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Assessment of academically bright rural young adolescents' creative endeavors across home environment

Sumit Sheoran, Bimla Dhanda, Krishna Duhan and Joginder Singh Malik

Abstract
Education is an engine for growth and progress of any society and country. Numerous challenges are faced by 21st century education system despite the implementation of teaching various and learning approaches. In the pre- technology era, most teachers employed teacher - centered learning method. There are lots of studies which show that traditional teaching methods are no more applicable to the current younger generations and many of such educational institutions are moving ahead by applying creativity and innovation based strategies in their teaching and learning. But very few researches study the impact of learners' home environment variables on their creative abilities. This paper attempts to investigate the relationship between creativity and home environment. Information has been collected through questionnaire-cum-interview schedule by the researcher and data gathered was analyzed by using SPSS. The study found that there were significant differences among adolescents' seeing problem abilities, unusual uses fluency, unusual uses originality, blocks originality and inquisitiveness across their family type. In addition, there were significant differences in respondents' unusual uses flexibility and unusual uses creativity across parenting style adopted by their parents.

Keywords: ANOVA, creativity, Haryana, home environment, SPSS, young adolescents

Introduction
Education plays a pivotal role for the growth and progress of any civilization and population. Numerous challenges are faced by 21st century education despite the implementation of many teaching and learning approaches. But we can observe that the profile of our current generations' learners has changed. Chen (2010) [4] illustrated that digital natives weaned on video games and Web 2.0, and have been depicted as "matching through our today' schools, carrying a transformational change in the form of powerful multimedia handheld devices". According to Pink (2005) [13], the 21st century will be dominated by a diverse means of knowing, being and doing, and right – brain competences will appear increasingly to the core. In the pre-technology education circumstance, majority of teachers employ teacher – centered learning method. At the same time, there are various studies which illustrate that traditional teaching methods are no more relevant to the current generations.
Recent educational revolutions in different countries have associated pedagogical innovations with cross-curricular proficiencies, such as social and communicative expertise, meta-cognitive skills, reasoning and creative thinking (Boissonnade, Giglio and Kohler, 2015) [3]. In order to match the expectations educators they necessitate to quit from ideas and pedagogies of past and become courageous to advocate the new transitions' of learning (Kwek, 2011) [9]. Nowadays, lots of higher education institutions are moving ahead by applying creativity and innovation in teaching and learning activities. Creativity is the capability to create or bring into existence something new, whether a new solution to an existing problem, a new technique or device or an innovative artistic object or form (Olatoye, Akintunde and Ogunsanya, 2010) [11].
Creativity and innovation can produce blueprint of thinking which is an approach to learning that concentrates on developing creative and confident students through hand-on projects that centers on empathy, promoting a prejudice toward action and fostering active problem- solving competencies and skills. Thus, through the implementation of creativity in the teaching and learning curriculum, educators can facilitate students to expand a skill set that includes ideas generally not promoted within traditional educational setting and at the same moment it can also improve their academic performance.

According to Pennick (1992) [12] creativity is not merely confined to becoming sensitive to current problems, but it is also identifying upcoming problems, finding new solutions and finally communicating the results. Creativity can also be referred to as a psychological process, related to play, fantasy, imagination, feelings and emotions and making the use of symbols (Vygotsky & Michael, 1978; Joh-Steiner et al., 2010) [15, 8]. Runco (2007) [14] defined creativity as a unique human trait that reflects someone's' ability to adapt to the changing circumstances. Besides that, creativity also enhances actionable new ideas, various new concepts, lots of new designs and numerous opportunities while innovation adjoins values to the new products (Olatoye, Akintunde & Ogunsanya, 2010) [11]. Adding to this point, Akinboye (2003) [1] also said that without creativity, a person can't have access to the fullness of information and resources available but it may stay locked up in old habits, patterns, structures, concepts and perceptions.

With modernization the society also becomes complex, there is also a mutual increase in the awareness that traditional methods cannot effectively solve contemporary problems of the society and this is why creativity is needed in nearly all the facets of the society. Several research studies have been accentuated to study the significant role that parents and home environment all together may contribute in supporting the creative endeavors of their children by planning special creativity enriching strategies for home and by providing appropriate creative supporting home-environment. By keeping in view the relevance of such futuristic research studies, the present research study was designed in such a way to assess the probable impact of home environment that it may have on development of adolescents' creative potential.

Methodology

Study design

The objective of the current research study was to examine the impact of home environment on the creative talent of the academically bright young adolescents from rural area (N=300). To gather primary data for the present study Hisar district was chosen purposively as no such sort of research was conducted in this locality prior. Academic brightness of the respondents was calculated as the consecutive academic record of the young adolescents (12 to 14 years old students) who attained 85% and more than 85% from the last three consecutive academic years. Further, consecutive academic record was evaluated as the cumulative academic performance of the pupils from the previous three academic classes consecutively.

Data collection

The primary data for the study was collected from the respondents by using questionnaire cum interview schedule.

Tool

The creative abilities of the students were studied by using Passi tool of Creativity (PTC, 2006) created by Dr. B.K. Passi. While, to study the home environment variables (type of family and parenting style adopted by parents) self developed questionnaire was employed.

Statistical analysis

The software Statistical Package for the Social Sciences (SPSS) was implemented for statistical analysis. Mean, Standard Deviation (S.D.) and ANOVA were calculated to accomplish the objectives of the study.

Table 1: Comparison of respondents 'creativity across type of family n=300

Sr. No.	Variables	Type of Family			F- value
		Joint Family (n=148) Mean ± S.D.	Extended Family (n=67) Mean ± S.D.	Nuclear Family (n=85) Mean ± S.D.	
1.	Seeing Problem (SP)	21.49±09.38	18.08±08.53	22.12±09.40	3.33*
2.	Unusual Uses Fluency (UF)	09.86±04.17	09.30±04.81	08.84±04.51	3.85*
3.	Unusual Uses Flexibility (UX)	07.63±03.83	07.33±04.84	07.74±04.61	0.92
4.	Unusual Uses Originality (UO)	22.55±14.48	25.70±15.67	27.91±16.52	2.59*
5.	Unusual Uses Creativity (UC)	50.34±26.79	46.76±29.35	49.35±27.98	1.07
9.	Inquisitiveness (INQ)	04.11±02.71	03.32±02.19	04.00±02.34	2.96*
10.	Persistency (PER)	20.25±10.23	20.10±11.00	21.92±10.21	0.74

*****Significant at 0.05 **Significant at 0.01

Note: Means in the same row that do not share superscripts differ at p<0.05 using Duncan multiple difference comparison

S.D.: Standard Deviation; n: Sample size

Table 1 revealed significant differences in seeing problem abilities (F=3.33, p<0.05), unusual uses fluency (F=3.85, p<0.05), unusual uses originality (F=2.59, p<0.05) and inquisitiveness (F=2.96, p<0.05) across the type of respondents' family. Data related to mean scores described that adolescents' who had joint families were performing better in three sub aspects of creativity i.e., unusual uses fluency (Mean=9.86), unusual uses creativity (Mean=50.34) and inquisitiveness (Mean=4.11). Further, data revealed that young adolescents' belonging to nuclear families were better in seeing problem (Mean=22.12), unusual uses flexibility (Mean=7.74), unusual uses originality (Mean=27.91) and persistency (Mean=21.92).

The research findings were also supported by the research results of another study conducted by Aqil and Ahamad (2015) [2] with the objective to study the creativity and achievement motivation of adolescents with regard to their parents' attitude towards creativity and role of their home environment. The research findings revealed that there existed significant differences between students' creativity and achievement motivation on the basis of their parents' attitude towards creativity and home environment available to the respondents.

Table 2: Comparison of respondents 'creativity across type of family n=300

Sr. No.	Variables	Type of Family			F- value
		Joint Family (n=148) Mean ± S.D.	Extended Family (n=67) Mean ± S.D.	Nuclear Family (n=85) Mean ± S.D.	
1.	Consequences Fluency (CF)	19.43±09.53	17.29±08.96	18.87±09.33	0.84
2.	Consequences Originality (CO)	17.16±09.10	13.97±07.92	15.93±08.57	2.34
3.	Consequences Creativity (CC)	36.51±17.51	31.08±15.64	34.81±16.17	1.59
4.	Blocks Fluency (BF)	05.47±02.19	05.54±02.22	05.53±02.22	0.09
5.	Blocks Flexibility (BX)	10.84±06.14	10.37±06.39	09.19±05.05	2.38
6.	Blocks Originality (BO)	13.31±08.48	14.57±08.48	11.82±08.56	2.75*
7.	Blocks Creativity (BC)	34.32±18.89	34.37±19.51	31.86±17.62	0.56

*****Significant at 0.05 **Significant at 0.01

Note: Means in the same row that do not share superscripts differ at $p<0.05$ using Duncan multiple difference comparison

S.D.: Standard Deviation; n: Sample size

Table 2 elucidated significant differences only in one creativity- domain i.e., blocks originality (F=2.75, $p<0.05$) across family type. Data related to mean scores displayed that adolescents' who had joint families were performing better in four different sub aspects of creativity i.e., consequences fluency (Mean=19.43), consequences originality (Mean= 17.16), consequences creativity (Mean=36.51) and blocks flexibility (Mean=10.84). Further, data stated that young adolescents' belonging to extended families were better in blocks fluency (Mean=5.54), blocks originality (Mean=14.57) and blocks creativity (Mean=34.37).

The research findings were in line with the research findings of another similar study conducted by Lew and Cho (2013) [10] with the objective to find the relationship among young adolescents' creativity level, role of home environment and motivation. The result findings revealed that there was significant positive correlation between the type of motivation provided by parents and the creativity level of the adolescents. Additionally, the significant relationship was also found between the respondents' creativity level and the creativity supportive home environment.

Table 3: Comparison of respondents 'Creativity for Parenting Style Adopted by the Parents n=300

Sr. No.	Variables	Parenting Style Adopted by the Parents				F- value
		Authoritative (n=80) Mean ± S.D.	Authoritarian (n=30) Mean ± S.D.	Permissive (n=138) Mean ± S.D.	Neglectful (n=52) Mean ± S.D.	
1.	Seeing Problem (SP)	19.63±08.81	20.97±10.18	21.61±09.46	20.71±09.10	0.77
2.	Unusual Uses Fluency (UF)	08.57±04.35	10.30±05.18	09.53±04.31	09.60±04.52	1.39
3.	Unusual Uses Flexibility (UX)	05.95±03.32	10.00±05.17	07.77±04.31	08.04±04.10	7.78**
4.	Unusual Uses Originality (UO)	21.01±11.45	26.07±16.18	25.31±16.11	27.77±17.55	2.40
5.	Unusual Uses Creativity (UC)	38.86±21.23	59.10±31.28	50.36±28.48	55.19±27.54	6.24**
6.	Inquisitiveness (INQ)	04.16±02.66	04.27±02.58	03.71±02.36	04.06±02.68	0.79
7.	Persistency (PER)	20.96±09.72	21.17±11.03	20.33±10.17	20.69±11.86	0.09

*****Significant at 0.05 **Significant at 0.01

Note: Means in the same row that do not share superscripts differ at $p<0.05$ using Duncan multiple difference comparison

S.D.: Standard Deviation; n: Sample size

Table 3 displayed highly significant differences in two sub aspects of creativity i.e., unusual uses flexibility (F=7.78, p<0.01) and unusual uses creativity (F=6.24, p<0.01). Data related to mean scores demonstrated that respondents whose parents adopted authoritarian parenting style performed better in majority of the sub-domains of creativity i.e., unusual uses fluency (Mean= 10.30), unusual uses flexibility (Mean= 10.00), unusual uses creativity (Mean= 59.10), inquisitiveness (Mean= 4.27) and persistency (Mean= 21.17). While, adolescents whose parents adopted permissive parenting style were better in seeing problem abilities (Mean=21.61). Respondents' whose parents adopted neglectful parenting style were better in unusual uses originality (Mean=27.77). Results were also supported by Harris and Goodall (2012) [7] in their research, which displayed that the highly creative adolescents belonged to the homes where creative stimulating and creativity supporting environment was available. Also, the study also stated that the creatively planned, designed and properly administered home based activities improved creative thinking among children at younger age.

Table 4: Comparison of respondents 'Creativity for Parenting Style Adopted by the Parents n=300

Sr. No.	Variables	Parenting Style Adopted by the Parents				F- value
		Authoritative (n=80) Mean ± S.D.	Authoritarian (n=30) Mean ± S.D.	Permissive (n=138) Mean ± S.D.	Neglectful (n=52) Mean ± S.D.	
1.	Consequences Fluency (CF)	17.69±08.64	18.77±09.55	19.77±09.55	18.19±09.59	0.95
2.	Consequences Originality (CO)	15.46±08.23	14.57±08.41	16.90±09.14	15.67±08.74	0.87
3.	Consequences Creativity (CC)	33.14±15.98	33.00±16.47	36.66±17.23	33.67±16.74	1.02
4.	Blocks Fluency (BF)	05.41±02.01	05.77±02.06	05.58±02.39	05.25±01.96	0.48
5.	Blocks Flexibility (BX)	10.69±05.83	09.70±06.80	10.27±05.95	09.54±05.52	0.47
6.	Blocks Originality (BO)	11.25±07.68	12.97±08.93	13.63±09.05	14.23±07.99	1.74
7.	Blocks Creativity (BC)	35.61±18.54	31.37±18.77	34.10±19.29	30.04±16.36	1.13

******Significant at 0.05 *Significant at 0.01

Note: Means in the same row that do not share superscripts differ at p<0.05 using Duncan multiple difference comparison

S.D.: Standard Deviation; n: Sample size

Table 4 revealed that none of the above mentioned sub-aspects of the creativity had any significant difference across parenting style adopted by respondents' parents. Data related to mean scores displayed that whose parents adopted authoritative parenting style performed better in two sub-domains of creativity i.e., blocks flexibility (Mean= 10.69) and blocks creativity (Mean= 35.61). While, adolescents whose parents adopted authoritarian parenting style were better in blocks fluency (Mean=5.77). Adolescents' whose parents adopted permissive parenting style performed better in majority of the above mentioned sub-aspects of creativity i.e, consequences fluency (Mean= 19.77), consequences originality (Mean= 16.90) and consequences creativity (Mean= 36.66). Respondents' whose parents adopted neglectful parenting style performed better in blocks originality (Mean=14.23) as compared to their counterparts.

Similar research findings were also observed by Clark (2012) [5], who planned a study to examine the probable impact of home environment on rural adolescents' creative abilities and research findings displayed that the creative skills of any student may be effected due to various factors such as, reward structure adopted by parents, restrictions imposed by parents, parenting techniques adopted and parents' attitude towards shaping their children's creative potential. Another similar research study conducted by Hari *et al*. (2013) [6] found that the various socio-cultural factors such as parents, neighbors, teachers, media, relatives and type of society played important role in the development of creative abilities among adolescents.

Conclusion

The present research study revealed that there were significant differences among adolescents' unusual uses fluency, unusual uses originality, seeing problem abilities, inquisitiveness and blocks originality across their family type. Significant differences were also elucidated in adolescents' unusual uses flexibility and unusual uses creativity across the parenting approach adopted by their parents.

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