Available online at http://www.ijims.com
ISSN - (Print): 2519 – 7908 ; ISSN - (Electronic): 2348 – 0343
IF:4.335; Index Copernicus (IC) Value: 60.59; UGC Recognized -UGC Journal No.: 47192. 1st July

Influence of some variables on Creative thinking ability of Adolescent students of Arunachal Pradesh

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Abstract

This study aimed to investigate the influence of settlement, anxiety and SES and their interactions on the creative thinking ability of school going adolescents. The descriptive research method was used for this study. Samples of 1500 adolescent students were selected randomly for the study. The tools used were Passi-Usha test of Creativity, Sarasan's test anxiety test and a socio-economic scale developed by the researcher. Three way ANOVA was used for the analysis. The finding shows that the triple interactions of settlement, anxiety and socio-economic status and also of sex, discipline and race were found to have its influence on the creative thinking ability of the school going adolescents.

Keywords: Creative thinking ability, Adolescent, Anxiety, settlement, stream, Race & SES.

Introduction

Most of us have been conditioned to regard creativity as something mysterious - a rare gift possessed by a very few people. We use the term 'creativity' in relation to the arts and to those strokes of genius that produce an invention or major scientific discovery. Of course, this way of looking at creativity may be valid, but creativity can be reflected through almost all human actions. Everyone during their everyday life may make changes to things they produce, for example dress designers, pottery makers, cooks, carpenters, goldsmiths etc., all are creating something. Their creative energies are being manifested in different ways and styles. In fact, creativity makes an object or activity better, richer, more productive, fruitful and aesthetically satisfying (Gulati ,1995, p.35).

There is no complete unanimity among those studying creativity as to what it really means (Freeman, Butcher and Christie, 1971). Creativity is complex in nature. It is difficult to understand it by adopting one single definition. Different viewpoints have been put forward to explain the concept, emphasising different aspects of creativity. By and large, psychologists seem to agree that creativity involves the ability to produce original ideas and to perceive new relationships among unrelated things. However, it does not involve just an ability to produce original ideas. Creativity is multifaceted (Gulati,1995, p.16).

Adolescence is a translation stage between childhood and adulthood (Matter, 1984). The relationship between adolescents and adult creativity is curious in some respects. Creative adolescents typically grow up to be creative adults, who often pursue the unusual careers which they envisioned during their youth (Nurmi & Pulliainen, 1991). In the case of adolescence, the significance of development and utilization of divergent thinking is very high because it is during this time they bloom out with their cognitive field through the development of their operational

thinking (Henderson, 2003). If we compare the creative expeditions of children and adolescents, we understand that the creativity of children is instinctual but the creative endeavours of adolescents are rational and productive. Once they start to think rationally and logically, the importance of divergent thinking also increases. This potential creativity of adolescents is understood as another cognitive capacity like intellect and is to be functionalized through creative activities like original, flexible and novel contributions (Wolters, 2004).

Adolescents, since they have just stepped out of childhood, are still young. So it is necessary to know about their creative capacities and provide the right guidance so that they can utilize their capacities in the best way and reach new zeniths. Education has to take the responsibility of identifying and developing the creative talent in the adolescents of Arunachal Pradesh. Understanding their creativity in relation to different variables will give us a wide perspective of creativity and help in understanding the creativity of adolescents better.

Review of Related Literature

A review of the literature on creativity and adolescents is presented below:

Chan (2005) used self assessments of creativity as the creativity measure among 212 gifted chinese students and found no gender difference. McCrae et al. (2002) measured creativity through openness to experience among 1,947 high school students and found that females scored higher. Gakhar and Dharmindra (2003) studied intellective and non-intellective factors associated with mathematical creativity among students. They found in one of their findings that there was significant difference in mathematical creativity of urban and rural students. Sahak et al. (2012) conducted a study to review and compare the extent of the inventive thinking of form four students of science and arts stream in national secondary schools. The level of thinking surveyed in this study involved 660 students who were selected from 5 national secondary schools from the area of Machang, Kelangtan. Seven inventive thinking sub-constructs reviewed were flexibility, higher order thinking, self regulation, and curiosity, and creativity, willingness to take risks and spiritual norms and values. In their study they found that the variables of stream affect the determination of the level of most inventive thinking sub constructs studied.

Whereas, Furnham et al. (2011) conducted a study on, “Individual Difference Predictors of Creativity in Arts and Science Students” The central question was whether arts and science students differ in their levels of creativity. The answer was yes. Most creativity is associated with divergent/imaginative thinking in arts while in the sciences it remains more convergent thinking. It was found that arts students have a divergent style and science students have a convergent style. It was also found that arts students believe they are more creative than science students. **Kaur (2012)** studied anxiety as a correlate of creative thinking ability of adolescents and found less anxious children to be more creative and that high creative individuals tend to be slightly maladjusted.

Objectives of the study

1. To investigate the influence of settlement, anxiety and socio-economic status (SES) and their interactions on the creative thinking ability of school going adolescents.
2. To investigate the influence of sex, discipline and race and their interactions on the creative thinking ability of school going adolescents.

Hypotheses of the study

1. There is no significant influence of settlement, anxiety and SES and their interactions on the creative thinking ability of school going adolescents.

2. There is no significant influence of sex, discipline and race and their interactions on the creative thinking ability of school going adolescents.

Delimitations of the study

1. 10^{th} to 12^{th} grade school going adolescents in Papumpare, Lower Subansiri and West Siang districts of Arunachal Pradesh
2. To the variables creative thinking ability, settlement, anxiety, socio-economic status (SES), sex, discipline and race.

Design of the Study

Method

Since the aim of this study was to obtain precise information concerning the current status of creative thinking ability among the adolescent students, the descriptive research method was used for the study.

Tools Used

The tool used was Passi-Usha test of Creativity, Sarasan's test anxiety test and socio economic status (SES) scale prepared by the researcher.

Sample

A sample of 1500 adolescent students from class X and Class XII were taken for the study. The researcher selected 18 secondary and senior secondary schools by adopting a random sampling technique. Further, out of these 18 secondary and senior secondary schools.

Analysis and Interpretation of Data

For analysis and interpretation of the data, three ways ANOVA were utilized.

The first objective was to study the influence of settlement, anxiety and SES and their interactions on the creative thinking ability of school going adolescents.

Table 1: Summary of analysis of variance of creative thinking ability scores of school going adolescents in relation to settlement, anxiety and SES

	Sources of variance	Sum of squares	df	M.S	F
1	Settlement	56.0	1	56.0	51.85
2	Anxiety	04.01	1	04.01	3.71
3	SES	8.21	1	8.21	7.60
4	Settlement x Anxiety	8.60	1	8.60	7.96
5	Settlement x SES	12.2	1	12.2	11.29
6	Anxiety x SES	8.69	1	8.69	8.04
7	Settlement x Anxiety x SES	14.60	1	14.60	13.51
	Within treatments	121.4	112	1.08	

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Interpretation of results:

The obtained F-value was found 51.85 in case of rural and urban school going adolescents in relation to their creative thinking ability whereas the criterion F-value for 1/112 df is 6.90 at 0.01 level of confidence. Therefore the hypothesis that there is no significant influence of settlement on the creative thinking ability of school going

adolescents gets rejected. Settlement has some influence on the creative thinking ability. Urban students were found to have higher creative thinking ability than their rural counterparts.

The computed F-value came out to be 3.71 whereas the criterion F-value is 3.94 for 1/112 df at 0.05 level of confidence. It means there is no significant difference in the creative thinking ability mean scores of high and low anxiety school going adolescents and consequently the hypothesis that there is no influence of anxiety on the creative thinking ability of school going adolescents is accepted.

The computed F-value was found 7.60 which is greater than the criterion F-value (6.90) at 0.01 level for 1/112 df. From this, it is concluded that SES does have bearing on the creative thinking ability of the adolescents. Therefore, the hypothesis that there is no influence of SES on the creative thinking ability of school going adolescents is rejected. Adolescents belonging to high SES showed higher creativity than those belonging to low SES.

The table shows that the obtained F-values 7.96, 11.29, 8.04 and 13.51 relating to double interaction among settlement and anxiety, settlement and socio-economic status, settlement and SES and the triple interaction among settlement, anxiety and socio-economic status were found significant respectively. Therefore, it is concluded that there is a substantial influence of double and triple interactions of settlement, anxiety and SES on the creative thinking ability of school going adolescents in Arunachal Pradesh.

The second objective was to study the influence of sex, discipline and race and their interactions on the creative thinking ability of school going adolescents.

Table 2: Summary of analysis of variance of creative thinking ability scores of school going adolescents in relation to sex, discipline and race

	Sources of variance	Sum of squares	df	M.S	F
1	Sex	42.56	1	42.56	6.19
2	Discipline	49.68	1	49.68	7.23
3	Race	3.3	1	3.3	0.48
4	Sex x Discipline	51.21	1	51.21	7.45
5	Discipline x Race	13.4	1	13.4	1.95
6	Sex x Race	72.1	1	72.1	10.49
7	Sex x Discipline x Race	131	1	131	19.06
	Within treatments	769.9	112	6.87	

Interpretation of results:

The obtained F-value was found 6.19 in case of male and female school going adolescents in relation to their creative thinking ability where as the criterion F-value for 1/112 df is 3.94 at 0.05 level of confidence. The computed F-value is greater than the criterion F-value and the hypothesis that there is no significant influence of sex on the creative thinking ability of school going adolescents gets rejected. Sex has some influence on the creative thinking ability. Female adolescents were found to have a little higher creativity than their male counterparts.

The computed F-value came out to be 7.23 whereas the criterion F-value is 6.90 for 1/112 df at 0.01 level of confidence. The computed F-value is greater than the criterion F-value and so the hypothesis that there is no significant influence of discipline on the creative thinking ability of the adolescents stands rejected. Science adolescents displayed better creative thinking ability than the arts adolescents.

The computed F-value (0.48) is not significant at 0.05 level of confidence for 1/112 df in case of tribal and non tribal (race) school going adolescents relating to their creative thinking ability. It means the hypothesis is accepted and interpreted that tribal and non tribal school going adolescents do not differ in their creative thinking ability.

The table shows that the obtained F-values 7.45, 10.49 and 19.06 relating to double and triple interactions were found significant. It means the interaction between sex and discipline, sex and race, and sex, discipline and race influence the creative thinking ability of school going adolescents. On the other hand, the interaction between discipline and race does not have any influence on the creative thinking ability of school going adolescents as the computed F-value (1.95) is lesser than the criterion F-value (3.94).

The findings of the study are:

1. Sex, stream, settlement has its influence on the creative thinking ability of the school going adolescents. Female students, science students and urban students were found to have higher creative thinking ability than their male, arts and rural counterparts respectively. While race, anxiety, SES didn't have any significant influence on creative thinking ability.
2. With regard to the interactions studied, the double interactions of settlement and anxiety, settlement and socio-economic status, settlement and SES, sex and discipline, sex and race and the triple interactions among settlement, anxiety and socio-economic status and also of sex, discipline and race were found to have its influence on the creative thinking ability of the school going adolescents.

   While the double interaction between discipline and race did not have any influence on the creative thinking ability of school going adolescents.

Discussion and Conclusion: The findings of the present study are greatly advantageous in understanding the nature of adolescents and their creative ability. This is an eye opener for the educational planners and administrators. Here the impact of certain variables on the creative thinking ability of the school going adolescents was found. The correlates like sex, stream, settlement and certain double and triple interactions have shown their impact on the creative thinking ability of the adolescents. The study becomes very educative for parents, teachers etc. for taking care of the sections of adolescents who showed lower creative thinking ability than their counterparts so that they don't get depressed. Special attention needs to be provided for their better development and Understanding their creativity in relation to different variables will give us a wide perspective of creativity and help in understanding the creativity of adolescents better.

References

Chan, D.W., Cheung, P.C., Lau, S., Wu,W.Y., Kwong, J.M., & Li, W.L. (2001): Assessing ideational fluency in primary students in Hong Kong. Creativity Research Journal, 13 (3-4), 359-365.

Furnham, A., Batey, M., Booth, T. W., Patel, V. & Lozinskaya, D. (2011): Individual Difference Predictors of Creativity in Art and Science Students. Thinking Skills and Creativity, 6 (2), 114-121.

Gulati, S. (1995) (ed.): Education for creativity: A Research book for Teacher Educators. New Delhi: National Council of Educational Research and Training (NCERT).

Kaur, H. (2012): Creativity in relation to anxiety and adjustment. International Journal of Research in Education, Methodology Council for Innovative Research. 1(3). 63-65.

Nurmi, J.A., and H. Pulliainen, (1991): The changing parent-child relationships, self- esteem, and intelligence as determinants of orientation to the future during early adolescence. Journal of Adolescence, 14, 17-34.

Sahak, S., Tuan M., Tuan, S., Osman, K. (2012): Comparison of level of inventive thinking among science and arts students. Procedia- Social and Behavioural Sciences, 51, 475-483