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CORRELATIONAL RESEARCH TO STUDY THE EFFECT OF "LEARNING STYLES" ON THE "CREATIVITY AND CRITICAL THINKING" AMONG ADOLESCENT STUDENTS

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ABSTRACT:

The present research involves the scientific study of learning style and with the help of scientific research journals. This particular study was carried out to find out the relationship between the learning styles and its effect om creativity and critical thinking skill among young adolescent students. A total of 45 girls were selected randomly belonging to the age range of 15-17 years of age living in Darjeeling West Bengal. The study was conducted in online modality with the help of google forms .The scale that was used here for the purpose of measuring the learning style a four-point rating scale consisting of 36 items, for measuring creativity "creativity style questionnaire revised by Dr.V.K.Kumar" was used and for measuring critical thinking skill a five-point rating scale consisting of 21 items was used. The correlational study indicates a positive correlation among the variables, with a "r" value of (.544) between creativity and critical thinking skills and "r" value of (0.333) between creativity and learning styles. The result of regression study indicates that the learning styles of the students is actually has an immense impact on the creativity and critical thinking skills of the students with the R value of (R=.443). Hence the findings of the present study suggest that the different types of learning style the students use do have an effect on the level of creativity and critical thinking skills among the young adolescent students, even this study indicated a positive correlation among the creativity and critical thinking skills among the students.

KEYWORDS:

LEARNING STYLE, CREATIVITY, CORRELATION, CRITICAL THINKING SKILLS.

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INTRODUCTION

Learning styles can be referred to a range of theories that aim to account for differences in individuals learning.

The idea of individualized learning styles became popular during 1970s that has greatly influenced education despite the criticism that the idea has received from some researchers. Proponents recommend that teachers need to run an analysis to assess the learning styles of their students and adapt their classroom methods to best fit each student's learning style. Learning styles have often been referred to as a "neuromyth" in the field of education.

Critical thinking is the ability to evaluate information and make logical judgments. Identifying problems, Researching, asking questions, identifying solutions, presenting solutions, Analyzing decisions. Critical thinking often motivates an individual to look for the answers to the questions like who? What? Why? Etc. This type of thinking pattern often unfolds the ability to think out of the box phenomenon, looking beyond the reality thereby enriching one's understanding of phenomenon. There is an ongoing debate among the researcher that how to teach critical thinking skills by a specific subject area or by a generic way. In the field of Education critical thinking not only brings academic success but also nourishes the thirst for knowledge.

Creativity can be defined as the inner ability to think regarding a problem in a different manner which will be unique to individual. Creative and critical thinking skills are the abilities, which can sometimes be used interchangeably in definition. In fact, they have different constructs because they differentiate in outcome of human behaviors. Also, in today's date one is required to approach everyday problems by using both competences. So, one of the helpful tools for development of creativity and critical thinking skills proposed is problem-based learning environments in classrooms. (birgili.et.al)

AIM OF THE CURRENT STUDY:

The current research study aims to find out that how the different types of learning styles among the adolescent students is affecting their creativity and critical thinking skills. The research aims to answer the following questions:

a) What is the relationship between learning styles among

student and creativity and critical thinking skills.

b) What is the relationship between critical thinking skill and creativity.

However, most of the research has found out that there is effect of learning styles on one's creativity and critical thinking skills, but few research also suggest that learning styles don't affect significantly but there are few other variables which do have an effect on creativity and critical thinking skills.

BACKGROUND:

Standing in the 21st century where everything with the advancement of the age is becoming digitalized and even the sphere of education has also been influenced to a great degree by the touch of modern way of learning. Nowadays every classroom is more dependent on technology for bringing the effective teaching learning sessions, like use of smart boards taking the help of mass media for reference of the topics discussed in the class. With this revolutionary change the way the students learn concepts nowadays and also the extent to which they are using their own potential to find out solutions for the problems has also changed to a greater extent especially after COVID period where everything has shifted temporarily to online modality of working for whole two years. This research aims to find out whether this sift from classical learning style to a more advanced and technology dependent learning style is slowly taking away or ruining the inner potentials of mankind.

SAMPLE:

The population boundary is considered students belonging to the age group of 16-18 years young adolescent students, of Darjeeling, West Bengal. The research study was conducted on a sample size of 45 students. The research will be undertaken within the geographic boundary of Darjeeling West Bengal. As gender is considered as a confounding variable in the current study, therefore it includes only females. The age criterion was defined and set within the range of16-18years.

TYPE OF STUDY:

The following study is quantitative research, where data is being collected from the sample population, and then it Will be analyzed through statistical methods and a conclusion will be drawn.

TOOLS:

The tool that was used here for the purpose of measuring the learning style is a four-point rating scale consisting of 36 items, for measuring creativity "creativity style questionnaire revised by Dr.V.K.Kumar" was used and for measuring critical thinking skill a five-point rating scale consisting of 21 items was used.

INSTRUCTIONS

Look at the four statements in each row and decide how they refer to you. Place the number '**4**' beside the statement which best describes you, '**3**' to the second, '**2**' for the third, and '**1**' for the statement least appropriate to you. *There are no right or wrong answers.*

SURVEY

	A	B	C	D
1	I like to get involved.	I like to take my time before acting.	I am particular about what I like.	I like things to be useful.
Scores				
2	I like to try things out.	I like to analyse things and break them into parts.	I am open to new experiences.	I like to look at all sides of issues.
Scores				
3	I like to watch.	I like to analyse things and break them into parts.	I am open to new experiences.	I like to think about things.
Scores				
4	I accept people and situations the way they are.	I like to be aware of what is around me.	I like to evaluate.	I like to take risks.
Scores				
5	I have gut feelings and hunches.	I have a lot of questions.	I am logical.	I am hard working and get things done.
Scores				
6	I like concrete things, things I can see, feel, touch or smell.	I like to be active.	I like to observe.	I like ideas and theories.
Scores				
7	I prefer learning in the here and now.	I like to consider and reflect about them.	I tend to think about the future.	I like to see the results of my work.
Scores				
8	I have to try things out myself.	I rely on my own ideas.	I rely on my own observations.	I rely on my feelings.
Scores				
9	I am quiet and reserved.	I am energetic and enthusiastic.	I tend to reason things out.	I am responsible about things.
Score				

SAMPLING DESIGN:

Individuals belonging to the age range of (15-17)were chosen as subject for this study. The technique of purposive sampling was used here, which is a non-probability sampling, for the purpose of sample selection, . A total of 45 participant were chosen, all of which were females belonging from Darjeeling . The location and the age group of the study kept fixed for the research purpose.

RESEARCH DESIGN:

Intensive literature review to find the research problem.

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Selection of the research problem:

"Correlational research to study the effect of "learning styles" on the creativity and critical thinking" among adolescent students"

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Necessary questionnaire was selected for the purpose of data collection

↓

Data was collected in the online mode through google forms.

↓

Equal numbers of males and females were taken for the study.

↓

The collected data was analysed using SPSS

↓

Then the results were written and the necessary

interpretation was drawn, and supported with proper literature review evidence.

DATA COLLECTION METHOD: this is correlational study and the data was collected through google form, in online mode.

Inclusion criteria: the individuals who belong from the age group of 15-17, pursuing higher secondary and belonging from Darjeeling their data were selected for the present study.

PROCEDURE: mainly young adults or the individuals belonging from the age range of 15-17 years were invited to participate in this survey study conducted through google forms and online medium. Subjects who were interested were successfully signed up for the procedure. The total time taken for completing the survey was 25 minutes. The present study is a correlational study.

STATISTICAL ANALYSIS: the data was analysed using IBM SPSS version 28.

- Descriptive statistics were used for defining learning style, creativity and critical thinking skill.
- Correlational analysis was done to see the degree of association among the variables.
- Regression analysis was done to find out the effect of learning style on creativity and critical thinking.

ANALYSIS:

The sample in the present study is considered to be homogeneous in term of age, sex, and location. After the collection of the data, descriptive statistical technique was used to find out the average performance of the population and the deviation of each individual from the average.

Exclusion criteria: the individuals with psychiatric problem and physiological problem were rejected for the study.

Descriptive Statistics

	Mean	Std. Deviation	N
LS	93.09	23.271	45
creativity	13.29	4.251	45
CT	67.87	9.265	45

after finding out the descriptive statistics, now the correlational statistics was computed to find out whether there is any significant effect of learning style on creativity and critical thinking of students, results indicated a significant positive correlation among the variables under study with a Pearson correlation "r" value of (.300) between learning style and creativity, (.437) between learning style and critical thinking skill, (.544) between creativity and critical thinking skill.

Correlations

Correlations

		CREATIVITY	CT	LS
CREATIVITY	Pearson Correlation	1	.544**	.300*
	Sig. (2-tailed)		.000	.046
	N	45	45	45
CT	Pearson Correlation	.544**	1	.437**
	Sig. (2-tailed)	.000		.003
	N	45	45	45
LS	Pearson Correlation	.300*	.437**	1
	Sig. (2-tailed)	.046	.003	
	N	45	45	45

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The regression study indicates that the learning styles of the students is actually has an immense impact on the creativity and critical thinking skills of the students with the R value of (R=.443).

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.443[a]	.197	.158	21.349

a. Predictors: (Constant), CT, creativity

b. Dependent Variable: LS

INTERPRETATION:

The present study entails the study of correlation between creativity, critical thinking skills and learning styles among 45 young adolescent students. **Creativity** is a process involving the generation of new ideas or concepts, or new associations between existing ideas or concepts, and their substantiation into a product that has novelty and originality. From a scientific point of view, the products of creative thought (sometimes referred to as divergent thought) are usually considered to have both "originality" and "appropriateness." An alternative, more everyday conception of creativity is that it is simply the act of making something new. **Critical thinking** is the analysis of available facts, evidence, observations, and arguments in order to form a judgement by the application of rational, sceptical, and unbiased analyses and evaluation. The application of critical thinking includes self-directed, self-disciplined, self-monitored, and self-corrective habits of the mind, thus a **critical thinker** is a person who practices the skills of critical thinking or has been trained and educated in its disciplines. **Learning styles** refer to for differences in individuals' learning. Learning style refers to the unique ways an individual processes and retains new information and skills.

For conducting this present study, a group of 45 young adolescent school girls were selected, and the data was collected online with the help of Google forms. The Mean and SD for creativity, critical thinking skills and learning styles for 45 students has come up to as follows:

Mean=93.09,13.29,67.87, SD=23.27,4.25,9.26.

Regression analysis was done to see whether the learning styles of the students are effecting the creativity and the critical thinking skills, the result showed that the learning styles is effecting the creativity and critical thinking skills of the students with a value of regression R as (R=.443).

After administering correlational statistics among these variables, a positive correlation was found among all of the three variables, it was seen that the Pearson correlation "r" was found to be (.544) between creativity and critical thinking skills. In one of the research studies among college students measuring the relationship between creativity and critical thinking skills(Rosba et.al .2021) found that students who has scored low in creativity has also scored low in critical thinking skills, which indicates a positive correlation between the two variables. A research study in 2019 conducted by Siburian et.al among students it was found that there prevails a positive correlation between critical thinking skill and creativity. The Pearson "r" was found to be (0.333) between creativity and learning styles. A regression study among students by Eishsani et.al (2014) found a positive correlation between creativity and learning styles. There also prevails a significant positive correlation between critical thinking and learning styles(0.437) Colucciello (1999) this study found that there is a positive correlation between critical thinking and learning styles..

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