative children are those constantly probing, discovering, imagining, asking questions and guessing. They should be encouraged to ask unusual questions to explore new ways of thinking and to try novel approaches to problem solving. Creative children show the higher academic performance and also contribute to the society for the development of the country.

Creativity is viewed in terms of problem-solving behaviour. Creativity is that characteristic of human behaviour that seems to be the most mysterious and yet most critical to human advancement. It is the capacity to solve problems in a new ways and to produce works that are novel, appropriate and socially valued. Sternberg & Lubart (1996) describe creativity as the confluence of intellectual activity, knowledge, motivation, thinking style, personality and environment. Akinboye (2003) without creativity a person is not able to access the fullness of information and resources available but is locked in old habits, structures, patterns, concepts and perceptions. The achievement of the students is seen by the scores that student gain in their academic work. From the academic achievement, the student come to know about themselves that where they stand in their studies. Higher the achievement more is the openings of students for better job in all fields. The average student in the class is always doing their work with stress and don't take interest in the studies. These effects on the academic achievement of the students and the students show average or poor result in academic performance.

Academic achievement is the core of the wider term i.e. educational growth. The importance of academic achievement in one's life cannot be overemphasised. Life in general, and for a student in particular has become highly competitive in the current scenario. In this context, parents, teachers and all in surrounding always ensure child's by providing conducive environment in terms of best school, favourable learning environment at home, for good academic achievement. But efforts made by parents, teachers and others cannot be always influencing factor for determining of academic achievement among children either due individual differences in children or any factor.

REVIEW OF RELATED LITERATURE:

Sarika Chauhan, & Anita Sharma (2017) Conducted a study on "Relationship between creativity and academic achievement among public and private school students in both the gender". The sample consisted of 600 students from higher secondary schools. Verbal Test of Creative Thinking by Mehdi (1973) was used to assess the students creativity. Correlation and Stepwise regression analysis was used to see the significant relationship and best predictor of academic achievement among components of creativity. The results of the present study reported the importance of creativity in predicting the student's academic success and achievement-orientation.

Aleksandra Gajda and Maciej Karwowski (2016) have conducted a study on "Creativity and Academic Achievement: A Meta-Analysis". This article reports on a meta-analysis of 120 studies (total N 52,578; 782 effects) examining the relationship between creativity and academic achievement in research conducted since the 1960s. Average correlation between creativity and academic achievement was $r = .22$, 95% CI [.19, .24]. Moreover, verbal tests of creativity yielded significantly stronger relationships with academic achievement than figural tests. Theoretical and practical consequences are discussed.

Chauhdary, V. (2014) studied to find out the correlation between academic achievement and creativity of the creative and non-creative students. The results shows that the value of the correlation coefficient for the two variables as creativity and academic achievement among creative students was found to be 0.234 and among non-creative students 0.14 respectively. A significant correlation was found between these two variables of creative students. It reveals that creative students who scored higher of creativity measures, would also score higher on academic achievement and vice versa.

S.Candrasekaran (2013) have conducted a study on "Creativity and Academic Achievement of Higher Secondary School Students in Tamilnadu". The aim of this research is to examine if a relationship exists between creativity and academic achievement and if the relationship differs between males and females. Participant (N=118; male=67 and female=51) completed creativity test. Cumulative grade point average (CGPA) was used to select the participants. Creativity was measured using the Khatena Torrance Creative Perception (KTCPI) test. Pearson correlation analysis indicated that aspects of creativity were not related to academic achievement for both males and females. However, implications of the findings for this study in creativity and academic achievement are discussed.

Md. Mohammed alam (2009) made a correlational study in relation to creativity and achievement motivation. Major finding of the study was a significant positive relationship between creativity, academic achievement and achievement motivation.

STATEMENT OF THE PROBLEM

The researcher has done his research on the topic "Analysis of creativity and its impact on academic achievement of plus two students"

OBJECTIVE OF THE STUDY :-

The following objective are-

1. To understand the difference of the measures of creativity gender wise and locale wise
2. To study the relationship between creativity and academic achievement among the plus two students.

HYPOTHESES OF THE STUDY

The following hypotheses are formed for the study-

H_{01} . There is no significant difference in the measures of creativity between male and female students of higher secondary school.

H_{02} . There is no significant difference in the measures of creativity between rural and urban students of higher secondary school.

H_{03} . There is no significant difference in the measures of academic achievement between male and female students of higher secondary school.

H_{04} . There is no significant difference in the measures of academic achievement between rural and urban students of higher secondary school.

H_{05} . There is no significant difference in the measures of creativity and academic achievement of higher secondary school students.

H_{06} . There is no significant relation between the measures of male creativity and male academic achievement of higher secondary school students.

H_{07} . There is no significant relation between the measures of female creativity and female academic achievement of higher secondary school students.

H_{08} . There is no significant relation between the measures of rural creativity and rural academic achievement of higher secondary school students.

H_{09} . There is no significant relation between the measures of urban creativity and urban academic achievement of higher secondary school students.

METHODOLOGY OF THE STUDY

Population of the study: Population for this study consists of students of higher secondary schools of Bankura district of WestBengal state .

Sample for the study:

The sample of the present research consists of 150 students of different higher secondary schools of 6 taluk of south zone of Tumkur district. In this sample 72 boys and 78 girls are taken. The selection of the students for the sample was done by collecting the school marks in the Board examination of the 10th standard students under WBSE. The researcher has selected a Purposive sampling from the population.

Tools used for study:

1. creativity scale by Dr.Roma Pal(1986).
2. Academic achievement was assessed by the total marks of students in their Matriculation Examination.

Statistical techniques Used

The researcher has used Mean, standard deviation, t-test and pearson product moment corelation method as statistical techniques for analyzing and manipulating the data.

ANALYSIS AND INTERPRETATION OF DATA

The analysis and interpretation of data is discussed under

Table 1 Presentation of the distribution of the score of creativity of higher secondary school students. (Boys and Girls)

Score	Boys/Male		Girls/Female	
	Frequency	Cmf%	frequency	Cmf%
10-19	7	9.72	2	2.56
20-29	12	26.38	15	21.79
30-39	20	54.16	26	55.13
40-49	25	88.89	26	88.46
50-59	8	100	9	100
	$\Sigma f=72$		$\Sigma f=78$	

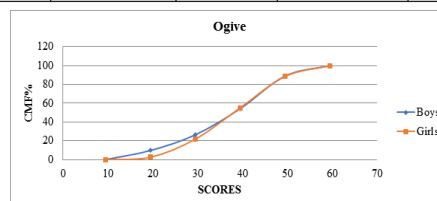


Figure 1: Cumulative frequency percentage (Ogive) showing the scores of Creativity of Boys and Girls.

Table 2 Presentation of the distribution of the score of creativity of higher secondary school students. (Rural and Urban)

Score	Rural		Urban	
	Frequency	Cmf%	frequency	Cmf%
10-19	8	9.75	2	2.94
20-29	16	29.27	11	19.11
30-39	24	58.54	21	50
40-49	28	92.68	23	83.82
50-59	6	100	11	100
	$\Sigma f=82$		$\Sigma f=68$	

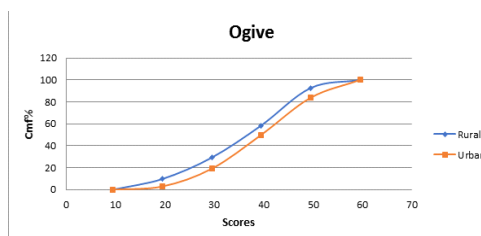


Figure 2: Cumulative frequency percentage (Ogive) showing the scores of Creativity of Rural and Urban

Mean score and S.Ds on creativity of higher secondary School Students Calculate Sub-Sample.

Sub Sample		N	Mean	S.D
Rural	Boys	39	35.3	10.8
	Girls	43	37.42	9.29
	Total Rural	82	36.4	10.0
Urban	Boys	33	40.64	9.34
	Girls	35	37.09	9.68
	Total Urban	68	38.81	9.61
Total Boys		72	37.8	10.4
Total Girls		78	37.27	9.41
Total Sample		150	37.50	9.87

Finding out the significance of Difference in the Mean Scores of the Creativity of higher secondary school students for Different sub-Sample

For specifying the mean difference of the students in the students in the Creativity different sub-sample, the investigator applied t-test. All result of those tests were shown in table no.4

Table-4. Showing the result of T-valu of creativity for different sub-sample

SL.NO	Sub-Group	N	Mean	S.D	T-value	P-value
1.	Boys	72	37.8	10.4	0.30	0.767
	Girls	78	37.27	9.41		
2.	Rural	82	36.4	10.0	1.48	0.140
	Urban	68	38.81	9.61		
3.	Rural Boys	39	35.3	10.8	0.95	0.344
	Rural Girls	43	37.42	9.29		
4.	Urban Boys	33	40.64	9.34	1.54	0.129
	Urban Girls	35	37.09	9.68		
5.	Rural Boys	39	35.3	10.08	0.74	0.460
	Urban Girls	35	37.09	9.68		
6.	Rural Girls	43	37.42	9.29	0.15	0.878
	Urban Girls	35	37.09	9.68		
7.	Rural Boys	39	35.3	10.08	2.22	0.030*
	Urban Boys	33	40.64	9.34		
8.	Rural Girls	43	37.42	9.29	1.49	0.140
	Urban Boys	33	40.64	9.34		

*Indicates Significant at 0.05 level

Interpretation:

From the above tables 4.10 it shows that the following:

I) The t-value of Boys and Girls of Creativity is 0.30 and the p-value is 0.767. As the p-value is greater than the 0.05 level of significance, therefore the testing is insignificant at 0.05 level of significance with df148. Hence the null hypothesis is accepted.

II) The t-value of Rural and Urban of Creativity is 1.48 and the p-value is 0.140. As the p-value is greater than the 0.05 level of significance, therefore the testing is insignificant at 0.05 level of significance with df 148. Hence the null hypothesis is accepted.

III) The t-value of Rural Boys and Rural Girls of Creativity is 0.95 and the p-value is 0.344. As the p-value is greater than the 0.05 level of significance, therefore the testing is insignificant at 0.05 level of significance with df 80. Hence the null hypothesis is accepted.

IV) The t-value of Urban Boys and Urban Girls of Creativity is 1.54 and the p-value is 0.460. As the p-value is greater than the 0.05 level of significance, therefore the testing is insignificant at 0.05 level of significance with df 66. Hence the null hypothesis is accepted.

V) The t-value of Rural Boys and Urban Girls of Creativity is 0.74 and the p-value is 0.460. As the p-value is greater than the

0.05 level of significance, therefore the testing is insignificant at 0.05 level of significance with df 72. Hence the null hypothesis is accepted.

VI) The t-value of Rural Girls and Urban Girls of Creativity is 0.15 and the p-value is 0.878. As the p-value is greater than the 0.05 level of significance, therefore the testing is insignificant at 0.05 level of significance with df 76. Hence the null hypothesis is accepted.

VII) The t-value of Rural Boys and Urban Boys of Creativity is 2.22 and the p-value is 0.030. As the p-value is less than the 0.05 level of significance, therefore the testing is significant at 0.05 level of significance with df 70. Hence the null hypothesis is rejected.

VIII) The t-value of Rural Girls and Urban Boys of Creativity is 0.49 and the p-value is 0.140. As the p-value is greater than the 0.05 level of significance, therefore the testing is insignificant at 0.05 level of significance with df 76. Hence the null hypothesis is accepted.

Finding out the Significance of Relationship between Creativity and Academic Achievement of higher secondary school students

The investigator applied product moment correlation for finding out the relationship of Creativity and Academic Achievement of higher secondary school students which has been given below.

Table 5 Showing the Significance of Relationship of Creativity and Academic Achievement of higher secondary School Student

Variables	N	Coefficient of Correlation	P-value
Creativity and academic achievement	150	0.640	0.000*

Indicates Significant at 0.05 level

Interpretation:

From the above tables 4.11 it shows that the following:

The coefficient of correlation of creativity and academic achievement is 0.640 and the p-value is 0.000. As the p-value is less than the 0.05 level of significance, therefore the testing is significant at 0.05 levels. Hence the null hypothesis is rejected.

CONCLUSION

From the above table, it is concluded that there is a significant positive relationship between creativity and academic achievement of higher secondary school students. It is also concluded that high creative students have higher academic achievement than low creative students.

EDUCATIONAL IMPLICATIONS:

- Teachers should provide opportunities for free expression of thought by adopting modern scientific methods of teaching.
- It is the responsibility of the teachers to provide safe and permissive atmosphere to the children where their ideas are encouraged without the threat of evaluation.
- Unusual answers to questions and uncommon solutions to problems should be encouraged and rewarded.
- Creativity mobilization techniques should be used by teachers to mobilize functions essential for various types of creative activities of the students.
- Children should be encouraged to read stories of different kinds, as these will boost the imagination of the students.
- Freedom to commit mistake is the best environment to nurture creativity.

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