



EFFECT OF GENDER AND BIRTH ORDER ON VERBAL CREATIVITY OF SECONDARY SCHOOL STUDENTS

Sakshi Chauhan¹ and Dr. Monika Sood²

¹Research Scholar, Department of Education, ICDEOL, Himachal Pradesh University, Shimla, Himachal Pradesh, India.

² Assistant Professor, Department of Education, ICDEOL, Himachal Pradesh University, Shimla, Himachal Pradesh, India.

ABSTRACT

In the modern world, the educational system seeks to contribute to the knowledge and overall development of an individual to a large extent. The student is the central character in our educational system. It is necessary to transform student from an untutored, unskilled individual to a tutored, competent person. Education is a major vehicle to transform the cognitive abilities into a useful format. The most crucial concern, today for schools has been to identify the creative potentialities in children and to plan the educational programs in such a manner that creative abilities are developed among them and their talents are exploited to the fullest possible extent. The main purpose of the present study was to see the effect of gender and birth order on the verbal creativity of secondary school students. The sample consisted of 800 secondary school students belonging to Sirmour District of Himachal Pradesh. Verbal test of creativity developed by Baqer Mehdi was used by the investigator. The findings revealed that female secondary school students showed high mean score on fluency, originality and total creativity than male secondary school students and first born students were found high on all dimensions of verbal creativity viz. fluency, flexibility, originality and total creativity than later born secondary school students.



KEY WORLD : Creativity, Gender and Birth Order.

INTRODUCTION :

Man has been endowed with tremendous potentialities as well as great powers. Among all these powers, the man possesses wonderful imagination powers, marvelous intelligence and astonishing discriminating powers, sense of judgment, penetrating reasoning and unparalleled power of plunging into his inner self are some of the special gifts given to him by the nature. Man is remarkable because of his fantastic creative powers.

Creativity is essentially a human phenomenon. It is a process that helps an individual to achieve dignity and meaning in life. Every child is born creative. Creativity is a special quality in all children. They have urge to explore and investigate natural tendency to create something with the aid of whatever knowledge they have at that time. They have unusual curiosity to observe various objects in the environment which they like to explore further and to assimilate into their experiential structure. Such children do not get satisfaction with routine type solutions to the problems like intelligent ones. Today, the education imparted to the children is merely concerned about the acquisition of certain information, some peculiar habit patterns and skills and is examination oriented. But, what is more important is to meet their

individual needs and exploit their hidden potentials so that they can become a useful citizen on one hand and also be a source of satisfaction to themselves on the other hand.

In the modern world, the educational system seeks to contribute to the knowledge and overall development of an individual to a large extent. The student is the central character in our educational system. It is necessary to transform student from an untutored, unskilled individual to a tutored, competent person. His cognitive abilities would remain dormant, if not activated in a desired direction and will develop frustration, stress and strain which make them unable to adjust to the new conditions. Education is a major vehicle to transform the cognitive abilities into a useful format. As we enter the twenty- first century, children and teachers must be able to progress and succeed in their rapidly changing learning or working environment. They need to learn new techniques, skills and knowledge for adapting to the changing environment throughout their life. Hence, greater attention has to be paid to the quality of education and to preparation for life in a rapidly changing and technology - dominated world. The educationists are seriously concerned about introducing different techniques in the classroom to make education more creative, intelligently transacted, relevant, applicable and interesting to enrich the corpus of knowledge to further the prospects of sustainable development of man's world.

CONCPET OF CREATIVITY

The earliest scientific approach to the study and understanding of the nature and implications of "creativity" was undertaken in the 1950's in the USA under the initiative and guidance of J.P. Guilford of Southern California University. Guilford developed the "Structure of Intellect" model which is a three-dimensional figure representing various intellectual factors. He tried to show how content, operation and products interact to give a unique factor of the mind. He identified five factors: (i) Cognition (ii) Memory (iii) Convergent production (iv) Divergent production and (v) Evaluation.

Creativity is generally associated with divergent production which is a problem-solving activity involving originality, flexibility, fluency and sensitivity to new problem, definition, skills, ability to abstract, synthesize, organize a wide variety of ideas into a coherent, meaningful whole not seen before, elaboration etc. Creativity is regarded as "the ability for divergent thinking or open ended thought" (Page and Thomas, 1979).

MEANING OF CREATIVITY

Creativity has two aspects: one, the process of creation and the other the product of creation. As far as the process is concerned, there is no definite opinion, because it is almost an inner happening and it differs from individual to individual. But the products of creativity can be seen and defined. Psychologists have presented various definitions to explain the meaning of creativity.

Torrance had done remarkable work in creativity. According to him, "*creativity means to understand the gaps, mistakes and unknown principles and draw speculation hypotheses to evaluate them, search out conclusions and convey them to others and examine them again.*"

According to Passi, "*Creativity is multidimensional attribute differentially distributed among people and includes chiefly that factors of solving problems- fluency, flexibility, originality, acquisitiveness and persistency.*"

CREATIVITY AND GENDER

Boys show greater creativity than girls, especially as childhood advances in large part, this is due to the different treatment boys and girls receive. Boys are given more opportunity to be independent, they are prodded by peers to take more risks and they are encouraged by parents and teachers to show more initiative and originality. As Torrance has explained, "There is little doubt that the attitudes and treatment accorded girls and women by a society influence their creative development and behaviour".

Very inconsistent findings have been reported. The superiority of first born male adults over those of later born was reported in a few studies Helson (1968), Taylor and Eisenman (1964), Rosenberg and Sutternsmity, (1970), Looft&Barantuski (1971), but these studies did not show the same trend for female adults. Badrinath, S. and Satyanarayanan, S.B. (1979) and Dalta (1968) could not observe significant difference among high school seniors of different birth orders with respect to their creative achievement.

Passi (1971), Raina (1971), Goyal (1973), Bedi (1974), Singh (1975), Rawat and Garg (1977), Arora (1978) and Jarial (1981) found that female students were significantly superior to male student on verbal creativity. Male students were found to be significantly superior to their female counterpart on non-verbal creativity Prakash (1966), Gangneja (1972), Jain (1972), Rawat and Aggarwal (1977), Badrinath and Satyanarajan (1979) and Sharma (1979).

Contrary to these finding, no significant differences were found between male and female students with respect to verbal creativity Raina (1970), Gathr (1974), Thammaprakeep (1976), Dutt et.al. (1977), Lal (1972), Singh (1977), Thorat (1977), Singh (1978), Gupta (1979) and Pandey (1980).

CREATIVITY AND BIRTH ORDER

The order in which a person is born into their family plays a substantial role in the individual's development of personality, creativity, character and intelligence. In psychological literature, birth order is considered to be an environmental determinant of the physical, cognitive and social development of creativity. Like many other human attributes creativity is also considered as a mixed product of heredity and environment. Among the hereditary factors, birth order of the children appears to be an effective but least studied variable affecting creativity.

In Born to Rebel, Sulloway (1996) approached birth order through an evolutionary psychology lens by arguing that functional birth order, like Adler's psychological birth order, has preeminence over biological birth order. In his research about birth-order personality factors, Sulloway's findings support Adler's theory. Specifically, Sulloway asserted that first-born children are typically more achievement-oriented, antagonistic, anxious, assertive, conforming, extraverted, fearful, identified with parents, jealous, neurotic, organized, planful, responsible, self-confident, and traditional than their siblings. They also tend to affiliate under stress and are more likely than later-born children to assume leadership roles. Conversely, Sulloway found later-born children are generally more adventurous, altruistic, cooperative, easygoing, empathic, open to experience, popular, rebellious, risk-taking, sociable, and unconventional.

A good few investigation have been conducted estimating the effect of birth order on the development of creativity. Lunnebory (1968) reported that the first born children were found to be superior to the later born in verbal fluency. The superiority in verbal creativity of the first born children has also been demonstrated by Comeau Halen (1980), Shrivastava (1978), Repucci (1971) and Jarial (1979).

On the contrary, studies conducted by Datta (1978), Jawa (1971), Badirath and Satyanaryanan (1979), Shrivastava (1977) have shown that birth order of the subjects did not show any significant effect on the development of creative thinking abilities.

STATEMENT OF THE PROBLEM

"EFFECT OF GENDER AND BIRTH ORDER ON VERBAL CREATIVITY OF SECONDARY SCHOOL STUDENTS"

OBJECTIVES OF THE STUDY:

To find out the differences of Gender on various dimensions of verbal creativity viz. Fluency, Flexibility, Originality and Total creativity.

To find out the differences of Birth order on various dimensions of verbal creativity viz. Fluency, Flexibility, Originality and Total creativity.

To find out the interactional effect of gender and birth order on various dimensions of verbal creativity viz. Fluency, Flexibility, Originality and Total creativity.

HYPOTHESES OF THE STUDY:

There will be significant differences of Gender on various dimensions of verbal creativity viz. Fluency, Flexibility, Originality and Total creativity.

There will be significant differences of on various dimensions of verbal creativity viz. Fluency, Flexibility, Originality and Total creativity.

There will be significant interaction between gender and birth order on various dimensions of verbal creativity viz. Fluency, Flexibility, Originality and Total creativity.

METHOD

In present study, descriptive research method has been used to find out the effect of gender and birth order on verbal creativity of secondary school students.

POPULATION AND SAMPLE

The population of the present study consisted of all students of 9th and 10th class studying in Government secondary and senior secondary schools of district Sirmour, Himachal Pradesh. The sample comprised 800 students of class 9th and 10th studying in Government secondary and senior secondary schools of district Sirmour, Himachal Pradesh. The schools were selected randomly keeping in view the population of First born students.

VARIABLES

Four dimensions of Verbal Creativity viz. Fluency, Flexibility, Originality and Total creativity were regarded as dependent variables. Gender and Birth Order were treated as independent variables.

TOOLS

Verbal Creative Thinking Test developed by Baqer Mehdi (1973) was used for data collection.

RESEARCH DESIGN

In the present study a 2x2 factorial design was used for analyzing the data in respect of Verbal Creativity. There were two levels of gender- male and female and also two levels of birth order- first born and later born. In each cell of the design, there were 200 subjects. Thus 4 factorial designs of 2x2 nature were employed in the present investigation.

STATISTICAL TECHNIQUES

Two-way ANOVA was employed in the study of analysis of the data.

Table 1: Summary of Two-Way ANOVA in respect of Various Dimensions of Verbal Creativity:

Sr. No.	Dimensions	Source of Variance	Sum of Squares	Df	Mean of Square	F-Ratio
1	Fluency	Gender(A)	390.60	1	390.60	3.86*
		Birth Order(B)	1339.03	1	1339.02	13.22**
		Interaction(AxB)	28.50	1	28.50	0.28NS
2	Flexibility	Gender(A)	235.44	1	235.44	2.33NS
		Birth Order(B)	1357.20	1	1357.20	13.47**
		Interaction(AxB)	33.62	1	33.62	0.33NS
3	Originality	Gender(A)	768.32	1	768.32	7.76**
		Birth Order(B)	483.60	1	483.60	4.88*
		Interaction(AxB)	1.62	1	1.62	0.01
4	Total	Gender(A)	3947.16	1	3947.16	4.59*

Creativity	Birth Order(B)	9105.75	1	9105.75	10.60**
	Interaction(A×B)	97.30	1	97.30	0.113NS

**Significant at 0.01 level, *Significant at 0.05 level & NS- Not Significant at 0.05 level

Table 2: Mean Scores of Verbal Creativity of Male and Female Secondary School Students

Dimensions	N	Male	Female
Fluency	400	49.68	51.08
Originality		49.38	51.34
Total Creativity		149	151.22

Figure1: Gender wise mean scores on Fluency, Originality and Total Creativity

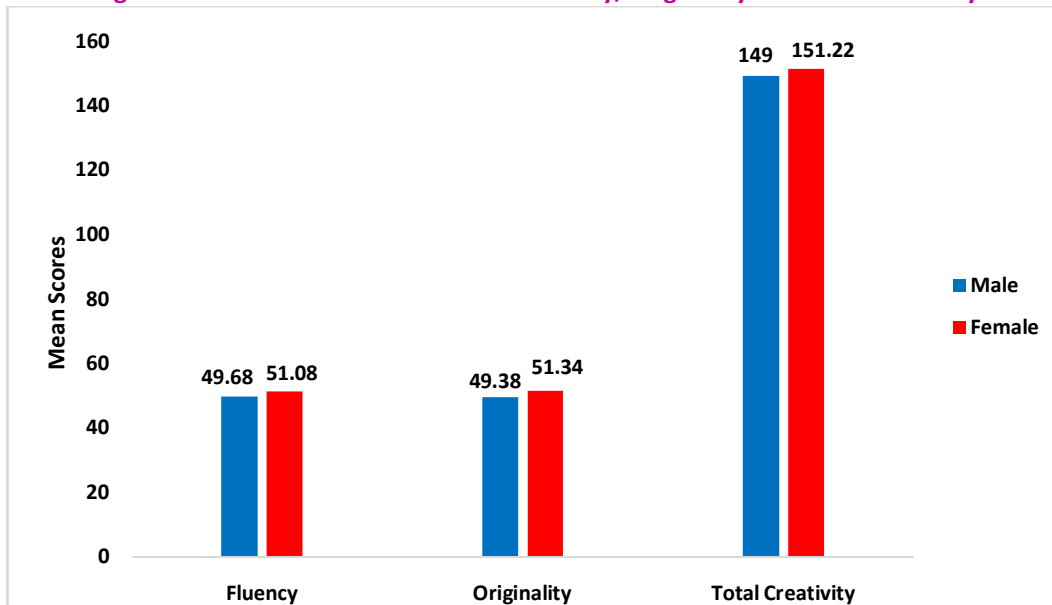
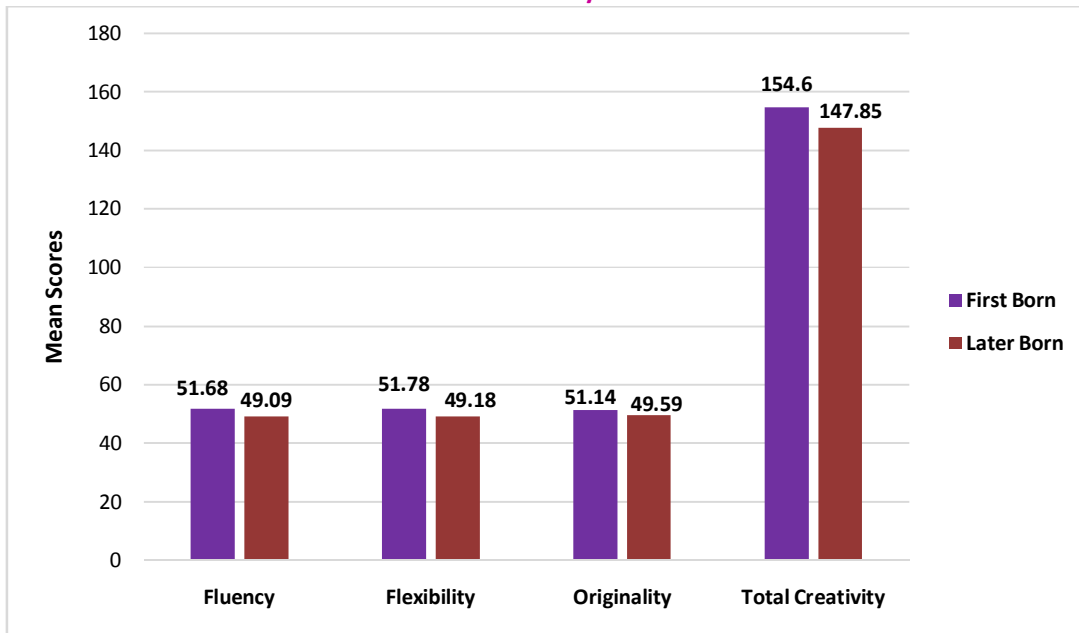


Table 3: Mean Scores of Verbal Creativity of Secondary School Students in respect of Birth order:

Dimensions	N	First Born	Later Born
Fluency	400	51.68	49.09
Flexibility		51.78	49.18
Originality		51.14	49.59
Total Creativity		154.60	147.85

Figure2: Difference in the mean scores on Fluency, Flexibility, Originality and Total Creativity of First Born and Later Born Secondary School Students:



RESULTS: -

The obtained results of two way ANOVA in respect of Verbal Creativity have been given in table1. Means scores of male and female students for those dimensions of Verbal Creativity where differences have been found are presented in table 2. Further significance of the differences in mean scores of First born and Later born students have been reported in table3.

It may be observed from Table1 that gender had main effect on Fluency, Originality and Total Creativity. Table1 further showed that birth order had main effect on Fluency, Flexibility, Originality and Total Creativity. However, there was no interaction effect of gender and birth order on any dimensions of Verbal Creativity was found.

As regards gender differences, it was observed (vide table2) that female secondary school students tended to rate them higher on Fluency, Originality and Total creativity than male counterparts. The means scores (vide table3) disclosed that on Fluency, Flexibility, Originality and Total Creativity, first born secondary school students tended to score higher than later born.

DISCUSSION

Hypothesis1 stated that there wouldbe significant differences in Verbal creativity of male and female secondary school students. This wasretained with reference to three dimensions of Verbal Creativity viz. Fluency, Originality and Total creativity. The findings revealed that female secondary school students were having high mean score on fluency, originality and total creativity than male secondary school students. Such findings of the study is in conformity with the findings of Passi (1971), Raina (1971), Goyal (1973) Bedi (1974), Singh (1975), Rawat and Garg (1977), Arora (1978) and Jarial (1981), Li(1996),Hoff(2005) and Matud, Rodriguez& Grande(2007).

Hypothesis2 anticipatedsignificant differences in the Verbal Creativity of the first born and later born secondary school students. This wasretained with regard to all dimensions of Verbal Creativity namely Fluency, Flexibility, Originality and Total Creativity. First born students were found to have higher mean scores on all dimensions of Verbal Creativity viz. fluency, flexibility, originality and total Creativity than later born secondary school students.

The studies supporting these findings are Badrinath, S. and Satyanarayanan, S.B. (1979), Dalta (1968) and Grakauskaite –Karkockiene, Daiva (2013). The results of interaction of gender and birth order did not emerge out to be significant. Hence research hypothesis 3 was not accepted. Since so far few studies have been conducted on the theme of present investigation, empirical support could not be extended with reference to interaction effect of gender and birth order on Verbal Creativity. Further research in the concerned area may highlight this aspect.

CONCLUSION

The findings revealed that female secondary school students were having high mean score on fluency, originality and total creativity than male secondary school students.

First born students were found to have higher mean scores on all dimensions of Verbal Creativity viz. fluency, flexibility, originality and total Creativity than later born secondary school students.

There is no significant interactional effect of gender and birth order on Verbal Creativity.

EDUCATIONAL IMPLICATIONS

The findings of the study suggest that there is need to integrate the interventions or specialized programs for enhancing the creativity. Differential treatment towards the children is seen in the family, school and society. The parents, teachers are expected to be above such mental set up and should provide equal opportunity to first born and later born children for the development of their originality and self-expression both in academic as well as non-academic matters. The curriculum of school subjects should be flexible so that it may have ample scope for creative activities.

The primary function of education should be to identify the creative potentialities in children and to plan the educational programs in such a manner that creative abilities are developed among them and their talents are exploited to the fullest possible extent. This is a challenging task which the teachers must take up for the progress of the nation.

SCOPE AND LIMITATION

The current study was analyzed through data collected from first born and later born (9th and 10th) male and female secondary school students of Sirmour district of Himachal Pradesh.

The Future research may consider data collection from other respondents like middle born, college students, and private institution of some other districts and states in the country and also employing number of variables which effects creativity might provide the investigators in the field with deeper insights in to the problem.

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Sakshi Chauhan

Research Scholar, Department of Education, ICDEOL, Himachal Pradesh University, Shimla, Himachal Pradesh, India.