



IMPACT OF CREATIVE THINKING ON ACADEMIC ACHIEVEMENT AMONG DIFFERENT SOCIAL GROUP: A COMPARATIVE STUDY

Dr. Sristidhar Bera

Assistant Professor, Department of Education
Gourav Guin Memorial College, Chandrakona Road,
Dist-Paschim Medinipur, W.B.

ABSTRACT

The present study tries to examine the impact of creative thinking on academic achievement of xth grade secondary students of Paschim Medinipur District in West Bengal. For this purpose six schools were chosen under two block namely Garhbeta – III and Narayangarh block. Simple random sampling technique was used to collect the data from Xth grade secondary students. SD, Correlation, student 't' test were used to analyzed the data. The result showed that creative thinking is positively correlated with academic achievement. There exist significant difference between General students and SC, ST students in their creative thinking. No significance difference is shown between general students and SC, ST students in their academic achievement but significant difference exists between SC and ST students in their academic achievement.

Key words: Student's 't' test, Creative thinking, social group

Introduction

Academic achievement is commonly measured by examinations or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important — procedural knowledge such as skills or declarative knowledge such as facts. Academic achievement represents performance outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in school, college, and university. School systems mostly define cognitive goals that either apply across multiple subject areas (e.g., critical thinking) or include the acquisition of knowledge and understanding in a specific intellectual domain (e.g., numeracy, literacy, science, history). Therefore, academic achievement should be considered to be a multifaceted construct that comprises different domains of learning. Because the field of academic achievement is very wide-ranging and covers a broad variety of educational outcomes, the definition of academic achievement depends on the indicators used to measure it.

Among the many criteria that indicate academic achievement, there are very general indicators such as procedural and declarative knowledge acquired in an educational system, more curricular-based criteria such as grades or performance on an educational achievement test, and cumulative indicators of academic achievement such as educational degrees and certificates. All criteria have in common that they represent intellectual endeavors and thus, more or less, mirror the intellectual capacity of a person. In developed societies, academic achievement plays an important role in every person's life. Academic achievement as measured by the GPA (grade point average) or by standardized assessments designed for selection purpose such as the SAT (Scholastic Assessment Test) determines whether a student will have the opportunity to continue his or her education (e.g., to attend a university). Therefore, academic achievement defines whether one can take part in higher education, and based on the educational degrees one attains, influences one's vocational career after education. Besides the relevance for an individual, academic achievement is of utmost importance for the wealth of a nation and its prosperity. Recently, PISA (Programme for International Student Assessment), administered by the OECD (Organisation for Economic Co-operation and Development), has showed strong association between a society's level of academic achievement and positive socioeconomic development. The results of these studies provide information about different indicators of a nation's academic

achievement; such information is used to analyze the strengths and weaknesses of a nation's educational system and to guide educational policy decisions. Given the individual and societal importance of academic achievement, it is not surprising that academic achievement is the research focus of many scientists; particularly, in psychology or educational disciplines.

Concept of Creative Thinking

We desperately need creative talents whose problem solving ability can help us resolve the perplexing problems of cancer, AIDS, energy crises, crime, corruption, overpopulation and diminishing natural resources. Development of creative talents produces Creative Excellence that leads to improvements which makes the future. They also produce tomorrow minds that generate the new knowledge.

Creativity is a faculty of humanity that values novelty and is reflected in human being through the qualities like fluency, flexibility, originality and elaboration. Creative thinking is the ability to think or imagine uniquely pertaining to a problem or to a situation at our hand. Creative thinking depends on the personal characteristics which relate to the independence, self discipline, orientation towards risk-taking, tolerance for ambiguity, perseverance in the face of frustration and a relative lack of concern for social approval (Barron, 1988). On the other hand, creative skills can be raised by the learning and practice techniques to improve and develop the teacher's cognitive flexibility and intellectual independence.

Both Poincare (1952) and Hadamard (1952) maintained that much of the work that goes in creative thinking is unconscious or intuitive, rather than strictly logical, formal and conscious. But these two researchers and latest investigators have come to a conclusion that there are actually several stages in creative thinking.

- i. The first is period of **preparation**, concentration and deep involvement in a problem.
- ii. This is followed by a second stage **incubation**, during which time the problem is set aside for a while but work on solution continues as the unconscious level.
- iii. If the prolonged unconscious work of the second stage is successful, the third stage occurs- **illumination** or insight into a solution.
- iv. During the fourth and final stage, **verification**, **elaboration** and **refinement** of insightful solution takes place.
- v. Academic Achievement and Creative Thinking

- vi. Creative thinking is another aspect or variable that can influence academic achievement of students. This is a powerful mental faculty which brings newer phenomena in the world. However different studies view this relation differently. Kaur (1992) found low positive relationship existed between creativity and academic achievement.

Guilford (1963) is of the opinion that creativity involves some specific kind of thinking abilities and each of which may be looked upon as a distinct kind of thinking skill. We can develop it by providing training with the help of appropriate curriculum material. Just as teachers are trained by developing their teaching skills, children can also be trained to think creatively by developing their creative thinking skills.

Olton and Cruchfield (1980) also agrees that appropriate training can produce significant increments in the skill of creative thinking, since the development of any kind of skills (Moto Or Mental) require specific training. The same views have been express by Mehdi (1975) and Deshmukh (1977). Brar (1986) found that highly creative students perform better and score higher than the low creative students in B.Ed Examination. (Rani, 1986). Pradhan (1990) found that there was significant and positive relationship between creative thinking and scholastic achievement. Golwalkar (1986) in his study on creativity and achievement of tribal students of Rajasthan found significant different between the mean creative score of tribal and non-tribals that means the non tribals have higher level of creativity than the tribals. Besides, the non-tribals students are found high in scholastic achievement in science subject than the tribal students.

Adolescence is an important segment of whole life of human being. Here Adolescence means those students studying in class X within the age group of 15-16 years.

Significance of the study

Different research findings showed that Creative thinking and academic achievement are not positively correlated. From the study it is clear that those who have high academic achievement he may possess high creative ability or not. But **Faux** (1992) investigated the extent of relationship among creative thinking, critical thinking, intelligence and problem solving ability. It was found that critical thinking and intelligence have relation with problem solving ability.

This topic emphasizes on how creative thinking ability of different social group student impact their academic achievement. Aim of this topic is to examine to what extent creative thinking of

general, SC and ST students increase or decrease their academic achievement. As Jangal Mahal area of Paschim Medinipur district is backward than the other districts of west Bengal so this topic is essential in present scenario. Many adolescence of this district are the first generation learner of Jangal Mahal area. They have to spend their life with strong hardship to fulfill their primary needs

Objectives:

Some major objectives can be drawn for the study:

1. To find out the creative thinking ability among different social group.
2. To find out the academic achievement among different social group
3. To find out the significant relationship between creative thinking and academic achievement of different social group.
4. To find out the significant difference exists between General and SC group in their creative thinking
5. To find out the significant difference exists between General and ST group in their creative thinking
6. To find out the significant difference between SC and ST group in their Creative thinking
7. To find out the significant difference between General and SC student in their academic achievement
8. To find out the significant difference between General and ST student in their academic achievement
9. To find out the significant difference between SC and ST student in their academic achievement

Hypothesis

On the basis of objectives, different hypotheses can be drawn:

Ho₁ There is no significant relationship between creative thinking and academic achievement of different social group;

Ho₂ There is no significant difference exists difference exists between General and SC group in their creative thinking;

Ho₃ There is no significant difference exists between General and ST group in their creative thinking;

Ho₄ There is no significant difference exists between SC and ST group in their creative thinking;

Ho₅ There is no significant difference exists between General and SC group in their academic achievement;

Ho₆ There is no significant difference exists between General and ST group in their academic achievement;

Ho₇ There is no significant difference exists between SC and ST group in their academic achievement.

Methodology of the Study

Population

The population of this study is tenth grade secondary students, studying in Bengali medium co-educational secondary schools recognized by the Board of Secondary Education and studying in backward areas of the district of Paschim Medinipur in West Bengal, India constituted the population of the present study. Some other important characteristics of the population are

1. Average age of the students 15 to 17years.
2. All the students followed same curriculum and syllabus prepared by the West Bengal Board of Secondary Education.
3. All students were Bengali speaking.

The survey method was used on four secondary school students from two blocks, namely, Nayagram block, Garbeta III for this work.

Sample design

One sixty five(165) students reading in nine grade Bengali medium secondary schools approved by West Bengal Board of Secondary Education and situated in the district of Paschim Medinipur, West Bengal is the sample of this study. Random sampling technique constituted the sample for the study.

Tool

To obtain essential, valid, reliable and definite conclusion the following tool was used.

For measuring creative thinking ability, a standardized adopted Bengali version test prepared by Baqer Mehdi was used.

The percentage (%) of final examination's score of class X grade students was considered as measures of academic achievement.

Variables

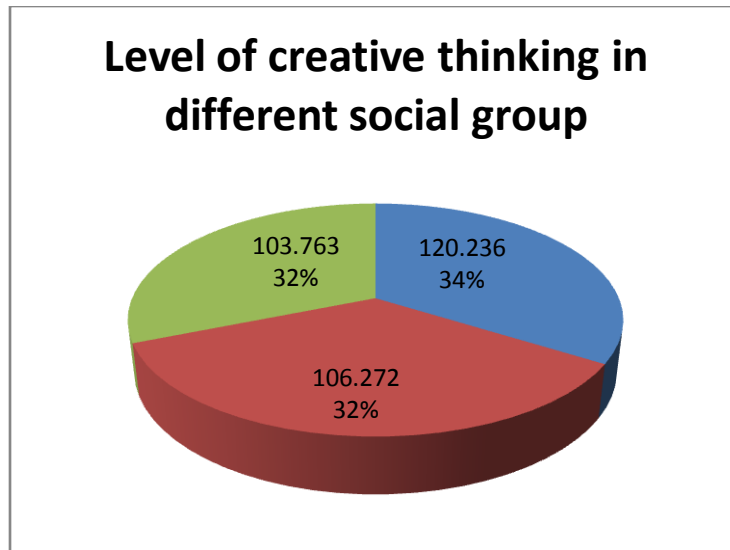
Independent variable: Creative thinking

Dependent Variable: Academic achievement

Analysis pertaining to objective-1

1. To find out the level of creative thinking of different social groups

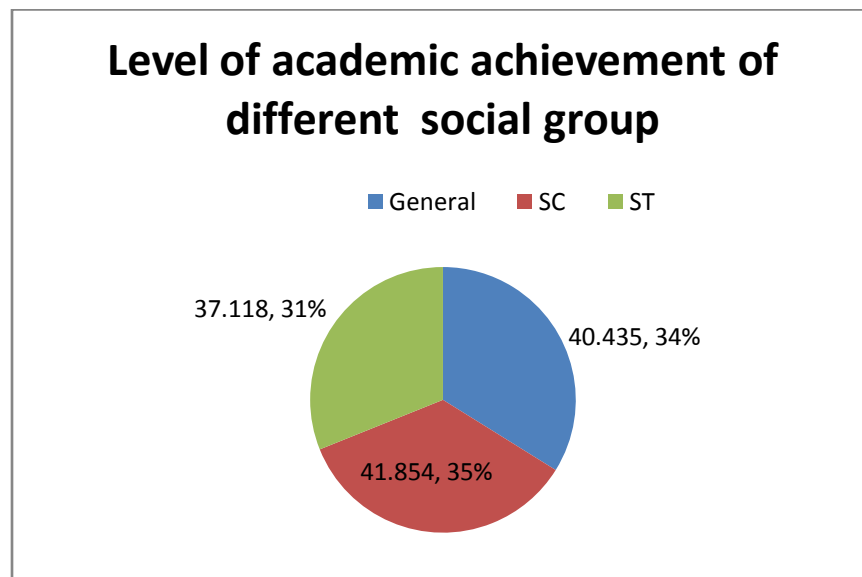
Social Group	General	SC	ST
Mean	120.236	106.272	103.763



The above table shows that the mean score of general students are better than SC and ST students. The SC students have high academic achievement than the ST students but lower than the general students in their Creative thinking.

2. To find out the level of academic achievement of different social group

Social Group	General	SC	ST
Mean	40.435	41.854	37.118



From the above figure it is found that SC students having high academic achievement than the general students. The ST students have low academic achievement than the general and SC.

3. Analysis pertaining to hypothesis 1

There is no significant relationship between Creative thinking and Academic achievement of secondary students.

Variables	N	Mean	SD	R	Sig.
Creative thinking	55	110.090	23.73	0.357	Sig
Academic achievement	55	39.80	9.48		

From the above table it is found that the mean score of creative thinking and academic achievement is 110.090 and 39.80 respectively. Standard deviation is 23.73 and 9.48. The calculated 'r' is 0.357 which is greater than the table value. That means null hypothesis is rejected. This indicates that there exists a significant positive relationship between two selected variables.

Analysis pertaining to hypothesis-2

Ho₂ There is no significant difference exists difference exists between General and SC group in their creative thinking

Variables	N	Mean	SD	't'	Sig.
General	55	120.236	27.36	3.049	Significant at 0.01 level
ST	55	106.272	20.11		

From the above table it is found that the mean score of SC and ST students is 102.236 and 106.272 respectively. Standard deviation is 27.36 and 20.11. The calculated value of 't' is 3.049 which is greater than table value. That means null hypothesis is rejected. It expresses that General and SC students have significant difference in their creative thinking.

Analysis pertaining to hypothesis -3

H₀₃ There is no significant difference exists between General and ST group in their creative thinking

Variables	N	Mean	SD	SED	't'	Sig.
General	55	106.272	20.11	4.562	3.61	Significant at 0.01 level
ST	55	103.763	19.90			

The above table shows that the means score of creative thinking of general and ST students are 106.272 and 103.763. Standard deviation is 20.11 and 19.90 respectively. The calculated 't' value is 3.61 which is greater than the table value. That means null hypothesis is rejected. It indicates that there exists a significant difference between general and ST students in their creative thinking ability.

Analysis pertaining to hypothesis -4

H₀₄ There is no significant difference exists between SC and ST group in their creative thinking

Variables	N	Mean	SD	SED	't'	Sig
SC	55	106.272	20.11	3.81	.658	Insignificant
ST	55	103.763	19.90			

From the above table it is clear that the means score of creative thinking SC and ST are 106.272 and 103.763 respectively. Standard deviation is 20.11 and 19.90. The calculated 't' is 0.658 which is lower than table value. So the null hypothesis is accepted. That indicates there exists no relationship between SC and ST students towards their creative thinking ability.

Analysis pertaining to hypothesis-5

H₀₅ There is no significant difference exists between General and SC group in their academic achievement

variables	N	Mean	SD	SED	't'	Remark
General	55	40.435	10.568	1.937	.007	Insignificant
SC	55	41.854	9.739			

The above table shows that the mean score of academic achievement of general and SC students is 40.435 and 41.854 respectively. Standard deviation is 10.568 and 9.739. The calculated value

of 't' is 0.007 which is lower than the table value. So the null hypothesis H05 is retained. This means that there exist no significant relationship between general and SC students in their academic achievement.

Analysis pertaining to hypothesis -6

H0₆ There is no significant difference exists between General and ST group in their academic achievement

Variables	N	Mean	SD	SED	't'	Remark
General	55	40.435	10.568	1.738	1.908	Insignificant at 0.01 level.
ST	55	37.118	7.389			

The above table shows that the mean score of academic achievement of General and ST students is 40.435 and 37.118 respectively. Standard deviation is 10.568 and 7.389. The calculated 't' value is 1.908 which is lower than the table value. So the null hypothesis H0₆ is retained at 0.01 level. It means General and ST students have no significant difference in their academic achievement of secondary level students.

Analysis pertaining to hypothesis – 7

H0₇ There is no significant difference exists between SC and ST group in their academic achievement

Variables	N	Mean	SD	SED	't'	Remarks
SC	55	41.854	9.379	1.648	2.87	Significant
ST	55	37.118	7.389			

From the table it is found that the mean score of academic achievement of SC and St Students is 41.854 and 37.118. Standard deviation is 9.379 and 7.389 respectively. The calculated 't; value is 2.87 which greater than the table value. So the null hypothesis H0₇ is rejected at 0.01 level. This indicates that the SC and ST students have significant difference in their academic achievement.

Results: After analyzing and interpreting the dada it is found that general students are better scored than the SC and ST students in their creative thinking. But in academic achievement SC students have high scored than the general and ST Students. From the above discussion it is found that academic achievement is positively correlated with creative thinking. Again it is found that general students are significantly differed with SC and ST students in their creative thinking but in SC and ST students have no significant difference in their creative thinking.

It is also found that general students are significantly different with the SC and ST students in their academic achievement. But SC and ST Students have no significant difference in their academic achievement.

Suggestion for further study

1. This study deals with only two variables. So a comprehensive study can be done on the other area.
2. Sample size may be enlarged in other classes like higher secondary, graduate level and university level.
3. Others medium students may be selected.
4. Different schools may be assigned for the study like government, non-government, government aided etc.

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