



## A STUDY OF CREATIVITY IN RELATION TO PERSONALITY TRAITS OF HIGH SCHOOL STUDENTS

**Satish Kumar Kalhotra, Ph. D.**

*Associate Professor, Rajiv Gandhi University, Itanagar.*

### Abstract

*The present study made an attempt to compare the mean score of students with high and low scores on different dimensions of Verbal Creativity with regard to their scores on Emotional Stability, Curiosity and Self-Concept. In the present study, random sampling technique was employed for collecting the data from 150 students. Descriptive Survey Method was used for the present study. 'Verbal Tests of Creativity' by Prof. B.K Passi and Emotional Stability, Curiosity and Self-Concept 'Singh's Differential Personality Inventory' by Arun Kumar Singh (2002) was employed. This shows that there exist no significant differences between students with high and low Verbal Fluency, Verbal Flexibility, Verbal Originality and Verbal Creativity with regard to their scores on Emotional Stability, Curiosity and Self-Concept respectively. Hence the Hypothesis namely- "Students in the high and low scores of Verbal Fluency, Verbal Flexibility, Verbal Originality and Verbal Creativity differ with respect to Emotional stability, Curiosity and Self-Concept" stand rejected at the high school stage.*

**Keywords:** *creativity, Personality and self concept*



*Scholarly Research Journal's* is licensed Based on a work at [www.srjis.com](http://www.srjis.com)

### Introduction

#### Meaning and Definitions of Creativity

#### Creativity

Creativity is an essential factor in thinking and learning which cuts across all disciplines. It is a central factor in driving the birth of new knowledge and innovation, and as such is a vital construct for the field of education. Over the past several decades creativity has become a trait of increasing interest in fields such as education and psychology (Plucker, Beghetto, and Dow, 2004). Creativity is the central source of meaning in our lives. Most of the things that are interesting, important and humane in life are the results of creativity. What makes us different from apes our language, values, artistic expression, scientific understanding and technology are the results of individual ingenuity that was recognized, rewarded and transmitted through creative potential of human race.

**Creativity is a process** which results in novel work that is accepted as useful or satisfying by a group at some point of time. It is a process whereby something new and valuable is created.

The ideas and concepts so conceived can then manifest themselves in any number of ways, but most often they become something we can see, hear, and smell touch or taste use, exhibit and preserve. Creativity is the capacity of a person to produce composition, products or ideas which are essentially new or novel and previously unknown to the producer. Creativity is the power of the human mind to create new contents by transforming relations and thereby generating new correlates. The phenomenon of creativity is so complex and multidimensional that it has proved to be one of the most troublesome concepts in the literature of measurement with no universally accepted definition.

The creative potential is mostly defined in term of, one of the cognitive abilities namely- "Divergent Thinking". Divergent thinking is the ability to generate a number of alternative decisions of problem solving. Divergent thinking is the ability to produce many ideas in a short span of time. These ideas/solutions/response are scored in term of four major dimensions i.e. Originality, Fluency, Flexibility and Elaboration. However, many thinkers point out that divergent thinking is only a part of creativity and should not be treated as equivalent of creativity.

### **Personality**

Personality is the particular combination of emotional, attitudinal, and behavioral response patterns of an individual. Different personality theorists present their own definitions of the word based on their theoretical positions. Personality is the sum of activities that can be discovered by actual observations over a long enough period of time to give reliable about individual information. It is the sum total of all biological, innate dispositions, impulses, tendencies, appetites and instincts of the individual and the dispositions and tendencies acquired by him through experience. Personality is the stable set of characteristics and tendencies that determine those commonalities and differences in the psychological behaviour (thought, feelings, and actions) of people that have continuity in time and that may or may not be easily understood in terms of the social and biological pressure of the immediate situation alone.

### **Relationship between Creativity and Personality**

The relationship between Creativity and Personality traits namely Emotional Stability, Curiosity, and Self-Concept can be understood on the basis of the writings of self-theorists like Carl Roger and Maslow. These psychologist regard creativity to be closely related with positive mental health and describe it as being expressed during the process of self-actualization. Thus, creative behaviour is seen as an emergent property which matures as the

individual attempts to realize his full potential during his/her interaction with the environment. In the words of Rogers, “the main spring of creativity appears to be man’s tendency to actualize himself, to become his potentiality. By this, I mean the urge to expand, extend, develop, mature the tendency to express and activate all capacities of the organism. Several psychologists have studied the relationship between Creativity and Personality. Getzels and Jackson(1962) have pointed out that the highly creative adolescents differ not only in mental processes but also in their temperaments. The first systematic idea of the relationship between Creativity and Personality is found in the works of Sigmund Freud. In 1952, Kris supported the idea of Freud that creativity is inborn mental conflict. In 1965, Berlyne pointed out that more mental conflict leads to higher creativity and more creative person is determined to solve more different difficult problems. In 1937, Earlier Allport had pointed out that creativity is expressed in functional autonomy in the individual. In 1937, Goldstein maintained that there is an effective tendency of self-expression through creative processes found among creative person.

#### **REVIEW OF RELATED LITERATURE**

**Devi, Dr. Nirmala (2011).** It is found achievement motivation has no effect on the adjustment, Extraversion has positive effect on social, educational and general adjustment and Neuroticism has negative effect on the emotional, social, educational and general adjustments. Effect of other secondary aspects on adjustment like sex and school location are also analysed and found that rural students proved better than the urban students on social, Educational and General/Total adjustment.

**Kalita,Sima (2016).**The study also depicted that high level of emotional stability leads to high academic achievement and low emotional stability leads to low level of academic achievement.

**Lee, Kyung-Hwa (2005).** It was found that creative thinking ability was partly related to creative personality and that there was a difference between creative thinking ability and creative personality. This researcher believes that teaching 4 to 5 year-old preschoolers in educational programs designed with consideration of these study results will be much more effective than in the past.

**Singh, Dr. Thiyam Kiran, Kaushik,Sakshi (2015).** The results found significant correlation ship between creativity and extraversion showing that more creative artists expressed more extraversion than the less creative ones. Also, there were no significant difference between performing and non-performing artists in creativity and the big 5 personality traits.

**Verma Anju (2016).** There exist no significant difference between variable academic achievement and personality characteristic. Further said that there exist no significant relationship between variable academic achievement and personality characteristic.

**Objectives of the study**

1. To Study the nature of Scores of Verbal Fluency, Verbal Flexibility, Verbal Originality, Verbal Creativity.
2. To Study the nature of Scores of Personality traits namely- Emotional stability, Curiosity and Self-Concept.
3. To Study the relationship between Verbal Fluency, Verbal Flexibility, Verbal Originality and Verbal Creativity.
4. To Study of the relationship between scores obtained on different dimensions of Verbal Creativity with scores on Emotional Stability, Curiosity and Self-Concept among boys and girls at high school stage.
5. To Study the differences between Male and Female students with regard to their scores on Verbal Fluency, Verbal Flexibility, Verbal Originality and Verbal Creativity respectively at high school stage.
6. To compare the mean score of students with high and low scores on different dimensions of Verbal Creativity with regard to their scores on Emotional Stability, Curiosity and Self-Concept.

**HYPOTHESES OF THE STUDY**

1. The scores on variables namely Verbal Fluency, Verbal Flexibility, Verbal Originality, Verbal Creatively, Emotional stability, Curiosity, Self-Concept are normally distributed.
2. There is significant correlations between scores on different dimensions of Verbal Creativity.
3. There is significant correlation between scores on different dimensions of Verbal Creativity with Emotional Stability, Curiosity and Self-Concept.
4. Male and Female students do not differ significantly with regard to their mean scores on different dimensions of Verbal Creativity.
5. Students with high and low Scores on Verbal Fluency, Verbal Flexibility, Verbal Originality and Verbal Creatively differ with respect to Emotional Stability, Curiosity and Self- Concept.

## **Method**

In order to achieve the objectives of present study, Descriptive Survey Method was used. Use of inferential statistics was made to derive results from the data collected.

## **Sample**

In the present study, random sampling technique was employed for collecting the data from 150 students from 6 schools of Jammu District. The sample comprised of 75 male and 75 female students studying at the secondary level i.e. 9<sup>th</sup> and 10<sup>th</sup> classes. Boys and Girls selected for the study belonged to the age group 14-16 years.

## **Tools used**

The data was collected by administering the following two tools

1. For studying the status on different dimensions of Verbal Creativity ‘Verbal Tests of Creativity’ by Prof. B.K Passi was administrated. Passi’s Tests of Creativity (1971) were standardized for higher secondary pupil population.
2. For studying the status on personality traits namely Emotional Stability, Curiosity and Self-Concept ‘Singh’s Differential Personality Inventory’ by Arun Kumar Singh (2002) was employed,

## **ANALYSIS AND INTERPRETATION OF DATA**

### **Study of the nature of scores of verbal fluency, verbal flexibility, verbal originality and verbal creativity: results**

#### **Verbal Fluency**

**Table - 1** shows the values of Mean, Median, S.D, Skewness, and Kurtosis of scores on Verbal Fluency obtained by high school students in the sample

**Table - 1** *Descriptive Statistics of Scores on Verbal Fluency*

<b>Statistic</b>	<b>Value</b>	<b>Remarks</b>
Mean	14.03	-
Median	14	-
Standard deviation	4.5	-
Skewness	0.676	Positively Skewed
Kurtosis	1.780	Leptokurtic

On the basis of data and graph it can be said that the shape of the frequency distribution of scores on Verbal Fluency resembles the normal probability curve. This is especially true when the curve is smoothed. However, the statistical analysis of the shape indicates that the curve is positively skewed as the value is higher than the normal. It means that higher concentration of scores towards the right side of the mean. Further, the distribution is Leptokurtic or peaked. It can be due to the fact data has been collected in the present study on a sample of 150 students. If the data had been collected on larger sample, the frequency

distribution would have more closely resembled the normal probability curve. So it can be said that Verbal Fluency is a normally distributed ability.

### **Verbal Flexibility**

**Table - 2** shows the values of Mean, Median, S.D, Skewness, and Kurtosis of scores on Verbal Flexibility obtained by high school students in the sample

**Table – 2 Descriptive Statistics of scores on Verbal Flexibility**

<b>Statistics</b>	<b>Values</b>	<b>Remarks</b>
Mean	4.86	-
Median	5	-
Standard deviation	2.9	-
Skewness	0.750	Positively Skewed
Kurtosis	1.449	Leptokurtic

The statistical analysis of the shape indicates that the curve is positively skewed as the value is higher than the normal. It means that higher concentration of scores fall on the right side of the mean. Further, the distribution is Leptokurtic or peaked. It can be due to the fact data has been collected in the present study on a sample of 150 students. If the data had been collected on larger sample, the frequency distribution would have more closely resembled the normal probability curve. So it can be said that Verbal Flexibility is a normally distributed ability.

### **Verbal Originality**

**Table - 3** shows the values of Mean, Median, S.D, Skewness, and Kurtosis of scores on Verbal Originality obtained by high school students in the sample

**Table 4.3 Descriptive Statistics of scores on Verbal Originality**

<b>Statistics</b>	<b>Value</b>	<b>Remarks</b>
Mean	35.43	-
Median	36	-
Standard deviation	13.93	-
Skewness	0.941	Positively Skewed
Kurtosis	2.72	Leptokurtic

The statistical analysis of the shape indicates that the curve is positively skewed as the value is higher than the normal. It means that higher concentration of scores fall on the right side of the mean value. Further, the distribution is Leptokurtic or peaked. It can be due to the fact data has been collected in the present study on a sample of 150 students. If the data had been collected on larger sample, the frequency distribution would have more closely resembled the normal probability curve. So it can be said that Verbal Originality is a normally distributed ability.

### **Verbal Creativity**

**Table - 4** shows the values of Mean, Median, S.D, Skewness, and Kurtosis of scores on Verbal Creativity, obtained by high school students in the sample

**Table – 4 Descriptive Statistics of scores on Verbal Creativity**

<b>Statistics</b>	<b>Value</b>	<b>Remarks</b>
Mean	54.33	-
Median	55.50	-
Standard deviation	20.43	-
Skewness	0.929	normally skewed
Kurtosis	2.970	Leptokurtic

The statistical analysis of the shape indicates that the curve is not skewed. This means that scores fall eventually on both sides of the mean. At the same time the curve is Platyokurtic. It can be due to the fact data has been collected in the present study on a sample of 150 students. If the data had been collected on larger sample, the frequency distribution would have more closely resembled the normal probability curve. So it can be said that Verbal Creativity is a normally distributed ability.

**Study of the nature of scores of personality traits namely emotional stability, curiosity and self-concept: results**

**Emotional Stability**

**Table - 5** shows the values of Mean, Median, S.D, Skewness, and Kurtosis of scores on Emotional Stability obtained by high school students in the sample

**Table – 5 Descriptive Statistics of scores on Emotional Stability**

<b>Statistics</b>	<b>Value</b>	<b>Remarks</b>
Mean	9.42	-
Median	10	-
Standard deviation	1.69	-
Skewness	-0.365	Negatively skewed
Kurtosis	0.154	Platykurtic

The statistical analysis of the shape indicates that the curve is negatively skewed as the value of skewness is lower than the normal. It means that higher concentration of scores fall on the left side of the mean. Further, the shape of the curve is Platykurtic. It can be due to the fact data has been collected in the present study on a sample of 150 students. If the data had been collected on larger sample, the frequency distribution would have more closely resembled the normal probability curve. So it can be said that Emotional Stability is a normally distributed trait among the population.

**Curiosity**

**Table - 6** shows the values of Mean, Median, S.D, Skewness, and Kurtosis of scores on Curiosity obtained by high school students in the sample

***Descriptive Statistics of scores on Curiosity***

<b>Statistics</b>	<b>Value</b>	<b>Remarks</b>
Mean	11.33	-
Median	11	-
Standard deviation	1.59	-
Skewness	-0.207	Negatively Skewed
Kurtosis	0.394	Leptokurtic

The statistical analysis of the shape indicates that the curve is negatively skewed i.e. the value of skewness is lower than the normal. It means that higher concentration of scores fall on the left side of the mean. Further the shape of the curve is Leptokurtic or peaked. It can be due to the fact data has been collected in the present study on a sample of 150 students. If the data had been collected on larger sample, the frequency distribution would have more closely resembled the normal probability curve. So it can be said Curiosity is a normally distributed trait among the population.

**Self-Concept**

**Table - 7** shows the value of Mean, Median, S.D, Skewness, and Kurtosis of scores on Self-Concept obtained by high school students in the sample

**Table – 7 Descriptive Statistics of scores on Self-Concept**

<b>Statistics</b>	<b>Value</b>	<b>Remarks</b>
Mean	8.59	-
Median	8.50	-
Standard deviation	1.48	-
Skewness	0.194	normally skewed
Kurtosis	-0.062	Platykurtic

The statistical analysis of the shape indicates that the curve is not skewed. This means that scores fall eventually on both side of the mean. At the same time the curve is Platykurtic. It can be due to the fact data has been collected in the present study on a sample of 150 students. If the data had been collected on larger sample, the frequency distribution would have more closely resembled the normal probability curve. So it can be said that Self-Concept is a normally distributed ability.

**Study of the relationship between verbal fluency, verbal flexibility, verbal originality and verbal creativity: results**

The extent of relationship between scores of Verbal Fluency, Verbal Flexibility, Verbal Originality and Verbal Creativity was computed by working out Product Moment Coefficients of Correlation between the scores on two dimensions at a time. The results have been given in Table 4.8 in which the values of Pearson’s(r) have been shown



**Table – 8 Coefficients of correlation between Verbal Fluency, Verbal Flexibility, Verbal Originality, and Verbal Creativity**

Dimensions	Value of Correlation (r)
Verbal Fluency and Verbal Flexibility	0.837**
Verbal Fluency and Verbal Originality	0.838**
Verbal Fluency and Verbal Creativity	0.914**
Verbal Flexibility and Verbal Originality	0.802**
Verbal Flexibility and Verbal Creativity	0.877**
Verbal Originality and Verbal Creativity	0.984**

(\*\*) value Significant at 0.01 level.

**A study of Table - 8 indicates as under:**

1. The value of Coefficient of Correlation between Verbal Fluency and Verbal Flexibility ( $r= 0.837^{**}$ ) is highly positive and significant at 0.01 level. Hence, Verbal Fluency is highly correlated with Verbal Flexibility.
2. The value of Coefficient of Correlation between Verbal Fluency and Verbal Originality( $r= 0.838^{**}$ ) is highly positive and significant at 0.01 level. Hence, Verbal Fluency is highly correlated with Verbal Originality.
3. The value of Coefficient of Correlation between Verbal Fluency and Verbal Creativity ( $r= 0.914^{**}$ ) is highly positive and significant at 0.01 level. Hence, Verbal Fluency is highly correlated with Verbal Creativity.
4. The value of Coefficient of Correlation between Verbal Flexibility and Verbal Originality ( $r=0.802^{**}$ ) is highly positive and significant at 0.01 level. Hence, Verbal Flexibility is highly correlated Verbal Originality.
5. The value of Coefficient of Correlation between Verbal Flexibility and Verbal Creativity( $r= 0.877^{**}$ ) is highly positive and significant at 0.01 level. Hence, Verbal Flexibility is highly correlated with Verbal Creativity.
6. The value of Coefficient of Correlation between Verbal Originality and Verbal Creativity( $r= 0.984^{**}$ ) is highly positive and significant at 0.01 level. Hence, Verbal Originality is highly correlated with Verbal Creativity.

**Study of the relationship between scores obtained on different dimensions of verbal creativity with scores on emotional stability, curiosity and self-concept among boys and girls at high school stage: results**

The extent of relationship between the scores on different dimension of Verbal Creativity and scores on Emotional Stability, Curiosity and Self-Concept respectively was studied by computing Pearson's Product Moment Correlation Coefficient (Pearson's r)

Table - 9 shows the values of coefficients of correlation between scores obtained on different dimensions of Verbal Creativity with Emotional Stability, Curiosity and Self-Concept

**Table – 9 Coefficients of Correlation between scores obtained on different dimensions of Verbal Creativity with Emotional Stability, Curiosity and Self-Concept**

<b>Verbal Creativity Dimensions</b>	<b>Emotional Stability Correlation Coefficient (r)</b>	<b>Curiosity Correlation Coefficient (r)</b>	<b>Self-Concept Correlation Coefficient (r)</b>
Verbal Fluency	-0.027#	+0.023#	+0.008#
Verbal Flexibility	-0.064#	-0.018#	-0.052#
Verbal Originality	-0.050#	-0.069#	-0.026#
Verbal Creativity	-0.049#	-0.045#	-0.023#

(#) value not significant at 0.05 level.

On the basis of results given in the table, it can be concluded as under:

1. The value of correlation coefficient between Verbal Fluency and Emotional Stability( $r=-0.027$ ) is not significant at 0.05 level. Hence, Verbal Fluency is not correlated with Emotional Stability. In other words, Verbal Fluency and Emotional Stability are two more or less independent variables and one is not affected by the other.
2. The value of correlation coefficient between Verbal Fluency and Curiosity( $r= 0.023$ ) is not significant at 0.05 level. Hence, Verbal Fluency is not correlated with Curiosity. In other words, Verbal Fluency and Curiosity are two more or less independent variables and one is not affected by the other.
3. The value of correlation coefficient between Verbal Fluency and Self-Concept( $r =0.008$ ) is not significant at 0.05 level. Hence, Verbal Fluency is not correlated with Self-Concept. In other words, Verbal Fluency and Self-Concept are two more or less independent variables and one is not affected by the other.

4. The value of correlation coefficient between Verbal Flexibility and Emotional Stability( $r=-0.064$ ) is not significant at 0.05 level. Hence, Verbal Flexibility is not correlated with Emotional Stability. In other words Verbal Flexibility and Emotional Stability are two more or less independent variables and one is not affected by the other.
5. The value of correlation coefficient between Verbal Flexibility and Curiosity( $r= -0.018$ ) is not significant at 0.05 level. Hence, Verbal Flexibility is not correlated with Curiosity. In other words, Verbal Flexibility and Curiosity are two more or less independent variables and one is not affected by the other.
6. The value of correlation coefficient between Verbal Flexibility and Self-Concept( $r=-0.052$ ) is not significant at 0.05 level. Hence, Verbal Flexibility is not correlated with Self-Concept. In other words, Verbal Flexibility and Self-Concept are two more or less independent variables not related to each other.
7. The value of correlation coefficient between Verbal Originality and Emotional Stability( $r= -0.050$ ) is not significant at 0.05 level. Hence, Verbal Originality is not correlated with Emotional Stability. In other words, Verbal Originality and Emotional Stability are two more or less independent variables and not related to each other.
8. The value of correlation coefficient between Verbal Originality and Curiosity( $r= -0.069$ ) is not significant at 0.05 level. Hence, Verbal Originality is not correlated with Curiosity. In other words, Verbal Originality and Curiosity are two more or less independent variables and one is not affected by the other.
9. The value of correlation coefficient between Verbal Originality and Self-Concept ( $r=-0.026$ ) is not significant at 0.05 level. Hence, Verbal Originality is not correlated with Self-Concept. In other words, Verbal Originality and Self- Concept are two more or less independent variables and one is not affected by the other.
10. The value of correlation coefficient between Verbal Creativity and Emotional Stability( $r= -0.049$ ) is not significant at 0.05 level. Hence, Verbal Creativity is not correlated with Emotional Stability. In other words, Verbal Creativity and Emotional Stability are two more or less independent variables and one is not affected by the other.
11. The value of correlation coefficient between Verbal Creativity and Curiosity( $r= -0.045$ ) is not significant at 0.05 level. Hence, Verbal Creativity not correlated with

Curiosity. In other words, Verbal Creativity and Curiosity are two more or less independent variables and not related to each other.

12. The value of correlation coefficient between Verbal Creativity and Self-Concept ( $r = -0.023$ ) is not significant at 0.05 level. Hence, the Verbal Creativity is not correlated with Self-Concept. In other words, Verbal Creativity and Self-Concept are two more or less independent variables and one is not related to the other.

The results given in the table indicate that even though all the 12 correlation shown in the table are insignificant, yet it can be seen that coefficient 2 correlations are positive and 10 correlations are negative. Thus association between different variables even though not significant in statistical terms does indicate positive or negative association between the variables concerned.

**Differences between male and female high school students with regard to scores on verbal fluency, verbal flexibility, verbal originality, verbal creativity: results**

In order to examine whether male and female high school students differ significantly with regard to their mean scores on different dimensions of Verbal Creativity, Significance of differences between means scores were worked out and ‘t’ values were computed. The results have been given in table - 10 to 13

**Verbal Fluency**

**Table - 10** shows the significance of difference between Male and Female Students with regard to mean Verbal Fluency scores

**Table – 10 Significance of Difference Between Male and Female Students on Verbal Fluency**

<b>Creativity Dimension</b>	<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Calculated ‘t’ value</b>
Verbal Fluency	Male Students	75	14.60	5.15	1.535 #
	Female Students	75	13.46	3.78	

(#) value not significant at 0.05 level.

From **Table - 10** it can be seen that t-value computed between male and female students on Verbal Fluency is 1.535 which is not significant at 0.05 level. This shows that there is no significant difference between boys and girls on Verbal Fluency. In other words, boys and girls cannot be statistically differentiated on the basis of their scores on Verbal Fluency. At

the same time, the value of 't' is large enough to be of symptomatic importance. It can be said that generally, boys are likely to be more fluent than girls at high school stage.

**Verbal Flexibility**

**Table - 11** shows the significance of difference between Male and Female Students with regard to mean Verbal Flexibility scores

**Table – 11 Significance of Difference in Male and Female Students on Verbal Flexibility**

<b>Creativity Dimension</b>	<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Calculated 't' value</b>
Verbal Flexibility	Male Students	75	5.09	3.20	0.945#
	Female Students	75	4.64	2.64	

(#) value not significant at 0.05 level.

From **Table - 11** it can be seen that t-value computed for gender difference on Verbal Flexibility level is 0.945 which is not significant at 0.05 level. This shows that there are no significant difference between boys and girls on Verbal Flexibility.

**Verbal Originality**

**Table - 12** shows the significant difference between Male and Female Students with regard to mean Verbal Originality scores

**Table - 12**

**Significance of Difference in Male and Female Students on Verbal Originality**

<b>Creativity Dimension</b>	<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Calculated 't' value</b>
Verbal Originality	Male Students	75	37.09	14.19	1.464#
	Female Students	75	33.77	13.57	

(#) value not significant at 0.05 level.

From **Table - 12** it can be seen that t-value computed for gender difference on the basis of Verbal Originality scores is 1.464 which is not significant at 0.05 level. This shows that there is no significant difference between boys and girls on Verbal Originality. In other words, boys and girls cannot be statistically differentiated on the basis of scores on Verbal Originality. At the same time the value of 't' is large enough to be of symptomatic importance. It can be said that generally, boys are likely to have higher Verbal Originality than girls at high school stage.

### **Verbal Creativity**

**Table - 13** shows the significant difference between Male and Female Students with regard to Verbal Creativity scores

**Table – 13 Significance of Difference in Male and Female Students on Verbal Creativity**

<b>Creativity Dimension</b>	<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Calculated 't' value</b>
Verbal Creativity	Male Students	75	56.78	21.55	1.476#
	Female Students	75	51.88	19.08	

(#) value not significant at 0.05 level.

From Table - 13 it can be seen that t-value computed for difference between boys and girls on the basis of Verbal Creativity score is 1.476 which is not significant at 0.05 level. This shows that there is no significant difference between boys and girls on Verbal Creativity. In other words, boys and girls cannot be statistically differentiated on the basis of their scores on Verbal Creativity. At the same time the value so 't' is large enough to be of symptomatic importance. It can be said that generally, boys are likely to have higher Verbal Creativity than girls at high school stage.

### **Comparison of the mean scores of students with high and low status on different dimensions of verbal creativity with regard to scores on emotional stability, curiosity and self-concept: results**

In order to study whether students with high and low Verbal Fluency, Verbal Flexibility, Verbal Originality and Verbal Creativity differ statistically with regard to their means scores on Emotional Stability, Curiosity and Self-Concept, the investigator first identified students with high and low status on Verbal Fluency, Verbal Flexibility, Verbal originality and Verbal Creativity. This was done by computing Percentile points 27 and Percentile points 73 of the scores on all Verbal Creativity dimensions and then identifying students falling below and above these percentile points. Next, Means, S.D of the students with high and low Verbal Creativity were worked out on Emotional Stability, Curiosity and Self-Concept. Significance of difference between the groups were next computed by computing t-value. Results have been given in Table - 14 to 16

### **Emotional Stability**

Significance of Differences Between group of Students with High and Low Status on Different Dimensions of Verbal Creativity with regard to scores on Emotional Stability has been given in Table - 14

**Table – 14 Differences Between Group of Students with High and Low Scores on Different Dimensions of Verbal Creativity with regard to Emotional Stability**

<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>t</b>
High Verbal Fluency	54	9.37	1.67	0.679#
Low Verbal Fluency	43	9.60	1.70	
High Verbal Flexibility	60	9.25	1.62	1.144#
Low Verbal Flexibility	46	9.60	1.57	
High Verbal Originality	51	9.33	1.59	0.175#
Low Verbal Originality	44	9.27	1.78	
High Verbal Creativity	41	9.41	1.68	0.619#
Low Verbal Creativity	39	9.43	1.61	

(#) value not significant at 0.05 level.

1. From the **Table - 14** it can be seen that the value of ‘t’ computed between students with high and low Verbal Fluency level is 0.679 which is not significant at 0.05 level. This shows that there is no significant difference between students with high and low Verbal Fluency with regard to Emotional Stability.
2. The value of ‘t’ computed between students with high and low Verbal Flexibility level is 1.144 which is not significant at 0.05 level. This shows that there is no significant difference between students with high and low Verbal Flexibility with regard to Emotional Stability.
3. The value of t computed between students with high and low Verbal Originality level is 0.175 which not significant at 0.05 level. This shows that there is no significant difference between students with high and low Verbal Originality with regard to Emotional Stability.
4. The value of t’ computed between students with high and low Verbal Creativity level is 0.619 which not significant at 0.05 level. This shows that there is no significant difference between students with high and low Verbal Creativity with regard to Emotional Stability.

## **Curiosity**

Significance of Differences of Students with High and Low Status on Different Dimensions of Verbal Creativity with Regard to scores on Curiosity

**Table – 15 Differences Between mean scores on curiosity of group of Students with High and Low Scores on Different Dimensions of Verbal Creativity**

<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>t</b>
High Verbal Fluency	54	11.16	1.61	0.343#
Low Verbal Fluency	43	11.27	1.59	
High Verbal Flexibility	60	11.25	1.66	0.667#
Low Verbal Flexibility	46	11.36	1.56	
High Verbal Originality	51	11.21	1.57	0.382#
Low Verbal Originality	44	11.34	1.61	
High Verbal Creativity	41	11.12	1.50	0.711#
Low Verbal Creativity	39	11.35	1.47	

(#) represent not significant at 0.05 level.

1. From the **Table - 15** it can be seen that the value of 't' computed between students with high and low Verbal Fluency level is 0.343 which is not significant at 0.05 level. This shows that there is no significant difference between students with high and low Verbal Fluency with regard to Curiosity.
2. The value of 't' computed between students with high and low Verbal Flexibility level is 0.667 which is not significant at 0.05 level. This shows that there is no significant difference between students with high and low Verbal Flexibility with regard to Curiosity.
3. The value of 't' computed between students with high and low Verbal Originality level is 0.382 which is not significant at 0.05 level. This shows that there is no significant difference between students with high and low Verbal Originality with regard to Curiosity.
4. The value of 't' computed between students with high and low Verbal Creativity level is 0.711 which is not significant at 0.05 level. This shows that there is no significant difference between students with high and low Verbal Creativity with regard to Curiosity.



**SELF-CONCEPT**

**Table - 16** shows the Significant Difference Between Mean on Self-Concept Score of Students with High and Low Scores on Different Dimensions of Verbal Creativity

**Table – 16 Differences Between mean scores on Self-Concept of Group of Students with High and Low Scores on Different Dimensions of Verbal Creativity**

Group	N	Mean	Standard Deviation	t
High Verbal Fluency	54	8.66	1.69	0.408#
Low Verbal Fluency	43	8.53	1.42	
High Verbal Flexibility	60	8.65	1.60	0.430#
Low Verbal Flexibility	46	8.52	1.41	
High Verbal Originality	51	8.49	1.56	0.106#
Low Verbal Originality	44	8.52	1.40	
High Verbal Creativity	41	8.46	1.50	0.072#
Low Verbal Creativity	39	8.48	1.44	

(#) value not significant at 0.05 level.

1. From the Table - 16 it can be seen that the value of ‘t’ computed between students with high and low Verbal Fluency level is 0.408 which is not significant at 0.05 level. This shows that there is no significant difference between students with high and low Verbal Fluency with regard to Self- Concept.
2. The value of ‘t’ computed between students with high and low Verbal Flexibility level is 0.430 which is not significant at 0.05 level. This shows that there is no significant difference between students with high and low Verbal Flexibility with regard to Self- Concept.
3. The value of ‘t’ computed between students with high and low Verbal Originality level is 0.106 which is not significant at 0.05 level. This shows that there is no significant difference between students with high and low Verbal Originality with regard to Self- Concept.
4. The value of ‘t’ computed between students with high and low Verbal Creativity level is 0.072 which is not significant at 0.05 level. This shows that there is no significant

difference between students with high and low Verbal Creativity with regard to Self-Concept.

## **FINDINGS VIS-À-VIS OBJECTIVES AND HYPOTHESES OF THE STUDY**

### **Objective-1**

#### **To study the Nature of Scores of Verbal Fluency, Verbal Flexibility, Verbal Originality and Verbal Creativity**

The results obtained from the study of scores on Verbal Fluency, Verbal Flexibility, Verbal Originality and Verbal Creativity show that the shape of the distribution resembles the normal probability curve. This is especially true when the curves are smoothed. However, the statistical analysis of the shapes indicates that the curves are positively skewed as the scores concentrate on higher side of mean. Further, the distributions of Verbal Creativity dimensions are Leptokurtic or peaked. It can be due to the fact data has been collected in the present study on a sample of 150 students. If the data had been collected on larger sample, the frequency distribution would have more closely resembled the normal probability curve. It can therefore be said that Verbal Fluency, Verbal Flexibility, Verbal Originality and Verbal Creativity are normally distributed abilities. Hence, the Hypothesis namely-“The scores on variables namely verbal Fluency, verbal Flexibility, Verbal Originality and Verbal Creativity are normally distributed” stands accepted on the basis of results obtained in the present study.

### **Objective-2**

#### **To study the Nature of Scores of Personality traits namely Emotional Stability, Curiosity and Self-Concept**

The results obtained from the study of scores on Personality traits namely Emotional Stability, Curiosity and Self-Concept show that the shape of the distribution resembles the normal probability curve. This is especially true when the curves are smoothed. However, the statistical analysis of the shapes indicates that the curves are negatively skewed as the value of skewness is lower than the normal. It means that higher concentration of scores is less than the mean value fall the left side of the mean. Further the distributions of scores on Emotional Stability and Self-Concept are Platykurtic while the distribution of scores on Curiosity is Leptokurtic or peaked as well. The obtained trend can be due to the fact data has been collected in the present study on a sample of 150 students. If the data had been collected on a larger sample, the frequency distribution curves would have more closely resembled the normal probability curve. It can therefore be said that Emotional Stability, Curiosity and Self-Concept are a normally distributed traits among the population. Hence, the Hypothesis

namely-“The scores are Personality traits namely Emotional Stability, Curiosity and Self-Concept are normally distributed” stands accepted on the basis of results obtained in the present study.

### **Objective-3**

#### **To Study the Relationship between Verbal Fluency, Verbal Flexibility, Verbal Originality and Verbal Creativity**

The Coefficients of Correlation between Verbal Fluency, Verbal Flexibility, Verbal Originality and Verbal Creativity are highly positive and significant at 0.01 level. Hence, Verbal Fluency is highly correlated with Verbal Flexibility, Verbal Originality and Verbal Creativity. The above can be said about the correlation coefficient between Verbal Flexibility, Verbal Originality and Verbal Creativity and between Verbal Originality and Verbal Creativity respectively. The Coefficient of Correlation between Verbal Flexibility, Verbal Originality and Verbal Creativity are also highly positive and significant at 0.01 level. So, there exist significant correlations between different dimensions of Verbal Creativity. We can say that a person high in Verbal Fluency is also likely to be high on Verbal Flexibility, Verbal Originality and Verbal Creativity respectively and vice versa. Hence, the Hypothesis namely-“There exist significant correlation between different dimensions of Verbal Creativity” stands accepted on the basis of results obtained in the present study.

### **Objective-4**

#### **To Study the Relationship Between Scores Obtained on Different Dimensions of Verbal Creativity with Emotional Stability, Curiosity and Self-Concept among Boys and Girls at High School Stage**

The values of the correlation coefficient (Pearson's  $r$ ) computed between scores on Verbal Fluency, Verbal Flexibility, Verbal Originality and Verbal Creativity in the scores obtained by the students on Emotional Stability, Curiosity and Self-Concept have been found to be insignificant. The values of all Coefficients of Correlation have been found to be negligible and none of these has been found to be significant at 0.05 level. Hence, scores on dimensions of Verbal Creativity have not been found to be correlated with scores on Emotional Stability, Curiosity and Self-Concept. It can be therefore concluded that the Hypothesis namely-“There exist significant correlation between scores on different dimensions of Verbal Creativity with scores on Emotional Stability, Curiosity and Self-Concept” stands rejected on the basis of results obtained in the present study.

### **Objective-5**

#### **To Study the Differences between Male and Female High School Students with Regard their mean scores on Verbal Fluency, Verbal Flexibility, Verbal Originality, Verbal Creativity**

The values of 't' computed between the mean scores obtained by the male and female students on Verbal Fluency, Verbal Flexibility, Verbal Originality and Verbal Creativity dimensions have not been found to be significant at 0.05 level. This shows that there exist no significant differences between boys and girls on Verbal Fluency, Verbal Flexibility, Verbal Originality and Verbal Creativity. At the same time, the value of 't' is large enough to be of symptomatic importance. This indicates that boys of high school stage may have higher Fluency, Originality, and Creativity than the girls at high school stage. However on statistical terms, the Hypothesis namely- "Male and Female students do not differ significantly with regard to Verbal Creativity dimensions and Emotional Stability, Curiosity, Self-Concept" stand accepted on the basis of results obtained in the present study.

### **Objective-6**

#### **To Compare of the Mean Scores of Students with High and Low Scores on Different Dimensions of Verbal Creativity with Regard to their Scores on Variables namely Emotional Stability, Curiosity and Self-Concept**

The values of 't' computed between students with high and low mean score on Verbal Fluency, Verbal Flexibility, Verbal Originality and Verbal Creativity dimensions have not been found to be significant at 0.05 level. This shows that there exist no significant differences between students with high and low Verbal Fluency, Verbal Flexibility, Verbal Originality and Verbal Creativity with regard to their scores on Emotional Stability, Curiosity and Self-Concept respectively. Hence the Hypothesis namely- "Students in the high and low scores of Verbal Fluency, Verbal Flexibility, Verbal Originality and Verbal Creativity differ with respect to Emotional stability, Curiosity and Self-Concept" stand rejected at the high school stage.

### **REFERENCES**

- Allport.(1937), "Personality: A Psychological interpretation", Holt, Rinehart, &Winston, New York.*  
*Anju verma( 2016), Academic achievement of high school student's in relationto their personality characteristics; IMPACT: International Journal of Research inHumanities, Arts and Literature (IMPACT: IJRHAL)ISSN(P): 2347-4564; ISSN(E): 2321-8878Vol. 4, Issue 9, Sep 2016, 11-20*  
*Aiken,I.R. (1973). Ability and Creativity in Mathematics Review of Educational Research. 43(4); 405-432.*  
*Bhatnagar.A.B&Bhatnagar.M(2002).Advanced EducationalPsychology.Meerut: International publishing house.*

*Devi, Dr. Nirmala ( 2011). A study of adjustment of students in relation to personality and achievement motivation; Bhartiya International Journal of Education & Research; Volume 1 Issue 1 2011 ISSN:2277-1255*

*Koul,L.(2013).Methodology of Educational research. New Delhi: Vikas Publishing house.*

*Lee, Kyung-Hwa (2005). The relationship between creative thinking ability and creative personality of preschoolers ‘ International Education Journal, 2005, 6(2), 194-199. ISSN 1443-1475 © 2005 Shannon Research Press.*

*Mangal.S.K(2012). Advanced Educational Psychology. New Delhi: PHI Learning Private Limited.*

*Pandey,R(2004).Advanced Educational Psychological. Meerut: Aryan Press.*

*Passi,B.K(1971), “A Manual for Verbal Tests of Creativity” National Psychological Corporation, Agra, India.*

*Personality. Retrieved February 25, 2014, from <https://www.google.co.in/personality>.*

*Shan,H.R(1993). Identification and Development of Creativity. New Delhi: Common wealth Publishers.*

*Sharma,R.N. & Sharma,R.K.(2006). Advanced Educational Psychology. Delhi:Atlantic Publishers & Distributors.*

*Sima Kalita ( 2016). Academic achievement of high school students in relation to their emotional stability ; (JPMNT) Journal of Process Management – New Technologies, International Vol. 4, No.4, 2016.*

*Singh,Dr. Thiyam Kiran, Kaushik,Sakshi (2015). A Study of Creativity In Relation To Big 5 Personality Traits ; The International Journal of Indian Psychology ISSN 2348-5396 (e) | ISSN: 2349-3429 (p) Volume 3, Issue 1, No.9, Sept. 2015.*

*Singh, A.K,(2002) “A Manual of Singh’s Differential Personality Inventory”. National Psychological Corporation, Agra, India.*

*TraitTheory.RetrievedFebruary25,2014,from[http://en.wikipedia.org/wiki/Trait\\_theory](http://en.wikipedia.org/wiki/Trait_theory)*

*Upadhya,B.& Singh,Y.K.(2007) Educational Psychology. New Delhi: APH Publication Corporation*

*Verma, L.K &Sharma, N.R(2011). Statistics in education and Psychology Jammu: Narendra Publishing House.*