

# INTELLECTUALLY GIFTED AND ACADEMICALLY GIFTED ADOLESCENTS: A STUDY IN PERSPECTIVE OF THEIR CREATIVITY AND ITS DIMENSIONS VIZ FLUENCY, FLEXIBILITY AND ORIGINALITY

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## Abstract

*Creative behavior is universally present in every child and adult. A developing country like India can not afford to waste or let it get misdirected and thus leading to improper utilization of the creative potentialities of its citizens. Thus there is a need to identify this creative talent and to utilize it for the upliftment of the society and the nation. Comparison between Intellectually gifted and Academically gifted adolescents showed that the academically gifted adolescents are higher than their counterpart i.e. intellectually gifted adolescents on their fluency, flexibility, originality and composite creativity. Academically gifted girls were found to have higher mean values than intellectually gifted girls in respect to Fluency, Flexibility, Originality and the total Creativity but the group of academically gifted girls shows only one significant t-ratio which is in case of Originality. In case of sex wise comparison academically gifted girls were better on different dimensions of Creativity and total Creativity than academically gifted boys and all the t-ratios were found significant.*

## INTRODUCTION

Each individual is creative in his ability and it is most important for his well being and advancement. Creative thinking is essential for solving problems and in today's world problems faced by man are at its peak. Long before creative thinking was well understood, creativity was associated with Art, music, painting, designing, literature and drama. Challenge of Education –A Policy Prospective (1986) has rightly given importance to harnessing creativity to equip the younger generation. Initially creative thinking was thought to be limited to the scientist, writers and architects only but now it has become evident that creative behavior is universally present in every child and adult.

There is a world wide concern about creativity. Advanced countries are interested in the study and development of creativity, as are the third world countries whose survival depends on creative vision and creative striving of the masses. It is extremely important that creative talent should receive a suitable honour in our country as it is essential to tackle the issues like Environment, country's security and development etc for our very existence with a creative mind.

Psychologists are busy in searching for creative

persons as they are responsible for scientific and technological development of future. The existence of mankind will depend upon our understanding of the process of innovation and creativity and its application in different areas of human endeavor.

Initially creativity was studied as a form of general intelligence and there has been a lot of confusion over defining the words 'creativity' and 'intelligence'. Creativity makes an individual confident for his capabilities and in turn improves his performance. Thus creativity is fruitful both for himself and his society and ultimately for the entire mankind. According to Parnes (1963) education can play a vital role in development of creative efficiency.

Keeping in view the challenges faced by the younger generation this study was conducted to observe the factors affecting the academic performance and its relation with creativity. A developing country like India can not afford to forgo wasted, misdirected and improper utilization of the creative potentialities of every citizen of the nation and there is a felt need to identify this creative talent and to utilize it for the upliftment of the society and the nation

## OBJECTIVE OF THE STUDY

In the study the objectives to compare quantitatively the difference between intellectually gifted and academically gifted adolescents on certain measures of non-verbal

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creative functioning (fluency, flexibility and originality) were as follows:-

- 1) To study the difference between intellectually gifted and academically gifted adolescents on creative functioning of Fluency, Flexibility and Originality.
- 2) To study the difference between intellectually gifted boys and girls on different dimensions of creativity
- 3) To study the difference between academically gifted boys and girls on different dimensions of creativity.

### HYPOTHESES

- 1) There is no significant difference between intellectually gifted and academically gifted adolescents on creative functioning of Fluency, Flexibility and Originality.
- 2) There is no significant difference between intellectually gifted boys and girls on different dimensions of creativity
- 3) There is no significant difference between academically gifted boys and girls on different dimensions of creativity.

### DELIMITATIONS OF THE STUDY

- 1) The study was delimited to ninth class students only.
- 2) The study was restricted to few schools in Delhi and Ghaziabad region.
- 3) The study was limited to 100 students as samples for each category i.e. academically gifted and intellectually gifted.
- 4) No attempt was made to study the verbal intelligence in the investigation.

### DESIGN OF THE STUDY

The method and procedure employed are

given under the following heads:-

1. The population, sample and Data Collection
2. The Instruments:
  - a) Torrance Test of Creative thinking (only non verbal form)
    - (i) Picture Completion
    - (ii) Circles
  - b) Jalota's Test of General Intelligence.

### POPULATION AND SAMPLE

In the study, stratified random sampling was used. For the investigation, 10 schools were selected randomly out of the list of fifty schools from, Delhi region and Ghaziabad region. Hundred students of IX standard were selected from each school. In this way thousand students were randomly selected on the basis of Jalota's Test of General Intelligence. Out of these students the top 10% of students were taken for the final sample as intellectually gifted. 10% students from the population were selected on the basis of their academic performance i.e., those students who scored highest marks in their final examination were termed as academically gifted. Hence two groups one intellectually gifted and other academically gifted were formed. These two groups i.e. intellectually gifted and academically gifted were compared on different dimensions of creative functioning. The scores on fluency, flexibility and originality were scored on Picture completion and Circles and then were totaled for these dimensions.

### INSTRUMENTATION

TABLE: Psycho-metric instruments.

S.No.	Variable	Tool Used	Author
1	Intelligence	Jalota's Test of General Intelligence	Jalota
2	Creative Functioning (Non-Verbal)	TTCT (non verbal) 1. Picture Completion 2. Circles	Torrance, E.P. The test has been used in Indian conditions and has high Reliability and Validity

## STATISTICAL TECHNIQUES

After data collection scoring was done and the observations were tested on central tendencies like Mean, Median, Mode, Standard Deviation, Standard Error, t-test

## RESULTS AND DISCUSSION

The two groups formed namely intellectually gifted and academically gifted were given the non-verbal task i.e. picture completion and circles to be scored on fluency, flexibility and originality and the total of all these scores constitute the composite creativity index in the two groups.

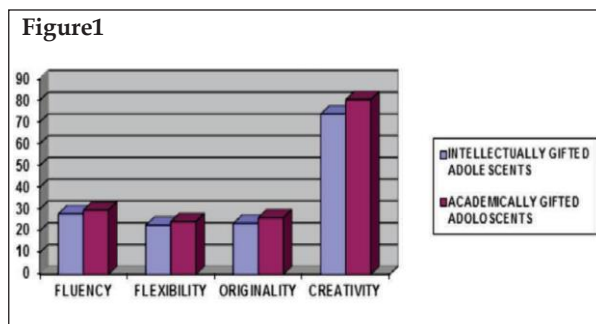
The scores obtained were analyzed. In order to test the various hypotheses in the present study, mean standard deviation and t- test techniques were applied. The analysis was done to seek answers to the questions how intellectually gifted and academically gifted adolescents differ on their fluency, flexibility, originality and composite creativity. The subjects in the investigation were comparatively studied on the basis of gender and these two categories.

In order to test the first hypothesis that "There is no significant difference between intellectually gifted and academically gifted adolescents on creative functioning (fluency, flexibility and originality), the values for mean, S.D. and t-values were calculated and compared. On all the dimensions of creativity such as fluency, flexibility and originality, the academically gifted students scored slightly better than intellectually gifted. (Table 1)

**TABLE 1: Comparison of creativity between academically gifted and intellectually gifted adolescents.**

	Intellectually gifted (N =100)			Academically gifted (N=100)			
Variable	Mean	S.D.	S.E.	Mean	S.D.	S.E.	t-value
Fluency	27.88	7.98	.797	29.53	7.78	.778	1.48
Flexibility	22.63	6.72	.673	24.30	7.03	.703	1.71
Originality	23.46	9.17	.917	26.11	10.14	1.014	1.94
Creativity	73.69	22.20	2.22	80.30	23.46	2.346	2.05*

\*Significant at .05 level.

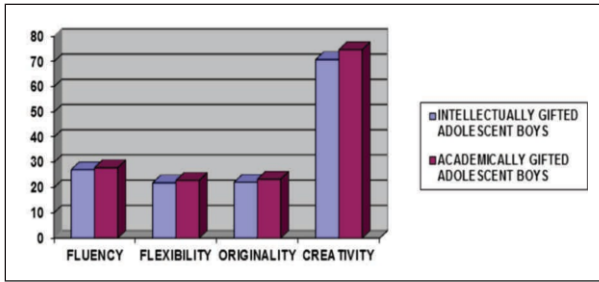


Though the mean value for academically gifted is higher than their counterpart i.e. intellectually gifted but none of the t-ratios reach up to the significance level. For composite creativity though the mean value 80.30 (23.46) is higher for the same group i.e. academically gifted in comparison to intellectually gifted where the mean value is 73.69 (22.20) and the t-ratio is significant at .05 level. According to the results the hypothesis that "there is no significant difference between intellectually gifted and academically gifted adolescents on creative functioning (fluency, flexibility and originality) is not accepted in case of total creativity and the hypothesis is partially accepted in case of dimensions of creativity such as fluency, flexibility and originality.

The comparison was made between intellectually gifted and academically gifted adolescent boys. (Table2.) The academically gifted and intellectually gifted boys have almost the same mean, no significant t-ratio in all the cases i.e. fluency, flexibility, originality. And both the groups seem identical as far as creativity is concerned.

**TABLE 2: Comparison of creativity and its components viz, Fluency, Flexibility and Originality between Intellectually gifted and Academically gifted adolescent boys.**

	Intellectually gifted (N =58)			Academically Gifted (N=55)			
Variable	Mean	S.D	S.E	Mean	S.D.	S.E.	t-value
Fluency	27.15	7.52	.98	27.94	7.38	.99	.56
Flexibility	21.94	6.29	.82	22.90	6.40	.86	.81
Originality	22.17	8.99	1.18	23.41	9.43	1.27	.72
Creativity	70.84	21.40	2.81	74.76	21.94	2.95	.96

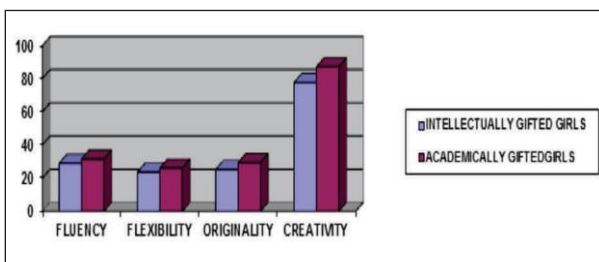


Comparison between intellectually gifted and academically gifted adolescent girls was done (Table 3) and the results showed that academically gifted girls have higher mean values in respect to Fluency, Flexibility, Originality and the total Creativity but the group of academically gifted girls shows only one significant t-ratio which is in case of Originality.

**Table 3 Comparison of creativity and its components viz fluency, flexibility, and Originality between Intellectually gifted and Academically gifted adolescent girls.**

	Intellectually gifted (N=42)			Academically Gifted (N=45)			
Variable	Mean	S.D.	SE	Mean	S.D.	S.E	t-value
Fluency	28.88	8.54	1.31	31.47	7.89	1.17	1.47
Flexibility	23.57	7.26	1.12	25.98	7.47	1.11	1.52
Originality	25.24	9.21	1.42	29.40	10.09	1.50	2.00*
Creativity	77.62	22.92	3.53	87.07	23.68	3.53	1.89

\*Significant at .05 level.



In order to test the second hypothesis that "There is no significant difference between intellectually gifted boys and girls on different dimensions of creativity (fluency, flexibility and originality), the values for mean, S.D. and t-values were calculated and comparison was done.

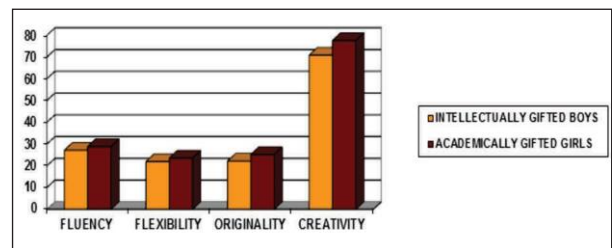
**Table 4: Comparison between Intellectually gifted adolescents sexwise on creativity**

Intellectually gifted Boys (N=58)      Intellectually gifted Girls (N=42)

Variable	Mean	S.D	S.E.	Mean	S.D.	S.E.	t-value
Fluency	27.15	7.5	.98	28.88	8.54	1.31	1.07
Flexibility	21.95	6.29	.82	23.57	7.26	1.12	1.19
Originality	22.17	8.99	1.18	25.23	9.21	1.42	1.66
Creativity	70.84	21.40	2.81	77.61	22.92	3.52	1.52

\*Significant at .05 level.

It was found that intellectually gifted adolescents boys and girls were similar in all dimensions of creativity and total creativity. So the hypothesis is accepted.



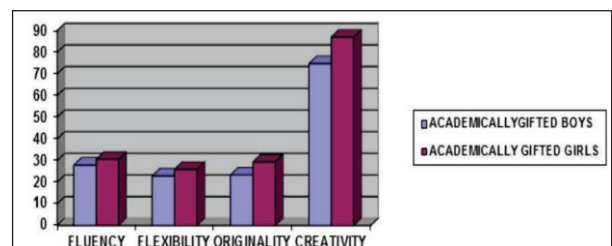
In order to test the third hypothesis that "There is no significant difference between academically gifted boys and girls on different dimensions of creativity (fluency, flexibility and originality), the values for mean, S.D. and t-values were calculated and comparison was done.

**Table 5 Comparison between academically gifted adolescents sex wise on creativity**

Academically Gifted boys (N=55)      Academically Gifted girls (N=45)

Variable	Mean	S.D.	SE	Mean	S.D	S.E	t-value
Fluency	28.88	8.54	1.31	31.47	7.89	1.17	1.47
Flexibility	23.57	7.26	1.12	25.98	7.47	1.11	1.52
Originality	25.24	9.21	1.42	29.40	10.09	1.50	2.00*
Creativity	77.62	22.92	3.53	87.07	23.68	3.53	1.89

\*Significant at .05 level. \*\* Significant at .01 level.



In case of Academically gifted adolescents on all the dimensions of creativity and total



creativity girls performed significantly better than boys and all the t-ratios were significant values either at .05 level or .01 level. Thus the hypothesis was rejected in the case of academically gifted adolescents.

### EDUCATIONAL IMPLICATIONS OF THE STUDY

To develop fully competent human beings it is essential to come up with methods enabling the students to utilize the maximum information and to use it in different ways. The teachers and educational workers should become better informed of students abilities and freedom should be given to them to express their views and new ways of thinking. Rewards could be given to creative behaviors in order to motivate them and to give them freedom for expression. Students should be educated in the use of appropriate strategies for problem solving to meet a wide range of problem situations so that creative thinking may be encouraged and developed. The diversity among individuals should be recognized and utilized. The study suggests that the assessment of creativity is essential for the new global nation.

Different methods are needed that will make information more usable in different situations. Emphasis must be given to students' initiative and freedom but in our classes overemphasis is being given on content and rote learning. Students must be encouraged for their creative behaviors and motivated to indulge in the same. Creative thinking should be encouraged and developed in students. Students should be exposed to situations wherein they get opportunity to imagination and to apply creativity in daily life.

As the girls faired better on creativity, some factors like motivation, family life, day to day activities etc may be considered to be responsible for it. The factors should be studied comprehensively and used to improve performance in case of adolescent boys too. The creativity in students has been emphasized in NCF 2005 also and the continuous and comprehensive evaluation (CCE) as given by CBSE.

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