



INTERNATIONAL JOURNAL OF TRENDS IN EMERGING RESEARCH AND DEVELOPMENT

INTERNATIONAL JOURNAL OF TRENDS IN EMERGING RESEARCH AND DEVELOPMENT

Volume 1; Issue 1; 2023; Page No. 319-323

Received: 12-09-2023

Accepted: 22-10-2023

To find out whether the students with different levels of intelligence differ on learning stress

¹Ashish Kumar Dwivedi and ²Dr. Yogendra Kumar

¹Research Scholar, Sunrise University, Alwar, Rajasthan, India

²Associate Professor, Sunrise University, Alwar, Rajasthan, India

DOI: <https://doi.org/10.5281/zenodo.14555295>

Corresponding Author: Ashish Kumar Dwivedi

Abstract

Stress is a typical aspect in our life; It is a silent pillar in our civilization. According to the Oxford English Dictionary, "stress" is "a condition of affairs involving demand physical or mental energy." "Stress" is a disruption of the body's equilibrium, according to medical terminology. The human body is not designed to withstand situations of extreme stress. Stress is commonplace and, in many situations, helpful in today's world. The emotional component of classroom climate, according to Ambros *et al.* (2010), hinges on the instructor's capacity to foster an inclusive environment where students feel supported in overcoming obstacles to learning, have faith in their own abilities, and are comfortable taking risks. In order to make learning a collaborative rather than competitive process, teachers encourage students to engage in friendly and helpful social interactions both with one another and with the instructor. Physically, teachers make sure that all students have equal access to course materials by minimizing and eliminating distractions and obstacles to learning. Bremner (2006) discovered The intricate and often inexplicable connection between IQ and stress is still not fully understood. Learning stress among secondary school students must be investigated in connection to factors such as students' IQ, learning environment, and personality.

Keywords: Students, different, intelligence, learning and stress

Introduction

Academics have been trying to pin down what creativity is since Galton (1883) in the hopes that doing so would help make better use of this priceless human resource. originality is highly prized in today's rapidly evolving society since studies have shown that even the simplest tasks need some degree of originality. (Shalley *et al.*, 2000; Unsworth, 2001) The empirical examination of creativity has been expedited by it.

When Guilford (1950) called for the empirical study of creativity as a separate entity from intelligence in his APA Presidential speech, the year is often seen as the beginning of scientific exploration of creativity. The scientific study of creativity has benefited greatly from Guilford's focus and other variables, such as post-WWII scientific innovations, space exploration, the advent of the computer and electronics revolution, and economic globalization. Consequently, a great deal of effort has been made by researchers to dissect the intricate and multi-dimensional

character of creativity, its independence from intelligence, and its neurobiological and psychosocial correlates (e.g. Guilford, 1950, 1959, 1970; Getzels & Jackson, 1962; Torrance, 1966, Wallach & Kogan, 1965; Taylor & Hollow 1964; Mackinnon, 1960, 1983; Sternberg, 2003; Runco, 2004; Kaufman, 2005). So yet, no universally accepted definition of creativity has been put forth due to the very diverse methodologies and settings that have been used to comprehend it (Simonton, 1999). Considering the construct's multidimensionality and complexity, several definitions have been put forward. However, four ways have been condensed into one by Rhodes (1961), Moony (1963), Kneller (1965), and Runco (2004): 1) as Product, 2) as Process, 3). as Person, and 4). as Press. Two further methods, i.e. 5, were introduced by Runco (2007). Relevant to the current 4 Ps as Persuasion and 6.

For the most part, the product approach to creativity has focused on the creative process's end results and how important, useful, original, and high-quality they are. New

perceptual organization, ideas, perspectives, skills, and other outputs conveyed in various forms and situations are the primary manifestations of originality (Runco, 1996, 2004; Sternberg & Kaufman, 2011). Examples of creative goods include technological advances and artifacts, as well as new ideas, styles, designs, and paradigms. Innovative goods are not just mass-produced copies of existing ideas; they are also powerful, applicable to a wide range of contexts, and sparing with resources, all of which have a positive impact on society and the environment. There have been claims that this method is skewed towards famous people, which means that the results cannot be applied to a broader population (Gardner, 1993; O'Quin and Bresemer, 1989).

Regarding this, two more categories, mini-c and pro-c, were introduced by Kaufman and Beghetto (2009) in an effort to circumvent the shortcomings of conventional dichotomy. By separating the subjective from the objective aspects of little-c creation, mini-c opens up more space for the expression of emotional or subjective creativity. If artists are unable to reach the levels of eminence, pro-c may assist them express their professional inventiveness. In order to provide a thorough explanation of the nature, magnitude/level, and forms of creativity, Kozbelt and colleagues (2010) proposed that theories of creativity should include such dichotomies.

Review of Literature

Kaufman *et al.*, (2020) conducted a study to examine the creativity and its relationship with the domains of personality. The study was conducted on 182 students (69 male, 108 female, 5 did not tell about their gender) and 60 warehouse employees (44 female, 16 male). Results analyzed that there exist a relationship between creativity domains and personality domains. Creativity and personality variables were affected by gender and occupation did not affect the creativity and personality of the individuals. The results revealed that women are more creative in arts in general and men are more creative in math-science field.

Hoseinifar *et al.*, (2021) studied creativity in relation to personality factors among high school students. Sample consisted of 630 students among which 322 are female and 308 are male. Data was collected through multistage cluster sampling. Descriptive Statistics, Pearson 's Correlation, t-test and Multiple Regression Analysis were used for analysis of data. Findings revealed males to be more creative as compared to females. Results also revealed that neuroticism is the only factor of personality which is the negative predictor of creativity and rest of the personality factors are the positive predictors of creativity.

Hasanvand *et al.*, (2023) examined the relation of personality domains such as psychological hardness and attachment style with the creativity among university students. Total 380 students were selected by using branch random sampling technique. The results indicated that there is a relation between hardness and creativity. A significant relation was found between safe attachment and creativity, and a negative relation was found between unsafe attachment and creativity.

Sameen and Burhan (2014) examined the relationship of creativity with personality type A/B in art students. The sample consisted of 121 postgraduate fine arts students. The study was aimed at examination of low creativity relates to Type A and Type B personality. Type A personality

includes-tenseness, impatience, restlessness, achievement, domineering, workaholic variables. Type B includes easy going, non-assertive, relaxed, patience, complacent variables. Creativity was found having positive association with Type A personality variables and negative with Type B variables.

Campos *et al.* (2015) examined the relation between creativity, personality and entrepreneurship. The sample was consisted of 65 women and 118 men i.e. a total of 183 individuals from various professional courses. Descriptive Statistics and Pearsonian correlations were used to analyze the data. Creative process and thinking styles were found strongly related with variables sufficiency of originality among ideators. Sufficiency of originality and ideator were also strongly correlated with the personality traits.

Materials and Methods

Research design is defined as a framework of methods and techniques chosen by a researcher to combine various components of research in a reasonably logical manner so that the research problem is efficiently handled. In every case the nature of problem determines the scrupulosity and rationale of method to be used in any research work. The present study tries to study about learning stress among secondary level students with respect to their personality, intelligence and learning environment. The population of this study comprises of male and female students studying in XI class of U.P. Board and CBSE Board schools in Prayagraj city of Uttar Pradesh. The total population of students studying in class XI in 2019-20 was approximately 25000 (as per the records taken from DIOS office and CBSE). Intelligence, Personality and learning environment are the independent variables of the study and learning stress is the dependent variable. the present investigation such as intelligence, personality, learning stress and learning environment For LSI reliability has been established by Split-half method.

Results and Discussion

Study of distribution of scores for various variables

Table 1: Skewness and Kurtosis for distribution of scores on Intelligence and Personality the students of UP board and CBSE

S. No.	Variables	Skewness for		Kurtosis for	
		UPB	CBSE	UPB	CBSE
1.	Intelligence	-.580	-.596	-.784	-.689
2.	Psychoticism	-.215	.250	.218	.549
3.	Extraversion	-.115	.159	-.761	-.638
4.	Neuroticism	.162	.152	-.274	-.194

Observation of values of skewness and kurtosis for various variables in table 1 shows that the scores on intelligence and personality are normally distributed.

Table 2: Skewness and Kurtosis for distribution of scores on Intelligence and Personality for male and female students

S. No.	Variables	Skewness for		Kurtosis for	
		Male	Female	Male	Female
1.	Intelligence	-.511	-.673	-.726	-.490
2.	Psychoticism	-.621	.208	.249	.222
3.	Extraversion	-.027	-.684	-.809	-.635
4.	Neuroticism	.251	.189	-.382	-.107

Observation of values of skewness and kurtosis for intelligence and personality in table 2 shows that scores for male and female students are normally distributed.

Study of differences between CBSE and UPB students on intelligence

It is hypothesized that there was no significant difference on intelligence between UPB and CBSE students. T ratio have been computed to test this hypothesis. The results have been depicted in table 3.

Table 3: Mean, S.D. and t-ratio showing difference in intelligence among UPB and CBSE students

S. No.	Groups	Mean	S.D.	t-ratio
1	UPB	34.99	7.981	4.250**
2	CBSE	37.38	6.204	

** Significant at .01 level

Observation of the table shows that mean scores on intelligence for UPB and CBSE students are 34.99 and 37.38 respectively. S.D. for UPB and CBSE students are 7.981 and 6.204 respectively. The value of t-ratio (=4.250) is significant at .01 level. It means that null hypothesis can be rejected and it can be inferred that UPB and CBSE students differ from one another on intelligence. Observation of table also shows that as compared to UPB students, CBSE students have higher intelligence.

Study of differences between CBSE and UPB students on learning stress: It was hypothesized that there was no significant difference between UPB and CBSE students on learning stress. t-ratio has been computed to test this hypothesis, the results have been depicted in table 4.

Table 4: Mean, S.D. and t-ratio showing difference in learning stress among UPB and CBSE students

S. No.	Groups	Mean	S.D.	t-ratio
1	UPB	106.03	32.405	2.353*
2	CBSE	100.12	31.471	

*significant at .05 level.

Observation of the table 4 shows that mean score on learning stress for UPB and CBSE students are 106.03 and 100.12 respectively. S.D. for UPB and CBSE students are 32.405 and 31.471 respectively. The value of t-ratio (=2.353) is significant at .05 level. It means that null hypothesis can be rejected and it can be inferred that UPB students have more learning stress than CBSE students.

Study of differences between male and female students of UP Board on learning stress

It was hypothesized that there is no significant difference between male and female UPB students on learning stress. t test have been computed to test this hypothesis, the results have been depicted in table 5.

Table 5: Mean, S.D. and t-ratio showing difference in learning stress among male and female UP Board students

S. No.	Groups	Mean	S.D.	t-ratio
1	Male	103.9375	32.4099	2.5622*
2	Female	108.0123	32.2832	

*Significance at .05 level

Observation of the above table shows that mean score on learning stress for male and female students are 103.9375 and 108.0123 respectively. S.D. for male and female students are 32.4099 and 32.2832 respectively. The value of t-ratio (=2.5622) is significant at .05 level. It means that null hypothesis can be rejected and it can be inferred that UPB female students perceive more learning stress than UPB male students.

Study of relationship between intelligence and learning stress among UP Board students

It was hypothesized that there is no significant relationship between intelligence and learning stress among UP Board students. Product moment coefficient of correlation has been computed to test this hypothesis with male and female students separately. Results have been depicted in table 6.

Table 6: Correlation between Intelligence and learning stress among UP Board secondary male and female students

S. No.	Groups	N	Value of r
1.	Male	160	-.901**
2.	Female	160	-.611**

**significant at .01 level

Observation of table 6 shows that the values of correlation between intelligence and learning stress for male and female secondary students are -.901 and -.611 respectively. Both are significant at .01 level. Thus null hypotheses can be rejected. So, it can be inferred that intelligence is negatively related to learning stress among male and female UP Board secondary students.

Study of relationship between personality and learning stress among CBSE students

It was also hypothesized that there is no significant relationship between learning stress and personality among CBSE students. Product moment coefficient of correlation have been computed to test this hypothesis with reference to each dimension of personality for male and female students separately. Results have been depicted in table 7.

Table 7: Correlation between personality and learning stress among CBSE students

S. No.	Personality dimensions	Correlation value for male & female	
		Male	Female
1	Psychoticism	.654**	.566**
2	Extraversion	-.835**	-.828**
3	Neuroticism	.751**	.761**

** Significant at 0.01 level

Observation of table 7 shows that the values of correlation between psychoticism and learning stress for male and female CBSE students are .654 and .566 respectively. The table also shows that the values of correlation between extraversion and learning stress for male and female CBSE students are -.835 and -.828 respectively and the value of correlation between neuroticism and learning stress for male and female CBSE students are .751 and .761. All the six values of correlation are significant at .01 level. It means that null hypothesis can be rejected for male and female CBSE students with reference to psychoticism, extraversion and neuroticism dimensions of personality. It can be

inferred that learning stress is positively related to psychoticism and neuroticism dimensions of personality among male and female CBSE students whereas it is negatively correlated to extraversion for both male and female students of CBSE.

Study of learning stress among UPB male students with different levels of intelligence

Male UP board students were divided into three groups viz. low, average and high on the basis of mean \pm 1S.D. scores on intelligence. Values of mean and S.D. on intelligence for male UPB students were 35.1813 and 6.39. Male students with intelligence scores ≤ 28.68 were classified as male students with low intelligence while those with intelligence scores ≥ 41.58 were classified as male students with high intelligence. Male students with intelligence scores greater than 28.68 but less than 41.58 were included in the group of male students with average intelligence. ANOVA was used for comparing learning stress of male students belonging to these three groups. Results have been shown in table 8 and 9.

Table 8: Summary of results of ANOVA showing differences in learning stress of male UP Board students with low, moderate and high levels of intelligence

Sources	df	Sum of squares	mean square	F-ratio
between groups	2	110434.25	55217	147.903**
within group	157	58613.347	373.33	

**significant at the level of .01

Table 8 shows that the value of F-ratio (=147.903) is significant at .01 level. So, the null hypothesis can be rejected. It means that male students with high, average and low levels of intelligence differ from one another on learning stress. Further analysis has been done by using Tukey HSD test.

Table 9: Results of Tukey HSD Test showing differences in learning stress among male UP Board students with high, moderate and low levels of intelligence

Group	Levels of intelligence	Mean	Group compared	Difference between mean
1	Low	150.4828	1-2	42.20657**
2	Average	108.2762	1-3	89.75199**
3	High	60.7308	2-3	47.54542**

** significant at .01 level

Table 9 shows that mean scores on learning stress for male UP board students with low, moderate and high intelligence are 150.4828, 108.2762 and 60.7308 respectively. Significant paired comparisons show that UPB male students with low intelligence have high learning stress than those with average or high intelligence in their classroom. UPB male students with average intelligence experience more learning stress than those with high intelligence. It means students who are more intelligent, experience less learning stress.

Study of learning stress among CBSE female students with different levels of intelligence

Female CBSE students were divided into three groups viz. low, average and high on the basis of mean \pm 1SD scores on

intelligence. Values of mean and S.D. on stress for female CBSE students were 36.9938 and 6.39034. Female students with intelligence scores ≤ 30.6 were classified as female students with low intelligence while those with intelligence scores ≥ 43.38 were classified as male students with high intelligence. Female students with intelligence score greater than 30.6 but less than 43.38 were included in the group of female students with average intelligence. ANOVA was used for comparing learning stress of male students belonging to these three groups. Results have been shown in table 10.

Table 10: Summary of results of ANOVA showing differences in learning stress of female CBSE Board students with low, average and high levels of intelligence

Sources	df	Sum of squares	mean square	F-ratio
between groups	2	52269.185	26134.592	37.115**
within group	157	110552.159	704.154	

** Significant at .01 level

Table 10 shows that the value of F-ratio (=37.115) is significant at .01 level. So, the null hypothesis can be rejected. It means that female students with high, average and low levels of intelligence differ from one another on learning stress. Further analysis has been done by using Tukey HSD Test.

Conclusion

It helps the researcher in testing the hypotheses by drawing valid and reliable conclusions about the relationship between independent and dependent variables. The prime importance of the research design is, in conducting any research in a scientific manner. It ensures neutrality, reliability and validity of generalizations. Awareness of viewpoints different from their own, gives students the opportunity to think critically about their own views and examine the problems, this does not let the learning stress emerge. Class members use different behaviours to cope with learning stress.

References

1. Abdullah I, Omar R, Panatik SA. A literature review on personality, creativity, and innovative behaviour. International Review of Management and Marketing. 2016;6(1):177-182.
2. Aggarwal V, Sachar G. Find out the relationship of creativity with introversion-extroversion among adolescent students. International Journal of Education and Psychological Research. 2017;6(4):19-22.
3. Alkathiri F, Alshaikh M, Almesned A, Alalwan N, Alharthi Y. A systematic review: The relationship between learning styles and creative thinking skills. English Language and Literature Studies. 2018;8(1):34-44.
4. Altun H. Investigation of high school students' geometry course achievement according to their learning styles. Higher Education Studies. 2019;9(1):1-7.
5. Baer J, Kaufman JC. Creativity research in English-speaking countries. In: Kaufman JC, Sternberg RJ, editors. The International Handbook of Creativity. New York: Cambridge University Press; c2016. p. 10-38.

6. Baer J, Kaufman JC. Gender differences in creativity. *The Journal of Creative Behavior*. 2018;42(2):75-105.
7. Baquedano MTSA, Lizarraga MLSA. A correlational and predictive study of creativity and personality of college students. *The Spanish Journal of Psychology*. 2022;15(3):1081-1088.
8. Batey M, Furnham A. Creativity, intelligence, and personality: A critical review of the scattered literature. *Genetic, Social, and General Psychology Monographs*. 2016;132(4):355-429.
9. Batey M, Furnham A, Safiullina X. Intelligence, general knowledge and personality as predictors of creativity. *Learning and Individual Differences*. 2020;20:532-535.
10. Batey M, Chamorro-Premuzic T, Furnham A. Individual differences in ideational behavior: Can the Big Five and psychometric intelligence predict creativity scores? *Creativity Research Journal*. 2020;22(1):90-97.
11. Malathi S, Malini E. Learning styles of higher secondary students of Tamil Nadu. *Educational Tracks*. 2016;5(10):27-29.
12. Marshall ML. Examining school climate: Defining factors and education. [Internet]. 2022. Available from: <http://education.gsu.edu/school>
13. Murat AS, Sari H. An analysis of high school students' learning strategies and styles in Turkey. *Selcuk University, Education Faculty*. 2020;2.
14. Opdenakker MC, Van Damme J. Effects of schools, teaching staff and classes on achievement and wellbeing in secondary education: Similarities and differences between school outcomes. *School Effectiveness and School Improvement*. 2020;11(2):165-196.
15. Ozen O. Ergenlerin Oznel Iyi Olus Duzeyleri Yuksck Lisans Tezi Hacettepe Universitesi Sosyal Bilimler Enstitusu, Ankara; c2015.

Creative Commons (CC) License

This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY 4.0) license. This license permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.