

A Comparative Study of High And Low Creative's in Relation To Their Academic Achievement in Four School Subjects

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Abstract

As per National Policy on Education 2020 special innate talents which every child is having must be "discovered, nurtured, fostered, and developed". These talents may be in the form of creativity, different interests, dispositions, and capacities. Creative students must be encouraged. Creativity has been an area of considerable concern over the last two decades of previous research that might now be called investigation of creativity was conducted under a different topic headings and reported in the psychological literature under such labels as "insight", "imagination", "artistic ability" and "special abilities". This study attempted to compare high and low creative in relation to their academic achievement in four school subjects namely Social Science, Science, Maths and Mother Tongue. Four hypothesis were formulated to meet the objectives. It was hypothesized that there will be no significant correlation between fluency, flexibility originality and achievement in social science of high creatives and low creatives. Another hypothesis was that here will be no significant correlation among three factors of creativity namely fluency, flexibility and originality and achievement in science for high creative and low creative. Another hypothesis was that there will be no significant correlation between fluency, flexibility, originality and achievement in Maths, Mother Tongue and for high and low creatives. Major finding was that originality of high creative has a significant correlation of .01 level with achievement in Mathematics and Mother Tongue and correlation of .05 level in the achievement in Social Science and Science. It is clear that originality is the only factor of creativity which has significant correlation with all the four subjects

Creative children are those who manifest surplus energy and ability these gifted children learn faster and remember more solve problem more effectively than others. The existence of surplus of ability in these child creates some distinctive education problems. In typical education system because of their surplus ability they are usually isolated in their classroom by their teacher and peers. The problem created by these children are mostly remains and unattended by the teacher and parents. A continuous neglect towards these children generate many more problems and ultimate result of leaving them an identified for a long period of time develops in them many behavioural problems. The existing school system even in its best form does not have the potential and equipments to fulfil the basic need of these children.

Since the teachers are also not specified hence they also fail to provide adequate education according to their surplus ability and potential. It's result that child with gifted talent and surplus ability either because underachievers or they labelled as behaviour problem child or child with hyperactivity. Most of the researches shows that such children are generally disliked by their teacher/peers/parents. Teachers does not pay attention to child, sometimes creative students disturbs the class for parents expect more from child when they find more negative results of child so they even strict to their child, then child starts failing in class. Now a days no one can afford to overlook the tremendous wastage that result by our failure to identify and develop our most promising youth to the maximum limits of their creative potentials. This point has also been considered by the Kothari Commission which observe "even the talent that enters schools and succeeds in climbing the educational ladder does not flower fully because it is not discovered sufficiently early and it is often studying in poor schools"

The basic problem of educationist today is to identify the creatives and to provide them the conditions which foster creativity in such a manner that creative abilities are developed to the fullest possible extent. There is a strong evidence which indicates that activity does not just happen the conditions for creativity will have to be carefully nourished if we want more creativity to be demonstrated.

Besides identified creatives at an early stage, the conditions the environment which foster creativity has also to be identified if we have to nurture the creativity at the fullest to keep our creative alive.

1. The content of curriculum should focus on and to organise include more elaborate complex and in-depth study of major ideas, problems. That integrate knowledge with a cross system of thoughts. Obvious expected implications of such an organisation will be that the special programs should emphasis system of ideas, such as physical theories, historical generalizations, economic principles etc. Much care should be given to the fact that these things are within the capacity of students.
2. Curricula should allow the development and application of productive thinking skills to enable students to reconceptualise existing knowledge or generalizing new knowledge. The students should be taught technique of research and generate new ideas so that they become able to process knowledge without depending on teacher.
3. Curricula should enable to explore constantly changing information and should have develop constantly changing information and should have developed in them the attitude that knowledge is worth pursuing in an open world. The application will be the teachers would motivate the students to share with the limitations of the current knowledge and provide them intellectual tool for frontiers of knowledge.
4. Curriculum should encharge exposure to selection and use of specialised and appropriate resourses. In order to achievement ,students taught fully resourses such as libraries, computers and learn the technique of collection and processing of data etc.
5. Curriculum should promote self initiated and self directed learning and growth. Problem recognition may be considered as more important as problem solving. Opportunity should be extended that the student may gain experience in locating significant questions.
6. Curricula should provide for the development of self understanding and understand of one's relationship to person. Role of education and society should be approached directly to allow the students to see how they fit into their culture.
7. Evaluation of curricula should be conducted in accordance with prior stated principles stressing high level thinking skills, creativity, and excellence in performance and products. The tests of programme effectiveness is whether students have special knowledge and skills (noted above). This can be done simply by administering test and high performance are standard achievement test. Evaluation and judgement will be make multidimensional testing procedures and actual product.

Research study was conducted to compare high and low creative children in relation to academic achievement in four school subjects.

Objectives of the study in specific terms the present study seeks to compare the (high and low creative) different dimensions of creativity in relation to academic achievement in Life Science, Science, Maths and Mother tongue in following ways

1. To compare the fluency score with achievement in life science.
2. To compare the fluency scores with achievement in science.
3. To compare the fluency scores with achievement in Maths.
4. To compare the fluency scores with achievement in Mother tongue.
5. To compare the flexibility scores with achievement in life science.
6. To compare the flexibility score with achievement in science
7. To compare the flexibility scores with achievement in maths.
8. To compare the flexibility sports with achievement in mother tongue.
9. To compare the originality scores with achievement in life science.
10. To compare the originality score with achievement in science.
11. To compare the originality scores with achievement in Maths 1
12. To compare the originality scores with achievement in Mother Tongue

Hypothesis

1. There will be no significant correlation between fluency, flexibility originality and achievement in social science of high creatives and low creatives.
2. There will be no significant correlation among three factors of creativity namely fluency, flexibility and originality and achievement in science for high creative and low creative.
3. There will be no significant correlation between fluency, flexibility, originality and achievement in Maths for high and low creatives.
4. There will be no significant correlation between the fluency, flexibility originality and achievement in Mother Tongue.

Procedure in Outline: In the present study is students studying in class 8th, 9th were administered Baqer Mehdi test of creativity only verbal form. The sample consisted of 320 students. Correlation was applied to study the comparison of creativity factors for example fluency, flexibility and originality four school subjects namely Life Science, Science, Maths and Mother Tongue of high and low creatives.

Design of the Study: The present study is an attempt to compare the high and low creative's in relation to academic achievement in four school subjects namely Life Science, Science, Maths and Mother Tongue studying in class 8th and 9th in A.M.U Girls High School, Aligarh. full stop search for study would require a suitable tool for the measurement of creativity A review of previous researches revealed that creativity plays a significant and positive role in academic achievement however there are some researches which could not obtain a significant relationship between creativity and academic achievement.

Tools employed Baqer Mehndi's Verbal Test of Creative Thinking (1974). This test battery is meant to identify creative talent at all stages of education except pre primary and primary. The test is based on the Guilford's concept of divergent thinking ability. The divergent thinking abilities included are fluency, flexibility and originality. The whole test consists of the following four subtests

1. Consequences test
2. Unusual uses test
3. Similarity test or relationship test
4. Product improvement test

Sample of the study: The sample of the study consisted of 320 students studying in class 8 and 9 of AMU girls High School of Aligarh City, India. Out of 320 students only 70 students were taken as high creative and 70 students were taken as low creative.

Procedure Employed: Test was administered upon 320 girls then scoring was done for three creativity factors namely fluency, flexibility and originality. Then found out high and low creative's on the basis of total creativity scores the high scores obtained was 160 and lowest was 10. 70 above and 70 below are considered as high and low creative respectively. The final examination marks of four School subjects namely social science, science, mathematics and mother tongue were taken for high and low creatives. The correlation coefficient was computed between three variables of creativity and achievements in four subjects. Variable numbers were

1. Fluency
2. Flexibility
3. Originality
4. Social Science
5. Science
6. Maths
7. Mother Tongue

Now we saw the level of significance for high and low creative's separately then CR value was calculated for the variable of high and low creatives which are significant

Presentation Analysis and Interpretation of Data: Since the main purpose of this study was to compare the relationship between academic achievement in various subjects and creativity variable in respect of high and low creative, the data was analysed in three phases. In the first phase the inter-correlation among all the seven variables was studied for high creative group. In the second phase the corresponding inter-correlation table was studied for low creative groups. Finally the difference between correlations obtained for the both the groups was examined for significance. In this process a particular correlation coefficient between an academic variable and a creativity variable for low creative was compared with the high creative group. For making this comparison significance of difference between corresponding correlation coefficient was tested using Fisher's Transformation. All the three phases of data analysis are described in detail in the following pages

Inter Correlation for High Creative: The product moment correlation coefficient among the seven variables namely fluency, flexibility, originality and achievement in social science, science, Maths and mother tongue show in table 1

Variable No.	1	2	3	4	5	6	7
1	1.0000	0.7240*	0.2956*	0.33321*	0.2186	-0.0172	0.0871
2	0.7240	1.0000	0.1759	0.4469*	0.2358**	0.02188	-0.0197
3	0.2956	0.1759	1.0000	0.2794**	0.2317**	0.3026*	0.3711
4	0.3321	0.4469	0.2794	1.0000	0.7578*	0.3548*	0.2908*
5	0.2186	0.2358	0.2317	0.7578	1.0000	0.4491*	0.5226*
6	-0.0172	0.0218	0.3026	0.3548	0.4491	1.0000	0.5143*
7	0.0871	-0.0197	0.3711	0.2908	0.5226	0.5143	1.0000

* Shows that correlation is significant at .01 level of confidence

** Shows that correlation is significant at .05 level of confidence

Level of significance: The correlations which are at point .23 and above are significant at point .05 level. The correlations which are significant at .30 and above are significant at .01 level. Other correlations are not significant one is star (*) shows that the correlation are significant at point .01 level two stars (**) shows that the correlation are significant at .05 level.

The following are the correlations which are significant at point .01 level of confidence

1. Fluency and Flexibility
2. Fluency and Originality
3. Fluency and achievement of Social Science
4. Flexibility and achievement in Social Science
5. Originality and achievement in Mathematics
6. Originality and achievement in Mother Tongue
7. Achievement in Social Science and Science
8. Achievement in Social Science and Maths
9. Achievement in Social Science and Mother Tongue
10. Achievement in Maths And Mother Tongue

the following are the correlations which are significant at .05 level of confidence

1. Flexibility and achievement in Science
2. Originality and achievement in Social Science
3. Originality and achievement in Science

Inter-correlation for low creative: The product moment correlation coefficient among the seven variables namely fluency, flexibility, originality and achievement in Social Science, Science, Maths and Mother Tongue are shown in table 2

Variable No.	1	2	3	4	5	6	7
1	1.0000	0.8382*	0.3326*	-0.1017	-0.4180	-0.1247	0.1091
2	0.8382	1.0000	0.2333**	-0.0147	0.0144	-0.0793	0.1086
3	0.3326	0.2336	1.0000	0.1833	0.1190	0.1573	0.2552
4	-0.1017	-0.0147	0.1833	1.0000	0.5549*	0.5905*	0.5514
5	-0.0418	0.0144	0.1190	0.5549	1.0000	0.5495	0.5889

6	-0.1247	-0.0793	0.1573	0.5905	0.5495	1.0000	0.4135
7	0.1091	0.1086	0.2552	0.5514	0.5889	0.41352	1.0000

* Shows that correlation is significant at .01 level of confidence

** Shows that correlation is significant at .05 level of confidence

Level of Significance: The correlations which are at .23 and more are significant at .05 level. The correlation which are significant at .03 and above are significant at .01 level. Other correlations are not significant. One star (*) shows that the correlation are significant at .01 level ,two stars (**) shows that the correlations are significant at .05 level.

The following are the correlations which are significant at .01 level of confidence

1. Fluency and Flexibility
2. Fluency and Originality
3. Social Science and achievement in Science
4. Achievement in Social Science and achievement in Maths
5. Achievement in Social Science and achievement in Mother Tongue
6. Achievement in Science and achievement in Maths
7. Achievement in Science and Mother Tongue
8. Achievement in Maths and Mother Tongue

The following are the correlation which are significant at point 0 5 level of confidence

1. Flexibility and Originality
2. Originality and achievement in Mother Tongue

Conclusion, Discussion and Suggestions: The first hypothesis retained. The correlation for three factors of creativity with achievement in social science is found to be significant for high creative. For fluency and achievement in social science, flexibility and achievement in social science are found to be significant at .01 level of significance but for originality and achievement in social science is significant at .05 level. There is no significant correlation between creativity and achievement in social science for low creative.

The second hypothesis is partially confirmed. The correlation between flexibility and achievement in Science, originality and achievement in science is significant at .05 level of confidence for high creatives. There is no significant correlation between creativity factors i.e., fluency, flexibility, originality and achievement in Science for low creatives.

The third hypothesis is partially retained in light of result obtained. The correlation between originality and achievement in Maths is significant at .01 level for high creatives. There is found to be no achievement in Maths for low creatives.

The fourth hypothesis is also partially confirmed. There is found to be significant correlation between originality and Mother Tongue at .01 level for high creatives and at .05 level for low creative. The result of the study may be summarised as follows:

High Creative: The following are the correlations which are significant.

Fluency: Fluency of high creative has a significant correlation of .01 with Flexibility, Originality and achievement in Social Science.

Flexibility: Flexibility has a significant correlation of .01 level with achievement in Social science and .05 level with achievement in Science. Flexibility has no correlation or insignificant correlation with other variables.

Originality: Originality of high creative has a significant correlation of .01 level with achievement in Mathematics and Mother Tongue and correlation of .05 level in the achievement in Social Science and Science. It is clear that originality is the only factor of creativity which has significant correlation with all the four subjects.

Low Creative: The following are the correlations which are significant.

Fluency: Fluency has a significant correlation with Flexibility and Originality. This correlation is of .01 level. Fluency of low creatives had no significant correlation with achievement in any subject

Flexibility: Flexibility has correlation at .05 level with originality only. Like fluency low creative has no significant correlation with achievement in any subject.

Originality: Originality of low creative has significant at .05 level with achievement in Mother Tongue. Originality has no significant correlation with any other variable.

The present study has employed only a verbal measure of creativity for identifying high and low creative. Non verbal test of creativity can also employed in further researches for this purpose.

More classes (only 8th and 9th were taken in this study) and more subjects can be taken for further researches. In the present study only girls were taken as sample of study, boys may also be taken and comparison may also be made.

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