

Research Paper

Psychology

Impact of Personal Variables on Creativityamong High School Students

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ABSTRACT

A study was conducted on 600 high school students to find out the effect of gender, locality of residence and class of study on creativity. Creativity Scale developed by Venkatarami Reddy was used to assess the verbal creativity of the students. Results revealed that there is significant impact of gender, locality of residence and class of study on creativity.

among high school students. Boys are high in their creativity than girls, students hailing from urban areas are secured higher creativity when compared with rural students and the students studying different classes differed in their creativity. X class students possess high creativity than VIII and IX class students and IX class students fall in between.

KEYWORDS:

INTRODUCTION

Education plays an integral part in the overall development of the personality. Empowering of children to be active participants in a knowledge society is the main aim of education. Education is a powerful force in bringing about desired change in knowledge, skills, attitudes, appreciations and understanding things around us. Education helps a person to draw the best out of their mind and spirit. Education plays a vital role in the personal growth and the social development among all of us. It imparts us with all the power and necessities in making a noticeable mark in any of the field. Education which transforms a person to live a better life and more importantly in a socially well being. Education does make a remarkable effect on one's personality.

Creativity is the act or ability to create something new through imaginative skills. It is a mental process involving the generation of new ideas. Creativity is finding concepts or association between existing and new concepts or rearranging what is known in order to find out what is not known. The creative process takes place in the thought. Creative thinking has two aspects: Divergent Thinking (intellectual ability to think of many original, diverse and elaborate thought) and Convergent Thinking (intellectual ability to logically evaluate critique and choose the best ideas from a selection of ideas). It was initially felt that only gifted or special people could be creative. Research has proved that only certain attributes are required to be creative. A creative person requires passion and commitment; fresh way of looking at things; an understanding of people and an entrepreneurial willingness to take risk and work hard, ability to convince people that the new idea is good or better. Creativity is fostered or inhibited by certain environmental pressures. Every day, we face new changes in all aspects of life and creativity is not only a means for adapting with changes but also a stimulus for producing knowledge in different fields of study. Moreover, creativity as one of the key factors in academic achievement is required special attention.

Creativity is defined as the ability to bring something with existence, creativity is distinguished by novelty, originality and it's usually inventive. Creativity was believed to be human gift, a rare quality of distinguished individuals with inborn talent. Individual who is flexible in thought and action who can produce novel ideas, express his ideas fluently and long with certain personality trails is said to be creativity. Wallach and Kogan (1965) defined as creativity lies in producing more associations and are producing more that are unique. Levin (1978) defined as creativity is the ability to discover new solutions to problem or to produce new ideas, invention or works of art. It is a special form of thinking away of viewing the world and interacting with it in a manner different from that of the general population. Wilson Guilford and Christenson (1974) stated that creative process is any process by which something new is produced like an idea or an object including a new form or arrangement of old elements. The new creation must contribute to the solution of some problems. Sternberg (1985) proposes that creativity is one type of intelligence. The creative intelligence is the ability to go beyond the given data to generate novel and interesting ideas. Thus, creativity is the higher order intelligence that helps a person to translate ideas into practical accomplishments.

Over the past few decades Indian society is influenced by Western culture, the society is fast getting modernized. But the social norms, traditions, family structure, rearing practices etc., girls especially are restricted and their activities are closely supervised not only by parents and caretakers but also by neighbors in the close communities. Their thinking is guided so as to conform to the social norms and the activities also restricted which sets limits to their creativity, unlike the case of boys. (Passi, 1971; Paramesh, 1973; Sinha, 1975; Sansanwal and Jarial, 1979; Sharma , 1984; Gupta , 1990; Flaherty, 1992; Sebastian,1993; Bawa and Parvinder Kaur,1995; Suresh,1997; Shan, 2000; Yang and Ching, 2004; Sindhu, 2005; Palaniappan, 2007; Narula ,2007; Krishna and Das, 2008; Habibollah, 2009; Trivedi and Bhargava, 2010; Saima Siddigi, 2011; Ravi Kant, 2012 and Smritikana Mitra,2013). Participation in socio cultural aspects, innovative curriculum, stimulated school environment, interaction with public, life style, facilities available, opportunities, exposure etc., fortunately will be more in urban life than rural. This explains the development of creative thinking between rural and urban students.(Chaudhary, 1983; Marsh ,1985; Madhav and Hirdi Pal,1990; Asmali, 1994; Sansanwal and Deepika, 1997; Karimi, 2000; Bashir and Hussain, 2012; and Atefeh Kamaei and Mokhtar Weisani , 2013). According to Torrance (1962) creativity gets hampered whenever there is stress on the child. The stress may be in the form of adjusting to new environment, transition from one school to another and one society to another. Up to secondary school final examination (10th class) students are promoted to higher classes based on their attendance. But at SSC level there is pressure on the child to achieve better academic grade points. This pressure on studies promotes achievement, naturally curbs creative thinking. The same findings were observed in the present investigation.

The foremost concern of education today is to produce quality persons through a systematic approach i.e. through schooling; who are the real assets of the society for the 21st century. The principle objectivity of education is to make well rounded individuals capable of living fully and richly in their culture. School life is a test of a student, undergoing a transition from dependency to independency. The child's personality continues to develop during the school years. He/ she still have a chance to learn how to love and to be loved, how to tolerate frustration, how to integrate conflicting points of view, how to face reality realistically, how to express creative ideas without feeling from it to channel hostile impulses into socially approved activities. Success of school education depends upon large measures on how each young boy or girl feels about his/her school experiences and practicum experiences. It makes an immense difference whether he/she acquired attitudes, values, sense of justice and habits favorable to his/her own better intellectual, creative, social and emotional developments as a result of school experience. Social and emotional maturity is desirable in the development of intellectual and creative power an end product of formal education. Keeping the above views, the following objectives are setup for the present study.

OBJECTIVES:

- > To find out whether boys and girls differ in their creativity.
- To find out whether children belonging to rural and urban localities differ in their creativity.
- To examine whether students of different class of study are significantly related to creativity.

Based on the above objectives the following hypotheses are formulated for the present study:

HYPOTHESES:

- There would be significant difference between the creativity of boys and girls.
- 2 There would be significant difference between the creativity of students belonging to rural and urban localities.
- 3 There would be significant difference between the creativity of students from different class of study.

Tools

Creativity battery test standardized by Venkatarami Reddy (1982) was used in the study. The battery of creativity tests consisted of 10 subtests. The first seven of them were verbal tests while the remaining three were nonverbal tests. They are: Unusual Uses, Instances, Similarities, Common problems, Impossibilities, Consequences, Product improvement: Pattern Meanings: Line meanings and Circles. In the present investigation verbal test items were taken into consideration and the analysis were separately for fluency, flexibility and originality scores.

Scoring

As there is no right or wrong responses for the creativity test items much care has to be exercised in scoring them. To enhance the objectivity of scoring the usual procedure adopted is to get the responses scored by different scorers, and to see that the inter scorer reliability is high. According to Guilford (1962), Torrance (1962) and Gage and Berliner (1975) fluency, flexibility and originality are the primary components of divergent thinking. These factors operate in the creative thinking of adults as well as children. The responses of the subjects were scored based upon the following procedure suggested by Guilford (1951), Torrance (1962) and child (1973) and followed by various investigators like Gakhar (1974), Badrinath and Sathyanarayana (1979), Venkata Rami Reddy and Balakrishna Reddy (1984), Chadha and Ghose (1985), Misra (1986), Syama Trimurti (1987), Venkata Rami Reddy and Saleena (1988), Venkata Rami Reddy and Vijayakumari,etc.

Fluency:

A fluency score was obtained by totaling the number of relevant responses given by the subject. Responses that were nonsensical or which did not answer the question as posed, were eliminated before counting them.

Flexibility:

A flexibility score was obtained by categorizing the responses into as many discrete classifications as suggest themselves. Evidently, the subjectivity of the scorer comes into any measure of flexibility so derived; but consensus agreement among different scorers was employed by way of making the final flexibility score more objective.

Originality:

Different authors used different procedures to determine the originality. In this investigation, in line with Guilford (1952) and Torrance (1962) originality was defined in terms of the statistical in frequency of a given response is only relative, each response is originality of different responses may vary depending upon the statistical infrequency of each of un commonness, each level representing approximately one fifth of the total responses.

SAMPLE AND DESIGN:

Students of VIII, IX and X classes belonging to high schools located in Chittoor and Kadapa districts in Rayalaseema region of Andhra Pradesh state constituted the population for the study. Among two revenue districts, the schools located in urban and rural areas were selected at random from each district and 5 schools each from rural and urban areas were selected at random from each district. Five boys and five girls were selected at random, from each of the class, thus giving a total of 600 subjects for the study, equally distributed between the two sexes, two localities and three classes. As there are three independent variables in the investigation and each variable is further classified into two, a2X2X3 factorial design was employed.

RESULTS AND DISCUSSION

Tests.								
Category		N Mean	Fluency		Flexibility		Originality	
			SD	Mean	SD	Mean	SD	
Gender	Boys	300	103.02	16.55	66.37	24.49	385.27	48.20
	Girls	300	92.98	14.46	53.84	23.98	363.02	49.21
Locality	Rural	300	99.45	15.09	57.68	24.78	364.64	44.07
	Urban	300	100.55	17.45	62.52	25.06	383.65	53.57
Class of Study	VIII	200	92.75	17.30	57.78	25.72	371.86	50.65
	IX	200	95.96	16.69	59.43	24.23	373.42	52.32
	x	200	98.75	17.30	64.10	24.65	377.16	46.76

Table -I Mean Fluency, Flexibility and Originality Scores and SDs of different sub groups of Subjects on Verbal Tests.

Table I shows the mean fluency scores and SDs of different sub groups of the subjects on the verbal tests it could be seen from the table that the mean scores of the boys was 103.02 while that of girls scores was 92.98 this shows that boys scored higher than girls. It could be seen from the table that the students from urban scored better than those from rural subjects. The mean scores of urban students were 100.55, while that of rural students was 95.45. When the students were classified according to class of study which they belonged, it was found that the mean score of the students of 8th class students falling in between. The mean scores of the students of the three classes were: 8th class 92.75, 9th class 95.96, and 10th class 98.75 respectively.

The mean flexibility scores of different sub groups of the subjects on verbal test. It may be seen from the table that as in the case of the fluency, for flexibility also boys scored better than girls. The mean scores of boys were 66.37 while that of girls was 53.84. In case of locality, urban students (M=62.52) scored better than rural students (M=67.68) as in the case of fluency component. The mean score of 8th, 9th and 10th class were 56.78, 59.43 and 64.10 respectively. This shows that 8th class students scored least while the students of 10th class students scored the highest.

An examination of the table shows that the mean score of the boys was 385.27, while that of girls was 363.02 on originality. When the students were classified as rural and urban based upon the locality to which they belong, it was found that the students from urban locality (M=383.65) scored better than those from rural subjects (M=364.64). With regard to performance of the subjects belonging to different classes, the mean scores of the students of 8th, 9th and 10th classes were 371.86, 373.42 and 377.16 respectively. This shows that 8th class students scored least while the students of 10th class scored the highest and 9th class students falling in between.

Table-II:	Consolidated	Summary o	f ANOVA	of the	Fluen-
cy, Flexik	oility and Orig	inality Score	s.		

Variable	Fluency	Flexibility	Originality
Gender (A)	67.74 **	41.68 **	33.13 **
Locality (B)	17.45 **	6.22 *	24.13 *
Class of Study (C)	5.26 *	4.87 *	0.66 @
AXB	2.10 @	2.49 @	0.35 @
AXC	6.19 *	1.63 @	1.63 @
BXC	15.81 **	6.33 **	0.45 @
AXBXC	0.47 @	0.20 @	7.93 **

** Significant at 0.01 level * Significant at 0.05 level @ Not Significant

It could be seen from the table the F value for gender was 67.72, which was significant at 0.01 level. This shows that there was significant difference between the mean fluency scores of boys and girls as measured by verbal tests. The mean scores of boys and girls presented in table II shows that boys was higher than girls. The F value for locality was 17.45, which was significant at 0.01 level, indicating a significant difference between rural and urban subjects. The mean score of the subjects belonging to urban was 100.05 while those hailing from rural localities scored 95.45. This shows urban subjects were more creative than rural children as measured by the fluency component of verbal tests. The F value of 5.26 was significant at 0.05 level. This shows that there was significant difference between the creativity of the students belonging to different class of study. The obtained mean of 8th class, 9th class and 10th classes were 92.75, 95.96 and 98.75. Each group differs significantly from the others. 8th class students scored the least, while the students of 10th class scored somewhat highest than 9th class students and the 9th students falling in between 8th and 10th class students. The F value of 2.10 for gender and locality interaction, which was not significant, for gender and class of study interaction, (F=6.19< 0.01), the F value of 15.81 for locality and class of study interaction (F= 15.81 < 0.01), and the interaction between AXBXC (F= 0.47 @) was not significant.

Table two presents the F value for gender was 41.68, which was significant at 0.01 level. This indicates that there was significant difference between boys and girls with regard to the flexibility score as measured by the verbal tests. The mean scores of boys (M= 66.37) and girls (M=53.84) shows that boys was higher than that of girls. The F value for locality (F=6.22 < 0.05). An observation of the mean scores presented in table IV reveals that urban students (M=62.52) scored better than rural students (M=57.68) on the component as was the case of fluency. This shows urban subjects were more creative than rural children as measured by the flexibility component of verbal tests. Considering the class of study, the F value obtained was 4.87 which were significant at 0.05 level, indicating a significant difference between the flexibility scores of the subjects belonging to different classes. The mean score of 8th, 9th and 10th class were 56.78, 59.43 and 64.10 respectively. This shows that 8th class students scored least while the students of 10th class students scored the highest. Each group differs significantly from the others. 8th class students scored the least, while the students of 10th class scored somewhat highest than 9th class students and the 9th students falling in between 8th and 10th class students. The F value of the interaction between gender and locality was not significant. This shows that the gender effect on the creativity of the children was independent the locality to which they belong. The F value of the interaction between sex and class of study was not significant. This shows that the gender effect on the creativity of the children was independent of the class to which they belong and the vice versa. The F value for the interaction between locality and class of study was significant at 0.01 level. An examination of mean scores of the subjects classified according to two variables; shows that irrespective of their locality and sex, students of 8th class were the least score, while students of 10th class scored the highest mean in the group. It may be seen from the table however, that though the direction of the difference between the means was more for the both sexes. This shows that the magnitude of difference from class to class was not similar. A similar phenomenon was observed in case of fluency component also as discussed earlier. The F value (AX-BXC) for three factor interaction was not significant, indicating that the effect of any two variables taken at a time was independent of the level of third variable.

The F value for gender was 33.13, significant at 0.01 level, indicating that there was significant difference between the originality of boys and girls as by the verbal tests. This shows that there was significant difference between the mean originality scores of boys and girls as measured by verbal tests. The mean scores of boys and girls presented in table 1 show that boys were higher than that of girls. With regard to variable locality the obtained F value (F= 24.18 < 0.01). The mean score of rural children was 364.64, while it was 383.65 in the case of urban children. This shows urban subjects were more creative than rural children as measured by the originality component of verbal tests. The F value for class of study (F= 0.66> @). The means obtained by the 8th class students was somewhat less than 9th class students, 9th and 10th class students were shown significant mean difference. But the obtained means were not showing much difference.

The F value for the gender and locality interaction (F=2.10>@), for gender and class of study (F=0.35>@) and locality and class of study (F=0.45>@), indicating that the effect of gender, locality and class of study was not shown independently any impact on each other, when each was interacted with another one. But the obtained F value for gender, locality and class of study (AXBXC) was significant at 0.01 level. When the three variables independently interacted one variable with another was not shown any significant impact. But the three variables combined together, it shown the significant impact on originality scores. Based on the results obtained the following conclusions were drawn.

Conclusions:

There is significant difference between boys and girls with regard to their fluency, flexibility and originality (creativity) scores. Boys are better than girls on their creativity.

Rural and urban students shown significant difference with regard to their fluency, flexibility and originality (creativity) scores. Urban students are better than rural student on their creativity.

Class of study of the subjects shown significant impact on creativity. $10^{\rm th}$ class students obtained higher score on fluency, flexibility and originality (creativity) than the students studying $8^{\rm th}$ and $9^{\rm th}$ class-es. 8th class students i.e., lower class students secured low creativity scores.

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