



Scientific creative talent at an early stage

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Abstract

Creativity is a natural trait of all human beings. It may exhibit at any stage of life. In the present study the investigator tried to know the Scientific creative talent at an early stage. For this he had selected 190 students of class X, out of which 101 boys and 89 girls were studying in various schools at Aligarh. To measure the Creativity, Intelligence, Personality, and anxiety standardized tools made by Baquer Mehdi (verbal test of creative thinking,) Mehrotra (Mixed type of group test of intelligence,) Eysenck (Indian adaptation of Personality Inventory) and Sarason (General Anxiety Scale for children) were used. It was found that Fluency, Flexibility, originality and anxiety level of girls and boys differ significantly up to some extent but in general there was no significant difference in creativity of boys and girls students studying in secondary classes.

Key Words: Creativity, Fluency, Flexibility, Originality, Intelligence and anxiety.

Introduction:-The scientific and technological development of today is a long journey from cow dung age to the atomic age. There is a tremendous expansion of social, economical, and political institutions. There is an expansion of knowledge on all fronts. The question is who is responsible for all these. What is the task force which is behind all these developments? Certainly a relatively very small proportion of population, who could think rationally, reorganizes the existing idea and offer improved and sophisticated solutions to the day to day life problems. The creative energies of the future must be at least partially directed towards the problems that accompany the development of increased potential for harm. These problems are very gigantic and typical. They are worldwide and seem to be beyond the reach of most of us. Yet the individuals who will solve most of these problems of today and tomorrow are at present the students in our classroom. Anything that can be done to boost these present classroom students to emerge as a creative individual will be a step in the direction of a better world. Guilford (1950) mentioned: "Creativity is the key of education in its fullest sense to the solution of mankind's most serious problems" The man's creative faculty resorted to his dignity in computer dominated age. It becomes, therefore essential to probe into the educational environment in which creative talents are developed.

It is generally criticized that our school environment is not providing any chance for enhancing creativity in our school going children. Our present day evaluation system is 'examination ridden'. It prepares our students for only passing the examination. Not for developing in them the qualities and potentialities needed for the future mankind's problems. Creative individuals are few and they have their difference with the normal view. If we want to enhance their creativity, they have to be identified at an early stage so that the environment, education, and other may be provided for



their fuller and complete development. There are various methods of identifying these creative potentials at an early stage. Few suggest achievement as their criterion for identifying creative potentials while the others suggest identifying characteristics as an criterion, but the researches have shown their disagreement against these well known criteria, as it now proved beyond out that creativity on the one hand and intelligence and achievement on the other hand are related with each other but relationship is very low. Identification of scientific talent at an early stage through personality assessment is another approach it finds justification because of the fact that effective behavior is inseparable from the cognitive behavior. Seeing the importance of personality it is suggested to identification.

Objectives of the Study(1) To measure creative potentialities of school going children.(2)To assess the level of anxiety and extroversion among the children.(3) To determine sex difference in the fluency, flexibility, originality, the dimensions of creativity and creativity itself.(4) To determine the significance of difference in anxiety level of-(i) high and low creative groups.(ii) high and low fluency groups.(iii) high and low originality groups.(iv) high and low originality groups.(5)To determine the significance difference in the level of extroversion of -(i) high and low creative groups.(ii) high and low fluency groups.(iii) high and low originality groups.(iv) high and low originality groups after controlling the effect of intelligence.

Hypotheses of the study: The following hypotheses have been formulated for verification-

- (1) There is no sex difference between fluency, flexibility, originality, and creativity.
- (2) Highly creative are more anxious than low Creative.
- (3) Highly creative are more extrovert than low creative.

Methodology: The normative survey method of research was used in the project. The methodology and procedure adopted are given as under:-

Sample:-The sample consisted of 190 students out of which 101 were boys and 89 were girls studying in class x of the four intermediate Colleges of Aligarh city, namely T.R. Girls Inter College, Maheshwari Girls Inter College, D.S. Inter College and H.B. Inter College.

Tools:-The tools employed for collecting the required data were:-(1)Baquer Mehdi's Verbal test of creative thinking.(2)Mehrota's mixed type of group test of intelligences.(3) Indian Adaptation of Eysenck'sMudsley Personality Inventory.(4) Sarason's General Anxiety Scale for children (GASC).

Collection of the Data:-Above tests were administered by the investigator during the normal class periods with the help of subject teachers according to the prescribed instructions given in the test booklets. The test booklets were scored according to their respective keys.



Research Design:-The research design for achieving the objectives of the present study consists of the following tasks:-

- (1) Measurement of creativity, anxiety, extroversion, and intelligence of boys and girls.
- (2) Comparison of the total creativity and its different components between boys and girls.
- (3) Identification of high and low creative, high and low groups of fluency, flexibility and originality.

Determination of the significance of difference between anxiety and extroversion of high and low creative, high and low group of fluency, flexibility and originality after controlling the effect of intelligent.

: Mean ,Standard deviation, and Critical ratio had been calculated for Statistical analysis and to draw the inferences of the study.**Data Analysis**

Table-01

CR values of fluency.flexibility. originality and Total creativity scores of boys and girls

Variables	Boys N – 101		Girls N – 89		CR Values	SIGNIFICANT / NOT SIGNIFICANT at 05 level
	M	SD	M	SD		
Fluency	49.83.	11.29	48.90	7.52	0.68	NS
Flexibility	50.43	11.49	47.61	7.39	2.04*	Significant
Originality	50.72	9.91	48.56	10.04	1.49	NS
Total creativity	151.42	28.23	142.30	21.87	1.68	NS

Discussion: The above table 01- Indicates that boys and girls were equal on fluency, originality, and total creativity. The obtained values of CR of these accept the components were not significant at .05 level. This accepts the hypothesis of no sex difference with regard to the components of fluency, originality, and total creativity. On the component of flexibility boys were found to be more flexible than girls and the obtained value of CR was significant at .05 level. So the boys and girls differed significantly on the component of flexibility. Thus the hypothesis of no difference between boys and girls with regards to flexibility was rejected,



Table-02- CR values of Anxiety scores of High and Low fluency. flexibility. originality and creative groups

Variables	HIGH N – 60		LOW N – 60		CR	Sig/ NS
	M	SD	M	SD	Values	
Fluency	22.41	8.22	20.50	6.49	1.04	NS
Flexibility	22.67	7.80	19.91	6.59	2.76	SIGNIFICANT
Originality	21.67	7.18	19.91	6.59	1.40	NS
Creativity	22.08	7.44	20.75	6.08	1.07	NS

Discussion: Table 02- shows anxiety scores of high and low fluency, flexibility, originality, and creative groups. High and low fluency, originality, and creative groups did not differ on their anxiety. The obtained value of CR was not significant at 05 level. Thus hypothesis that high fluency, originality, and creative groups are highly anxious was rejected.

High fluency group was to found more anxious than low flexibility group. The CR value was significant at 01 level. It means that high flexibility was higher on its anxiety, and the hypothesis that high flexibility group is highly anxious was accepted.

Table 03 -cr value extroversion of high and low fluency, flexibility, originality and creative groups

Variable	High N-60		Low N-60		CR Value	Sign/ NS
	M	SD	M	SD		
Fluency	26.91	4.92	26.08	5.01	0.916	NS
Flexibility	27.0	6.28	25.5	5.77	1.36	NS
Originality	26.83	5.51	25.67	5.44	1.16	NS
Total Creativity	26.42	5.74	26.17	5.62	0.241	NS

The above table 03- reveals that high and low fluency, flexibility, originality and creative groups are equal on extroversion scores. The obtained values of CR were not significant at .05 level. Thus the hypotheses of high creative are more extroverts, was rejected. High and low creative's did not differ on extroversion scores.



Conclusion:

- On the basis of statistical analysis the following conclusions may be drawn:-
- The adolescent boys did not differ significantly from adolescent girls on fluency components.
- The adolescent boys were found more flexible in comparison to adolescent girls.
- The adolescent boys did not differ significantly from adolescent girls on originality.
- There was no significant difference in the creativity of boys and girls.
- High and low fluency groups did not differ significantly on anxiety.
- High flexibility group of adolescents was found highly anxious than low flexibility group.
- High and low originality groups did not differ significantly on anxiety.
- High and low creative adolescents were found to be equal on anxiety.
- High and low fluency groups did not differ significantly on extroversion.
- There was no significant difference between high and low flexibility groups on the variable of extroversion.
- There was no significant difference between high and low originality groups on the variable of extroversion.
- High and low creative adolescents did not differ on the variable of extroversion.

Reference:

1. Acharyulu, S.T.V.G.(1984) :The effect of nutritional status, age and sex on the creativity of Indian children. J. creative Behaviour, Vol. 18, No.4.
2. Arora, G,L, (1978):Relationship of sex with creativity, General anxiety, vocational Anxiety. J. education and psychology, vol.36, No. 3.133-139.
3. Dellas, M. and Gaier,H.L.(1970): Identification of creativity the individual. psychol. B73, 1,56-73.
4. Dutt, N.K.(1971):A Study of creativity in relation to intelligence, Extroversion and neuroticism. Indian educational review, vol.8, No.2, 81-85.
5. Goyal , R.P. (1973):A Study of some personality correlates of creativity in Scondary school teacher under trainees. Unpublished Ph.D. thesis.Punjab Univ. Patiala.
6. Goyal, R.P. (1974):A Study of some personality correlates of creativity. cited by Buch, M.B. (Ed.) a survey of educational research. Baroda center of advanced study in education. M.B. university.
7. Gakhar, s. (1974):creativity in relation to age and sex. J. education and psychology, vol. 32, no.3.
8. GAKhar, S.et al (1980): situational influence an creative thinking in relation to intelligences. trends in education , vol.6, No.1,