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Using Pictures in ELT Classroom for Developing Creative Writing

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ABSTRACT

The research investigates the efficacy of using pictures as a teaching aid to enhance creative writing skills among secondary school students. It examines the impact of incorporating visual stimuli into the English language classroom compared to traditional teaching methods. Through experimental design and quantitative analysis, the study evaluates the writing performance of students exposed to picture-based instruction versus those taught using conventional techniques. Findings suggest that the use of pictures stimulates creativity, improves vocabulary acquisition, and enhances students' motivation and engagement in writing tasks. The research recommends the adoption of innovative teaching methodologies, such as integrating visual aids, to promote effective language learning and foster students' writing proficiency.

Key Words: Pictures, Creative Writing, ELT Classroom
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INTRODUCTION

In the realm of education in Pakistan, creative writing occupies a pivotal role, serving as a conduit for the cultivation of cognitive abilities essential for generating inventive and skillful prose. Indeed, Harmer's (2004) framework underscores the essence of creative writing.

- beginning with the exploration of ideas
- their strategic arrangement
- and the subsequent act of transcribing these concepts into written form.

Yet, the process doesn't conclude there; it extends into the critical phase of revision, where meticulous attention is paid to refining the language and employing synonymous expressions to enhance clarity and impact. This cyclical approach ensures that the creative output evolves iteratively, culminating in a polished and eloquent composition that captivates and resonates with its audience.

Thinking about the topic and its use is necessary but thinking creatively is criticized several times due to our unsuitable methodology to teach the students. The learners' minds are not trained to think creatively. The learner learns only to get good marks but not able to answer the same question when placed in a different situation with same concept of topic. The educational methodology used in Pakistani institutes lacks how to teach the ability to write any creative composition. The prevailing teaching methodology in Pakistan lacks proper guidance and often employs a subject-centered approach, hindering students' ability to write creatively (Rahman, 2007). This passive learning approach stifles students' creativity and leaves them focused on rote memorization (Siddique, 2007). Additionally, the examination system prioritizes marks over creativity, further diminishing students' writing abilities (Siddique, 2007). Limited resources, untrained teachers, and a fixed syllabus exacerbate the situation, diverting attention from fostering creative writing skills (Siddique, 2007).

English language is mandated as a compulsory subject in educational institutions worldwide. The students after studying English language for over longer period of time still lack proficiency and command on the language. Therefore, they find it difficult to pursue their higher education easily and efficiently whereas English is as important as any other language to communicate within the

country and across the world. Students lack the ability to produce significant ideas and information, lack of vocabulary, use of incorrect syntactical structures, spellings, punctuating marks and capitalization while writing. The students learn only the content written on the books but not able to write any composition within the parameters of English which is correct and acceptable in English Language. The learners writing capability dies and he learns to rely on the prescribed books and notes. Which make them passive learners and kill their intellectualism to produce any meaningful writing on their own?

Pictures serve as vivid descriptions of objects, enabling learners to explore places and concepts beyond their physical reach. They play a crucial role in language learning, fostering engagement, prompting discussion, and aiding memory recall (Wright, 1989). Easily accessible and versatile, pictures can be sourced from various media or created by students themselves (Sarmelia, 2003). Visual aids like picture cards, stories, and wall displays enrich vocabulary acquisition and facilitate word association, enhancing students' retention and understanding of new language concepts (Thornbury, 2004; Herlina, 2000).

Wright (1976:42) emphasizes the significance of using a sequence of pictures in language teaching, as they provide specific stimuli that guide language development and communication abilities. Pictures not only spark interest and motivation but also offer a contextual framework for language usage. They serve as reference points for conversation, discussion, and storytelling, catering to learners at all proficiency levels. However, caution is advised to prevent distractions and maintain focus on language learning objectives. Additionally, effective writing requires adherence to syntactic, semantic, and morphological principles, facilitating coherent expression of ideas and effective communication (Wright, 1976). Feedback, guidance, and proper pedagogic treatment are essential for nurturing writing skills among students.

In the Pakistani education system, students struggle with creative writing in English due to a lack of proper training. The emphasis on rote learning inhibits their ability to express themselves creatively. Effective use of pictures can bridge this gap by stimulating idea synthesis and enhancing composition coherence. This research aims to address this issue by integrating picture-based teaching methods to teach creative writing at the SSC level. The objectives of the study are

1. To enable students to write creative composition.
2. To assess the impact of pictures on teaching creative writing skill to the students.
3. To provide fundamentals for developing creative writing in students.

LITERATURE REVIEW

Pictures are cutting summations of the objects that increase the realism of stimulus which in turn increases the probability that students can grasp the purpose of communication. **(**Dwyer, 1971, 1978). The combination of visual and textual signals enhances the performance of the learners. Pictures give an impression of literary situation through eyes. Impressions that are received through eyes leave a far stronger impact than those which are received through other senses that are stimulating and activating our senses to perceive new things. It empowers the teaching method by giving the most interesting and permanent sense impressions to the mind of the students. Picture enlivens the piece of writing by giving permanent and most interesting impressions to the eyes of the students to behold.

Visual aids enhance language learning by clarifying concepts and making learning more concrete (Mannan, 2005). They help students understand and interpret language, benefiting both learners and teachers (Canning Wilson, 2000). Writing is integral to language learning, aiding in practice, memorization, and reinforcement (Lindsay & Paul, 2006). Creative writing fosters self-expression and aesthetic production, diverging from factual writing (Grebe, 1996). It focuses on the process rather than just the final product (Hyland, 2002). Visual literacy, essential for effective communication, allows individuals to interpret and communicate through visual mediums (Debes, 1969).

Writing is a complex process involving idea translation, review, and planning, emphasizing the process over the end product (Harwell and Dorril, 1976). It requires adherence to standards of grammar and rhetorical style, demanding diligence from learners (Harwell and Dorril, 1976). However, students may find it challenging to maintain focus during writing tasks. The use of pictures for all the learners was not appreciated. Those were not ready to indulge themselves in laborious and tiring activity of writing an extract which was according to the set and acceptable patterns of the particular language.

In addition, the students who were not accustomed to writing freely feel afraid of making mistakes which hindered their progress to write any piece of extract. Moreover, the teachers' use of picture could be a monotonous activity when making use of prewriting when it was not handled creatively. In prewriting gathering background knowledge, stimulating and generating ideas could be monotonous activity. The teacher was needed to handle the picture intelligently and creatively in order to maintain the interest of the learners.

Learning to write is not like natural development like learning to speak. Everyone is capable of in expressing oneself to take ideas from inner inspiration. We can learn new communicative ideas as well as get the higher level of proficiency in L2 with pictorial understanding of the images. Pictures provided contextual cues which help in interpretation and explanation of the ideas behind the context, pictures not only reinforced in guided environment to learn the vocabulary and grammatical structures but it kindled learners' cognitive ability to organize and compose new ideas according to requirement of the task. But the usage of the pictures was helpful for the learners who had rich vocabulary. The shortage of vocabulary may impede the creative writing of the second language very well.

The pictorial descriptions of the object were useless firstly, if the learners were not equipped with variety of and huge number of vocabulary items according to needs and requirements appropriately. Secondly, the students felt reluctant to write anything when they had low writing abilities. Thirdly, students learning styles get affected by their shortage of expression and their ability to explain in native like expression. (Le, 1996).

Storytelling is present in our lives almost from the moment we began putting words together. The learner organized their ideas and experiences creatively and imaginatively by combining linguistic, pragmatic and sociolinguistics competences. A storytelling writing is about personal experiences and events around us. These are experiences, facts or stories of one's interest and the interest of writer's audience. (Abbott, 2002).

The learner was expected to use his formal knowledge to understand and usage of language like grammar, syntax, morphology and semantics, which meant that the learner had linguistic and pragmatic competence. Picture series technique follows systemic and step by step process which

was time consuming and laborious task for the students and teachers as well. This technique was not suitable for all types of learners. All the students are individually different. In this way the individual differences of learners made students lazy. They may not be able to focus on this systemic approach of learning where they were expected to focus. Therefore, learners became unable to move forward. This method of using pictures may be not suitable for the lazy students.

In the analysis of literature, the researcher had deduced that no research properly tackled the debate of effectiveness of pictorial examinations in a statistical and graphical manner. The researcher had pursued the current research to use systematic and regulated software to ensure unbiased and accurate results to conclude that the descriptive element within descriptive texts was enhanced by the exposure to pictures in a classroom.

RESEARCH METHODOLOGY

This research was quantitative in nature which dealt with collecting and analyzing quantitative data. The researcher used numbers, figures, and statistics to test or confirm the hypothesis in this research. This type of research was expressed in numbers, graphs or charts. This type of approach included designing tests for experiments, looking for observations, conducting interviews and using surveys as research tools for the collection of the data. This research was quantitative in nature which dealt scientific and systematic method of collecting data. This research used deductive reasoning approach towards the data of this research. The study gathered data systematically, analyzed the problem, investigated the data diligently, and drew conclusions based on the collected data to address the research questions.

The study's framework guided the systematic collection, measurement, and analysis of data to address the research problem coherently. It primarily adopted an experimental approach, with an experimental group receiving new treatment and a control group receiving conventional treatment. Writing tests were employed to evaluate students' proficiency in descriptive composition, assessing content, organization, vocabulary, language usage, and mechanics**.**

The population encompassed all subjects or individuals exhibiting specific characteristics that the researcher aimed to examine.

No.	Class	Students in each class
1	10-A	30
2	10-B	30
3	10-C	30
4	10-D	30
Total		120

The sample, drawn from the total population through purposive sampling, aimed to represent the population accurately when generalized. Homogeneity of the sample ensured authenticity and validity, facilitating meaningful comparisons with similar characteristics. In this study, students with academic performance above 70% were chosen from four sections of SSC(II) classes, totaling 120 students. This method ensured a representative sample aligned with the research objectives.

The research employs a nominal scale for measurement, using a standardized document called the EBAU2017-2018: Ingles Descriptive Paragraph Scoring Rubric from the Universidad de Murcia. This structured approach facilitates evaluation of various writing components such as organization, content, grammar, punctuation, spelling, mechanics, and style. While providing consistency in assessment, it's important to critically assess the applicability of the rubric to the study context and consider potential limitations**.**

The data collection process consisted of two stages: the pre-test and the post-test.

Pre-Test

For the pre-test, students from both groups were given a writing test in written form, lasting for 30 minutes.

Post -Test

Following the treatment, the post-test was administered to assess students' achievement in writing skill using pictures. This test also lasted for 30 minutes.

The results were tabulated based on the raw scores of students' writing, focusing on five components: content, organization, vocabulary, language use, and mechanics. A standardized

document, the EBAU2017-2018: Ingles Descriptive Paragraph Scoring Rubric from the Universidad de Murcia, was utilized for scoring.

DATA ANALYSIS

Researchers analyzed the data of presets and post-test then analyzing the same data as pre-test of controlled and experimental group along with post-test of controlled and experimental group to clearly explain the effectives of using the pictures. Firstly, the analysis of pre-tests of controlled and experimental have been done then post-tests of the both tests have been analyzed.

4.1.1 Pre-test Analysis (Controlled and Experimental)

A		
Parameters	Controlled	Experimental
Mean	14.90	14.50
Std. Deviation	1.792	3.951
P-value	0.753	

Fig-4.1 pre-test of controlled and experimental

The comparison of pre-test results between the controlled and experimental groups for topic "A" yielded a probability value of 0.753, which exceeds the significance threshold of 0.05, indicating nonsignificant results.

B		
Parameters	Controlled	Experimental
Mean	15.20	16.20
Std. Deviation	1.932	3.425
P-value	0.229	

Fig-4.2 pre-test of controlled and experimental

The comparison of pre-test results between the controlled and experimental groups for topic B yielded a probability value of 0.229, indicating nonsignificant results as it exceeds the significance threshold of 0.05.

C		
Parameters	Controlled	Experimental
Mean	15.40	14.60
Std. Deviation	2.119	4.452
P-value	0.65	

Fig-4.3 pre-test of controlled and experimental

By comparing the results of the pre-tests conducted for controlled group and experimental group for the topic C the probability value is 0.65 since is greater than 0.05 the result is not significant.

D		
Parameters	Controlled	Experimental
Mean	12.70	14.60
Std. Deviation	2.541	3.596
P-value	0.213	

Fig-4.4 pre-test of controlled and experimental

By comparing the results of the pre-tests conducted for controlled group and experimental group for the topic D the probability value is 0.213 since is greater than 0.05 the result is not significant.

E		
Parameters	Controlled	Experimental
Mean	15.70	15.00
Std. Deviation	1.767	3.830

P-value	0.612

Fig-4.5 pre-test of controlled and experimental

By comparing the results of the pre-tests conducted for controlled group and experimental group for the topic E the probability value is 0.612 since is greater than 0.05 the result is not significant.

F		
Parameters	Controlled	Experimental
Mean	14.20	14.50
Std. Deviation	2.781	3.472
P-value	0.828	

Fig-4.6 pre-test of controlled and experimental

By comparing the results of the pre-tests conducted for controlled group and experimental group for the topic F the probability value is 0.828 since is greater than 0.05 the result is not significant.

G		
Parameters	Controlled	Experimental
Mean	12.70	14.60
Std. Deviation	2.541	3.596
P-value	0.213	

Fig-4.7 pre-test of controlled and experimental

By comparing the results of the pre-tests conducted for controlled group and experimental group for the topic A the probability value is 0.753 since is greater than 0.05 the result is not significant.

4.1.2 Post-test analysis (Controlled and Experimental)

A		
Parameters	Controlled	Experimental
Mean	14.50	31.90
Std. Deviation	2.915	2.885
P-value	0.00	

Fig-4.8 post-test of controlled and experimental

By comparing the results of the post-test conducted for controlled group and experimental group for the topic A the probability value is 0.00 since is less than 0.05 the result is significant.

B		
Parameters	Controlled	Experimental
Mean	13.80	30.90
Std. Deviation	2.150	3.872
P-value	0.00	

Fig-4.9 post-test of controlled and experimental

By comparing the results of the post-test conducted for controlled group and experimental group for the topic B the probability value is 0.00 since is less than 0.05 the result is significant.

C		
Parameters	Controlled	Experimental
Mean	13.80	31.90
Std. Deviation	2.150	2.685
P-value	0.00	

Fig-4.10 post-test of controlled and experimental

By comparing the results of the post-test conducted for controlled group and experimental group for the topic C the probability value is 0.00 since is less than 0.05 the result is significant.

D		
Parameters	Controlled	Experimental
Mean	15.20	32.40
Std. Deviation	2.658	2.271
P-value	0.00	

Fig-4.11 post of controlled and experimental

By comparing the results of the post-test conducted for controlled group and experimental group for the topic D the probability value is 0.00 since is less than 0.05 the result is significant.

E		
Parameters	Controlled	Experimental
Mean	15.00	30.00
Std. Deviation	2.625	3.859
P-value	0.00	

Fig-4.12 post-test of controlled and experimental

By comparing the results of the post-test conducted for controlled group and experimental group for the topic E the probability value is 0.00 since is less than 0.05 the result is significant.

F		
Parameters	Controlled	Experimental
Mean	15.30	29.300
Std. Deviation	2.214	4.5717
P-value	0.00	

Fig-4.13 post test of controlled and experimental

By comparing the results of the post-test conducted for controlled group and experimental group for the topic F the probability value is 0.00 since is less than 0.05 the result is significant.

G		
Parameters	Controlled	Experimental
Mean	15.30	29.70
Std. Deviation	2.214	4.218
P-value	0.00	

Fig-4.14 post-test of controlled and experimental

By comparing the results of the post-test conducted for controlled group and experimental group for the topic G the probability value is 0.00 since is less than 0.05 the result is significant.

To avoid any complications on part of the test taker, the paragraphs are grouped chronologically, ranging from one to seven, and are awarded the first seven letter of the English alphabet as labels. Each of the seven alphabets, now representing seven statistical findings, consumed two excel sheets. The first excel sheet of the two contained ten participants of the controlled group, with the identification numbers 101 to 110.

Their results for the first Pre-test and the first Post-test are arranged vertically down the respective columns. The next excel sheet contains the same arrangement of the first Pre-test and first Post-test variable arranged vertically in columns, though they belonged to the ten participants from the experimental group having the identification numbers 201 to 210. The two excel sheets have been attached as to clear the process of analysis and rest of others have been explained under respective headings.

The two excel files for the first round of pair testing using Paired Sample t-Test have been arranged as follows:

A	B	C	D	E
Participant	GROUP	STORY	PRE TEST	POST TEST
101	CON	A	15	10
102	CON	A	16	12
103	CON	A	18	15
104	CON	A	12	13
105	CON	A	15	19
106	CON	A	15	12
107	CON	A	15	17
108	CON	A	15	13
109	CON	A	16	17
110	CON	A	12	17

Fig-4.15 Excel Data Sheet for Controlled Group – Topic A

A	B	C	D	E
Participant	GROUP	STORY	PRE TEST	POST TEST
201	EXP	A	18	34
202	EXP	A	17	35
203	EXP	A	13	32
204	EXP	A	10	30
205	EXP	A	11	32
206	EXP	A	16	32
207	EXP	A	8	25
208	EXP	A	20	32
209	EXP	A	18	35
210	EXP	A	14	32

Fig-4.16 Excel Data Sheet for Experimental Group – Topic A

In this first round of pair testing using Paired Sample T-Test, we expand upon the data that has been arranged in these two excel files, specifically. Firstly, the alphabet A represents the two topics that had been used in the conduction of tests. The alphabet A consists of the Pre-test topic "A Visit to the Jungle' and in the Post-test assessment of controlled and experimental groups, the topic is 'The Lost Child'. For the controlled group, in both Pre-test and Post-test, no additional information and guidance have been provided by the instructor.

Keeping the writing rubric in consideration, the writing errors, that is organization, grammar and style are assessed. In the experimental group, the Post-test for participants 201 to 210 is conducted with the provision of pictorial aid, which is by providing visual representations that help them in boosting their creativity. The Paired Sample T-Test have been conducted by

firstly taking the excel sheet given in Fig-4.15 and inserting it into the SPSS database. Within the new dialog box, the command to compute the action “Pre-test – Post-test” is given.

This command pushes the software to activate the ‘Dataset’, which means that the command is forwarded in a manner in which the results are required to be computed. This dataset consists of all the values that have been presented in the excel sheet, in this case Fig. 4.15 and 4.16

4.2.1 First Examination of Pre-test and Post-test

Since the analysis needs to be carried out systematically and swiftly, the data has been arranged into seven pairs among the two classes. The first of the seven pairs consist of two topics, symbolized as the category of stories written by the students as ‘A’. In the Pre-test session the title of the written work Is ‘A Visit to the Jungle’, while during the Post-test both groups, controlled and experimental, are given the topic ‘The Lost Child’ for assessing their creativity. Firstly, considering the data presented in Fig-4.17 and commanding the SPSS software to compute the data by comparing the results of the Pre-test standing against the Post-test grades, the system verifies the authenticity of the action by confirming the confidence interval (0.9500) and ensuring the dataset does not contain any holes, that is missing data. The two excel files for the first round of pair testing using Paired Sample t-Test have been arranged as follows:

A	B	C	D	E
Participant	GROUP	STORY	PRE TEST	POST TEST
101	CON	A	15	10
102	CON	A	16	12
103	CON	A	18	15
104	CON	A	12	13
105	CON	A	15	19
106	CON	A	15	12
107	CON	A	15	17
108	CON	A	15	13
109	CON	A	16	17
110	CON	A	12	17

Fig-4.17 Excel Data Sheet for Controlled Group – Topic A

A	B	C	D	E
Participant	GROUP	STORY	PRE TEST	POST TEST
201	EXP	A	18	34
202	EXP	A	17	35
203	EXP	A	13	32
204	EXP	A	10	30
205	EXP	A	11	32
206	EXP	A	16	32
207	EXP	A	8	25
208	EXP	A	20	32
209	EXP	A	18	35
210	EXP	A	14	32

Fig-4.18 Excel Data Sheet for Experimental Group – Topic A

Fig. 4.17 and Fig. 4.18 Present the two prepared excel sheets that, along with the data collected for the two variables, are now ready to be submitted to the software or analysis of effectiveness in teaching. The test Dataset follows the same principles as the first examination:

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE TEST	14.90	10	1.792	0.567
	POST TEST	14.50	10	2.915	0.922

Fig-4.19 Paired Sample Statistics for Controlled Group – Topic A

Pair 1 represents the two variables that are being measured, the grades for the topic ‘A Visit to the Jungle’ and the grades for the topic ‘The Lost Child’ as Pre-test and Post-test data, respectively for the controlled group. ‘N’ symbolizes the total number of candidates appearing for the experiment in both instances, where the number of participants is equal. The Mean value for the Pre-test procedure of these ten participants belonging to the controlled group is 14.90, which is higher than that of the Post-test Mean value for these same individuals, falling at 14.50. The Mean value of the Post-test has dropped as compared to the Mean value of the Pre-test, whereas

the standard deviation is greater, 2.915 versus that of Pre-test at 1.791, depicting that the range of the scores varies in the Post-Test of the story A within the experimental group.

Paired Samples Test									
		Paired Differences					t	df	Sig
		Mean	Std. Deviation	Std. Error Mean	95% Difference of (CI)				
					Lower	Upper			
Pair 1	PRE TEST POST TEST	0.400	3.471	1.097	-2.083	2.883	0.364	9	0.724

Fig-4.20 Paired Samples Test for Controlled Group – Topic A

Fig.-4.20 Presents the Paired Samples test for pair 1, which follows the procedure 'Pre-test – Post-test' for the Controlled group data considering the data for story A. Since this calculates and evaluates the difference, the Mean value 0.400 signifies a negligible and insignificant difference within the mean values of Pre-test and Post-test data. The actual mean may differ from the supposed mean by the Standard Error Mean of 1.097 and the mean may vary by 3.471 degrees of the calculated mean. Using these values, the t-value of the T-Test has been calculated using the formula: t= Mean-0/Std. Error of Mean. The value of t in Fig-4.20 is 0.364, which is extremely close to 0, that is the null hypothesis, the variation between the two samples is negligible. The p-value of Pair 1 further strengthens this deduction by arriving at the value 0.724, which is not less than 0.05 as is required in rejecting the null hypothesis.

Now, the data from Fig-4.18 is inserted into the SPSS software to create a Pair 2 for the story A, where Pre-test has been taken under the topic 'A Visit to the Jungle' and after experimentation involving pictures for instigating creativity the Post-test has been taken for the topic 'The Lost Child', and the results of the participants 201 to 210 of the experimental group are given as follows for a Paired Sample Statistics:

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 2	PRE TEST	14.50	10	3.951	1.249
	POST TEST	31.90	10	2.885	0.912

Fig- 4.21 Paired Sample Statistics for Experimental Group – Topic A

In the table entitled Pair Samples Statistics, the data for the two variables for N number of experimental group participants 201 to 210 is elaborated under the pair numbered 2. This 2 would represent the second excel sheet, of Fig-4.18, representing the second group for the first pair of stories categorized under A. The mean value of the Pre-test for this group has been recorded at 14.50 while the mean value of Post-test grades, after performing the experimentation as outlined by the researcher under the data collection and data evaluation sections of the research, have been recorded at 31.90 Showing a marked contrast between the two means; Post-test takes the higher position within the two when 10 participants have been assessed in Fig-4.21 Shows that the values in the Post-test are more concentrated nearer to the mean, such that the Standard Deviation falls to 2.885 as opposed to the disperses 3.951 of Pre-test examinations. Furthermore, the chance of error while calculating the Post-test mean is comparatively lesser than Pre-test since 0.912 is closer to insignificant than 1.249 of Pre-test values.

Paired Samples Test									
		Paired Differences					t	df	Sig
		Mean	Std. Deviation	Std. Error Mean	95% Difference of (CI)				
					Lower	Upper			
Pair 2	PRE TEST POST TEST	-17.400	2.503	0.792	-19.191	-15.609	-21.980	9	0.000

Fig-4.22 Paired Samples Test for Experimental Group – Topic A

Moving on to the Paired Samples test of Pair 2 under topic A for the Experimental group, the focus of the current table is to calculate the difference between the Pre-test and Post-Test value, this time with the 30-minute session guided by the instructors to weigh the effectiveness of pictorial representations in writing. Following the key 'Pre-test – Post-test', the Mean difference between the two variables is -17.400 which shows a great difference in favor of Post-test since the negative sign alludes to its greater magnitude. The Standard Error of Mean only amounts to 0.792, quite insignificant within the larger picture, where the Standard Deviation of this Mean value only differs by 2.503 degree as the Confidence Interval assures the value is between -19.191 to -15.609.

Now, the t-value, following the above information and formula:

t= Mean-0/Std. Error of Mean;

Where Std. Error of Mean= Std. Deviation/√N

The derived value of t, then, is -21.980, which is further away from 0, that is the null hypothesis. The negative sign next to zero signifies an inclination towards the second variable when calculating the greatness of the magnitude of the variation between the two variables, Pre-test and Post-test. Thus, Post-test should be considered statistically significant, since it diverges greatly from the null hypothesis. The p-value, which actually assumes the significance of a Paired Sample T-Test, supposes that the probability value should be less than 0.05 to show a marked change. Fig-4.22 depicts that Pair 2 comparing the difference of Post-test data against Pre-test data of Experimental class of 10 participants results in a probability value of 0.000 which is highly significant since it is far less than 0.05.

4.2.2 Second Examination of Pre-Test and Post-Test

The second examination of Pre-test and Post-test data follows the similar route for the second set of stories for both the groups, Controlled and Experimental, as the first examination did. Firstly, the researcher has arranged the gathered data procured while examining the students writing skills against the rubric taken into consideration by the researcher as the standard for

grading. The resultant figures are two excel sheets, ten participants each. One from 101 to 110 and the other from 201 to 210 representing the controlled and experimental group respectively. The alphabet A is substituted for B, since now the data deals with two new topics. The Pre-test examination is conducted for writing a story on the topic 'My Last Day at School' while the Post-test topic for both of the groups is 'A Mild Spring Day'.

Participant	GROUP	STORY	PRE TEST	POST TEST
101	CON	B	15	13
102	CON	B	17	12
103	CON	B	15	13
104	CON	B	17	15
105	CON	B	11	11
106	CON	B	14	12
107	CON	B	15	18
108	CON	B	18	13
109	CON	B	15	15
110	CON	B	15	16

Fig-4.23 Excel Data Sheet for Controlled Group – Topic B

Participant	GROUP	STORY	PRE TEST	POST TEST
201	EXP	B	17	35
202	EXP	B	19	34
203	EXP	B	17	32
204	EXP	B	18	22
205	EXP	B	10	32
206	EXP	B	16	27
207	EXP	B	10	34
208	EXP	B	19	30
209	EXP	B	17	31
210	EXP	B	19	32

Fig-4.24 Excel Data Sheet for Experimental Group – Topic B

Fig-4.23 and Fig-4.24 Present the two prepared excel sheets that, along with the data collected for the two variables, are now ready to be submitted to the software or analysis of effectiveness in teaching. The test Dataset follows the same principles as the first examination:

T-TEST PAIRS=PRE-TEST WITH POST-TEST (PAIRED)

/CRITERIA=CI (.9500)

/MISSING=ANALYSIS

With this in mind, the interpretation begins with calculating the separate value of the two teaching methods, and later ventures to calculate the difference between them. For this, the t-value and p-value of the test are measured to reject the null hypothesis, if possible.

In this second section, the Controlled group is given the topic ‘My Last Day at School, while for the Post-test they are given the topic ‘A Mild Spring Day’ for measuring the increase in the creativity of the students without additional efforts on behalf of the instructor. Considering the data presented in Fig-4.23, the SPSS plainly presents the data by laying out the statistics of the Pre-test and Post-test values, after affirming that the data is complete and conforms to the confidence interval of 0.9500, that is 95%. The first result of Fig 4.23 is as following:

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE TEST	15.20	10	1.932	0.611
	POST TEST	13.80	10	2.150	0.680

Fig-4.25 Paired Sample Statistics for Controlled Group – Topic B

This pair 1 represents the two variables that are being studied, the grades for the topic B of Pre-test and Post-test examination for the Controlled group participants, 101 to 110. N denotes the number of participants, which are equal in both cases. The Mean value for the Pre-test procedure of these participants settles at 15.20, while those of the Post-test fall to 13.80, such that the Mean value of Pre-test is greater than that of Post-test for controlled group participants. On the other hand, the Standard Error of Mean is merely 0.680 for Post-test and 0.611 for Pre-test showing that the mean value is not far from the established or calculated Means.

Paired Samples Test									
		Paired Differences					t	df	Sig
		Mean	Std. Deviation	Std. Error Mean	95% Difference of (CI)				
					Lower	Upper			
Pair 1	PRE TEST POST TEST	1.400	2.503	0.792	-0.391	3.191	1.769	9	0.111

Fig-4.26 Paired Samples Test for Controlled Group – Topic B

Fig-4.26 Presents the paired Samples test for pair 1, abiding by the method 'Pre-test – Post-test' for the Controlled group data, when considering the significance of the difference between two values in SPSS. The Mean value 1.400 shows a negligible difference between the values of the Pre-test and Post-test data. The actual mean may differ from the supposed mean by the Standard Error of Mean of 0.792 and the mean may vary by a degree of 2.503 as Standard Deviation, where the confidence interval assures the value must lie between -3.91 and 3.19. Using this data, the t-value of this T-Test has been calculated using the formula: t= Mean-0/Std. Error of Mean, where the value of t is 1.769.

This value is extremely close to the value zero and hence the null hypothesis cannot be rejected. Moving on further, these values lead to calculating the p-value, also known as probability value, which settles at 0.111. Since this value is not less than 0.05, as is required to reject the null hypothesis, this Pair 1 is not statistically significant. Now, the data from Fig-4.24 has been added into the SPSS software to create a Pair 2 for Story B. The Pre-test for Experimental group was taken under the topic entitled 'My Last Day at School' and after conducting an experiment involving the use of pictures to enhance creativity, the Post-test topic was called 'A Mild Spring Day'. The results of the participants of the experimental group range from 201 to 210, and they yield the following results:

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 2	PRE TEST	16.20	10	3.425	1.083
	POST TEST	30.90	10	3.872	1.224

Fig-4.27 Paired Samples Statistics for Experimental Group – Topic B

The data for two variables has been presented, where N number of participants, that is ten for each, have been studied. The Pair numbered 2 represents the second excel sheet, given as Fig-4.24, representing second set of stories and experiments categorized as B. The Mean value of the Pre-test for this part has been recorded at 16.20, while the Mean of Post-test is 30.90. The Post-test statistics have been measured after an interval of experimentation, thus, showing a marked increase in the mean of the Post-test grades of the ten participants belonging to the Experimental group. The Standard Deviation of Pre-test shows that they are more concentrated at 3.425 as compared to the 3.872-digit possibility of deviation in the Mean value of Post-test.

Paired Samples Test									
		Paired Differences					t	df	Sig
		Mean	Std. Deviation	Std. Error Mean	95% Difference of (CI)				
					Lower	Upper			
Pair 2	PRE TEST POST TEST	-14.700	5.736	1.814	-18.803	-10.597	-8.104	9	0

Fig-4.28 Paired Samples Test for Experimental Group – Topic B

Now, assessing the Paired Samples Test of Pair 2 under topic B for the experimental group, we find that the Fig-4.28 focuses on calculating the difference between the Pre-Test and Post-Test

scores, as in this group a 30-minutes session for enhancing the creativity of the students via pictures had taken place affecting their outcome. The difference has been calculated as 'Pre-Test – Post-Test' resulting in a Mean difference of -14.700, which is statistically significant. The negative sign shows that the value of Post-Test is greater than that of Pre-Test and the Standard Error of Mean of this difference only amounts to 1.814. The Standard Deviation of the values have been calculated nearing 95% accuracy as 5.736.

The derived value of t is -8.104 which quite far away from zero. The negative sign depicts that the inclination is towards the second variable, which in this case is the Post-Test value. Since being farther away from zero signifies that Pair 2 rejects the null hypothesis, the p-value can also be located to strengthen this claim. P-value assumes that it should be less than 0.05 to assert that a difference is statistically significant, and the p-value in Fig-4.28 lies far below 0.05 at 0.000, thus Pair 2 is significant.

4.2.3 Third Examination of Pre-Test and Post-Test

The third examination of Pre-Test and Post-Test data follows the same pattern for the thirds pair of topics given to both the groups (Experimental and Controlled groups). In this procedure, just as the one before, the researcher has arranged the collected scores gathered from checking the students' writing skills for creative writing by measuring them against a pre-determined standard. The researcher has compiled two excel sheets to arrange and compose the data in a manner which is fit for SPSS software. Each sheet will contain ten participants, where the Controlled group will have participants 101 to 110, and Experimental group will have participants 201 to 210. The alphabet C will denote the story set, as in this case the topic that had been assigned to the students during Pre-Test was 'A Visit to the Zoo' while the topic assigned during Post-Test was 'The Haunted House'. Following are the two excel sheets as per the requirement and need of the researcher.

Participant	GROUP	STORY	PRE TEST	POST TEST
101	CON	C	15	13
102	CON	C	16	12
103	CON	C	18	13
104	CON	C	12	15
105	CON	C	15	11
106	CON	C	18	12
107	CON	C	15	18
108	CON	C	17	13
109	CON	C	16	15
110	CON	C	12	16

Fig-4.29 Excel Sheet Data for Controlled Group – Topic C

Participant	GROUP	STORY	PRE TEST	POST TEST
201	EXP	C	18	34
202	EXP	C	18	35
203	EXP	C	9	30
204	EXP	C	14	27
205	EXP	C	16	31
206	EXP	C	7	32
207	EXP	C	10	29
208	EXP	C	16	34
209	EXP	C	18	32
210	EXP	C	20	35

Fig-4.30 Excel Sheet Data for Experimental Group – Topic C

Fig-4.29 and 4.30 have presented the finalized version of the excel sheets containing data arranged in a way that it may be submitted to the software for analysis of effectiveness of pictorial representations for creative writing enhancement. The software follows the principles:

T-TEST PAIRS=PRE-TEST WITH POST-TEST (PAIRED)

/CRITERIA=CI (0.9500)

/MISSING=ANALYSIS

Following the rules, the controlled data presented in Fig-4.29. depicts the effects upon the scores of students when no additional mode of teaching is applied for enhancing creativity in their writing style. For their Pre-Test, they are given the topic ‘A Visit to the Zoo’ and for their Post-Test scores they are given the topic ‘The Haunted House’ to judge their abilities. In this first table, the Pre-Test and Post-Test values are laid out in their statistical form. The software affirms that the data is not missing any values and conforms to the Confidence Interval of 95% before generating the following results:

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE TEST	15.40	10	2.119	0.670
	POST TEST	13.80	10	2.150	0.680

Fig-4.31 Paired Samples Statistics for Controlled Group – Topic C

The current pair 1 presents two variable, Pre-test and Post-test, their scores being studied after examination for controlled group participants for topic C. ‘’N” symbolizes the total number of participants under study, which are ten ranging from 101 to 110, and are equal and same for both Pre-test and Post-test. The mean value for the Pre-test procedure of these participants estimates at 15.40 while that of Post-test falls to 13.80. From this it is evident that the Mean value of Pre-test is greater than that of Post-test for controlled group participants. The Standard Deviation for Pre-test and Post-test value is 2.119 and 2.150 respectively with a Standard Error of Mean at 0.670 and 0.680 respectively.

	Paired Differences				t	df	Sig
	Mean	Std. Dev	Std. Error	95% Difference of (CI)			

					Lower	Upper			
Pair 1	PRE TEST POST TEST	1.600	3.688	1.166	-1.038	4.238	1.372	9	0.203

Fig-4.32 Paired Samples Test for Controlled Group – Topic C

Fig-4.32 Presents the Paired Samples test for pair 1, it follows the method 'Pre-test – Post-test' for the Controlled group data when evaluating the variation of difference between two variables in SPSS. The Mean value of the difference between Pre-test and Post-test values is 1.600 which is statistically insignificant. The Standard Deviation of 3.688 shows that the values fall with -1.038 and 4.238 when considering the 95% Confidence Interval accuracy of their differences. The actual mean may only differ from the calculated mean by a difference of 1.166. The data, then, allows an investigation into calculating the value of t using the formula: t= Mean-0/Std. Error of Mean, where the value of t is 1.372 which does not vary much from the null hypothesis value 0. Furthermore, the probability value, p-value, falls at 0.203 which is not less than require 0.05 principle of null hypothesis. Since it is not less than 0.05, the null hypothesis will not be rejected and the difference between Pre-test and Post-test scores is statistically insignificant.

The second excel sheet for Topic C, given in Fig-4.30, presents the data for the Experimental group which has been added into the SPSS software to create Pair 2. The Pre-test for the experimental group is conducted with the topic entitles 'A Visit to the Zoo' and after using pictures to enhance the creativity, the Post-test topic given for the test is 'The Haunted House'. The experimental group consists of participants 201 to 210 giving the statistical graph.

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 2	PRE TEST	14.60	10	4.452	1.408

	POST TEST	31.90	10	2.685	0.849

Fig-4.33 Paired Samples Statistics for Experimental Group – Topic C

The data has been presented where two variables Pre-test and Post-test values have been statistically laid out, where N is the number of total participants being studied. Pair 2 represents the second excel sheet, given in Fig-4.30 has focused on presenting the scores of the two stories categorized under C. The Mean value of the Pre-test for this second pair of experimental group data has been recorded as 14.60, while the Mean value of Post-test statistics have been recorded at 31.90 after a series of pictures have been shown to enhance the creative faculty of the students, 201 to 210. There seems to be a marked increase in the Pre-test and Post-test values. The Standard Deviation of Pre-test is 4.452 which are more dispersed than the Standard Deviation of Post-test at 2.685. The Standard Error of Mean estimates at 0.849 which may be considered negligible.

Paired Samples Test									
		Paired Differences					t	df	Sig
		Mean	Std. Deviation	Std. Error Mean	95% Difference of (CI)				
					Lower	Upper			
Pair 2	PRE TEST POST TEST	-17.300	3.622	1.146	-19.891	-14.709	-15.102	9	0.000

Fig-4.34 Paired Samples Test for Experimental Group – Topic C

From Fig-4.34 the Paired Samples test for Pair 2, when considering Topic C for the experimental group, calculates the difference between the Pre-test scores and the Post-test scores. The Post-test examination takes place after an interval of 30 minutes which studies effectiveness of pictures upon writing, and so the difference follows the pattern ‘Pre-test – Post-test’. As a consequence of this change, the Mean of the difference between the two variable is -17.300 which

is quite large in its magnitude and accompanied with a negative sign this figure illustrates that the Post-test scores are statistically significant.

The value of t, in this case, amounts to -15.102 which is quite removed from the null hypothesis value 0. The negative sign favors the Post-test score as the greater of the two variables. The p-value stands on the notion that the probability value must be less than 0.05 to assert that any difference between two given values rejects the null hypothesis and is statistically significant. Since the p-value is 0.000, in Pair 2, the experiment is significant.

4.2.4 Fourth Examination of Pre-test and Post-test

Continuing the arrangement and organization of data, the fourth sets of Pre-test and Post-test data are linked together to suit the format of SPSS analysis. The fourth set has been arranged into two excel sheets, one awarded to the Controlled group and one to the Experimental group, each with their Pre-test and Post-test scores organized accordingly. Each sheet contains ten participants; the controlled group contains the ID numbers 101 to 110 and the Experimental group consists of members from 201 to 210. The fourth set of stories, which include the topic 'A Visit to Bakra Mandi' for Pre-test scoring and 'The Calm Sea' for Post-test data, are collectively categorized as the alphabet D. The two resultant sheets fit for an SPSS analysis are:

Participant	GROUP	STORY	PRE TEST	POST TEST
101	CON	D	17	15
102	CON	D	16	13
103	CON	D	14	14
104	CON	D	14	14
105	CON	D	13	10
106	CON	D	10	18
107	CON	D	10	17
108	CON	D	10	15
109	CON	D	12	17
110	CON	D	11	19

Fig-4.35 Excel Sheet Data for Controlled Group – Topic D

Participant	GROUP	STORY	PRE TEST	POST TEST
201	EXP	D	12	36
202	EXP	D	19	34
203	EXP	D	11	33
204	EXP	D	14	34
205	EXP	D	13	29
206	EXP	D	16	34
207	EXP	D	8	32
208	EXP	D	17	29
209	EXP	D	18	32
210	EXP	D	18	31

Fig-4.36 Excel Sheet Data for Experimental Group – Topic D

These datasets, given in Fig-4.35 and Fig-4.23 have now arranged the data collected by the researcher and through field work into a defined set of two variables which can be compared and divided. When commanded to execute the data, the software ensures that the data present in Fig-4.35 and Fig-4.36 are:

T-TEST PAIRS=PRE-TEST WITH POST-TEST (PAIRED)

/CRITERIA=CI (.9500)

/MISSING=ANALYSIS

This principle asserts that the two variables are being paired together in a way that reveals 95% accuracy of all data by calculating the difference between them. Through this, the t and p-values will be located and measured to reject the null hypothesis. For this round of experiments, firstly focusing the analysis on the Controlled group in Fig-4.35, the topic for the Pre-test evaluations was ‘A Visit to Bakra Mandi’, and for Post-test evaluations the topic ‘The Calm Sea’ has been opted. Though, for the controlled group no additional guidance or audio-visual aid had been provided to the students, and so, the results were statistically outlined as follows:

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
	PRE TEST	12.70	10	2.541	0.803

Pair 1	POST TEST	15.20	10	2.658	0.841

Fig-4.37 Paired Sample Statistics for Controlled Group – Topic D

Pair 1 outlines the statistic representation of the two variables understudy for the topics categorized as D, that is Pre-test scores and Post-test scores. As this figure deals with the data obtained from the controlled group, N denotes the total number of participants that have been evaluated, 101 to 110. The mean value for Pre-test scores has been calculated as 12.70 while the mean value of the Post-test examination is set at 15.20. Though the mean of Post-test is greater, it is not significantly large, and the standard deviation among the participants, 2.658, of is near to that of the Pre-test deviation 2.541. And neither of the calculated means is too far off from what may be the actual mean.

Paired Samples Test									
		Paired Differences					t	df	Sig
		Mean	Std. Deviation	Std. Error Mean	95% Difference of (CI)				
					Lower	Upper			
Pair 1	PRE TEST POST TEST	-2.500	4.552	1.440	-5.756	0.756	-1.737	9	0.116

Fig-4.38 Paired Samples Test for Controlled Group – Topic D

Fig- 4.38 presents the paired Samples test for pair 1 in the fourth experiment, where the two variables are paired together following the pattern ‘Pre-test – Pots-test’ such that their difference is calculated and applied. For the controlled group when analyzing stories of category D, the difference between the Pre-test and Post-test value settles at a mean of -2.500 which is not essentially significant since it is not far removed from the digit zero, which depicts the null

hypothesis. This mean value may differ only slightly by 1.440 from the actual mean, while the standard deviation among the participants is 4.552 as the upper and lower values are 0.756 to -5.756.

By turning to the above data, the value of t is calculated which determines the variation between the two paired variables. Since the t-value is -1.737, which is fairly close to zero, the null hypothesis is more probable, and p-value loses its significance. Settling at 0.116, the probability value does not fall below 0.05 and affirms that the experiment yielded no significant change.

Next, the data from Fig-4.36 requires execution by commanding the software to create a second Pair of variables, where Pre-test and Post-test scores of the Experimental group are evaluated for the stories belonging to D. The results of the students Pre-test writing of 'A Visit to Bakra Mandi' is presented against the Post-test results of the story 'The Calm Sea'. This Post-test was conducted after a session of introducing pictures for inciting the imaginative faculty of the students to enhance their descriptive senses when writing. The statistical graph comparing the two tests for the experimental group as evaluated by SPSS is as follows:

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 2	PRE TEST	14.60	10	3.596	1.137
	POST TEST	32.40	10	2.271	0.718

Fig-4.39 Paired Samples Statistics for Experimental Group – Topic D

For two variables, Pre-test and Post-test, N number of participants have been arranged, where N equals the ten participants of Experimental group 201 to 210. This pair, labelled as Pair 2, represents the second excel sheet of the fourth experiment given in Fig-4.36 ,The mean value for the Pre-test of these ten participants has been calculated at 14.60, while that of the Post-test participants rises to 32.40. Since there is lesser Standard deviation between the values of the Post-test scores, 2.271, the Standard Error of Mean is also far lesser than that of the Pre-test mean, 0.718 and 1.137 respectively.

Paired Samples Test									
		Paired Differences					t	df	Sig
		Mean	Std. Deviation	Std. Error Mean	95% Difference of (CI)				
					Lower	Upper			
Pair 2	PRE TEST POST TEST	-17.800	4.492	1.420	-21.013	-14.587	-12.531	9	0.000

Fig-4.40 Paired Samples Test for Experimental Group – Topic D

. The t-value of this Pair 2 is -12.531 which as a number falls quite far behind the number zero. Since the t-value is not zero itself, the null hypothesis which dictates that no change has taken place is proven false. Next, the p-value vouches in favor of this claim by narrowing down the significance of a value to one that falls farther below 0.05. Since the Sig., also known as probability value, is 0.00 in this case, the hypothesis is proven to be highly significant and thus, fulfilling the demands of the experiment Directing the focus of the analysis toward the next feature in SPSS Paired T-Test, the researcher has accessed the Paired Samples Test for the experimental group when evaluating the difference between the Pre-test and Post-test scores obtained by the students in story D. The Post-test is conducted around 30 minutes after enriching the students writing capacity by showing them pictures and color their writing with a descriptive touch. 'Pre-test – Post-test' has been used to calculate the difference between the paired terms.

A statistically significant difference of -17.800 has been noted between the mean values of Pre-test and Post-test scores. The negative sign before the integer demonstrates how the Post-test mean value is greater than that of the Pre-test, while the Standard Error of Mean amounts to a measly total of 1.420. Since the upper and lower values of the mean -17.800 are -12.531 to -14.587, the Standard Deviation adds up to a total of 4.492.

4.2.5 Fifth Examination of Pre-Test and Post-Test

The fifth dataset involves the linking, or in other words, the pairing of the Pre-test and Post-test data arranged into two excel sheets. One sheet would contain the Pre-test and Post-test pair for the Controlled group 101 to 110, and the other would be the same pair for the experimental group 201 to 210. A total of ten participants have been opted for each group to suit the format of the SPSS analysis. The topics given as stories within this set are collectively considered under E include 'Childhood memory' as a topic for Pre-test examination and 'Musical Concert' for Post-test data. The arranged excel data dataset is as follows:

Participant	GROUP	STORY	PRE TEST	POST TEST
101	CON	E	15	14
102	CON	E	13	13
103	CON	E	17	15
104	CON	E	18	16
105	CON	E	18	14
106	CON	E	14	10
107	CON	E	16	17
108	CON	E	14	14
109	CON	E	15	19
110	CON	E	17	18

Fig-4.41 Excel Sheet Data for Controlled Group – Topic E

Participant	GROUP	STORY	PRE TEST	POST TEST
201	EXP	E	17	32
202	EXP	E	19	34
203	EXP	E	18	30
204	EXP	E	18	22
205	EXP	E	13	34
206	EXP	E	8	32
207	EXP	E	9	25
208	EXP	E	17	29
209	EXP	E	16	30
210	EXP	E	15	32

Fig-4.42 Excel Sheet Data for Experimental Group – Topic E

The data, as has been arranged now in the form of rows and columns as visualized in Fig-4.41 and 4.42, will work as the input. The command to execute the data will allow the software to compare the two variables, by firstly affirming that the two variables being paired together have a relation. The relation must reflect 95% accuracy in the calculation of the means and the differences between them. By this, the researcher realizes whether the t-value and p-value of the assumed hypothesis is not null in nature. Taking into consideration Fig-4.41, during this fifth round of experiments, the controlled group has been evaluated through their creative writing on the topic 'Childhood memory' for Pre-test evaluation. As for the Post-test evaluation, the topic 'Musical Concert' had been selected under Story E. The results of the two variables are firstly presented in a tabular form by statistically separating them.

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE TEST	15.70	10	1.767	0.559
	POST TEST	15.00	10	2.625	0.830

Fig-4.43 Paired Samples Statistics for Controlled Group – Topic E

Statistical representation of Pair 1 in the fifth experiment outlines the two variables that are understudy, Pre-test and Post-test. The data obtained in tabular form in Fig-4.43 belongs to the controlled group where N symbolizes the number of total participants. ID numbers 101 to 110 constitute the ten participants for controlled group. The mean value for their Pre-test scores is 15.70 while the Standard Error of Mean is only 0.559. The mean value of the Post-test scores has been recorded as 15.00, which is fairly close to that of the Pre-test scores. Post-test scores only differ in their variation from one another, such that they have a standard deviation of 2.625 compared to the 1.767 of Pre-test.

Paired Samples Test									
		Paired Differences					t	df	Sig
		Mean	Std. Deviation	Std. Error Mean	95% Difference of (CI)				
					Lower	Upper			
Pair 1	PRE TEST POST TEST	0.700	2.452	0.775	-1.054	2.454	0.903	9	0.390

Fig-4.44 Paired Samples Test for Controlled Group – Topic E

In Fig-4.44, the Paired Samples test for pair 1 presents the two variables have been paired together to calculate their difference. This paired examination follows the pattern ‘Pre-test - Post-test’. The controlled group scores for Pre-test and Post-test noted when examining the category of stories under E have a mean difference of 0.700. This value is frightfully close to that of the null hypothesis zero, thus the two do not differ. The result seems accurate since the calculated mean 0.700 may only differ from the supposed mean by 0.775.

From these results, the value of t has been calculated at 0.903. T-values determine the variation between the two paired variables and since 0.903 is not far removed from the null hypothesis zero, the difference between the two is negligible. Lastly, the p-value is 0.390 which

greater than 0.05. Since the condition for probability value has not been met, this paired t-test is insignificant.

Moving on to the experimental group, the data from Fig- 4.42 becomes the second pair of variables to be executed in the fifth test. Here, the students' writing has been evaluated by measuring their Pre-test attempt on the topic 'Childhood Memory' against the writing rubric for descriptive writing. The Post-test scores have been collected from their writing on the topic 'Musical Concert', after a series of pictures had been shown to them to enhance their imaginative outlook. The two variables are statistically stretched out in the following table:

Paired Samples Statistics					
		Mean	N	Standard Deviation	Std. Error Mean
Pair 2	PRE TEST	15.00	10	3.830	1.211
	POST TEST	30.00	10	3.859	1.220

Fig-4.45 Paired Samples Statistics for Experimental Group – Topic E

The two variables, Pre-test and Post-test, the ten participants, denoted by N, have been arranged for the experimental group as pair 2. This pair has been derived from Fig -4.45, giving a statistical overview of the data. The mean value for the Pre-test has been recorded as 15.00, where an error of 1.211 of the mean value may exist. The calculated Post-test mean value settles at 30.00 where the mean error, quite like the Pre-test, may be of 1.220 from the actual mean value.

Paired Samples Test								
	Paired Differences					t	df	Sig (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Difference of (CI) Lower	Upper			

Pair 2	PRE TEST- POST TEST	0.700	2.452	0.775	-1.054	2.454	0.903	9	0.390

Fig-4.46 Paired Samples Test for Experimental Group – Topic E

In Fig-4.46, the Paired Samples Test for pair 2 presents the two variables have been paired together to calculate their difference. This paired examination follows the pattern 'Pre-Test - Post-Test'. The controlled group scores for Pre-Test and Post-Test noted when examining the category of stories under E have a mean difference of 0.700. This value is frightfully close to that of the null hypothesis zero, thus the two do not differ. The result seems accurate since the calculated mean 0.700 may only differ from the supposed mean by 0.775. From these results, the value of t has been calculated at 0.903. T-values determine the variation between the two paired variables and since 0.903 is not far removed from the null hypothesis zero, the difference between the two is negligible. Lastly, the p-value is 0.390 which greater than 0.05. Since the condition for probability value has not been met, this paired t-test is insignificant.

4.2.6 Sixth Examination of Pre-Test and Post-Test

The sixth examination for the Pre-test and Post-test series requires an arrangement of the data gathered for two groups, the Controlled group and the Experimental group. Firstly, the researcher has arranged these acquired grades by scoring the students' written pieces and measuring their ability to creatively explore descriptive writing according to a pre-determined standard for language. Later, the researcher has compiled those scores into two excel sheets, one for each group of students, to prepare a dataset fit for SPSS analysis. Each of these two sheets consists of a total of ten participants, where the controlled group will contain participants ranging from 101 to 110, while the experimental group will have participants 201 to 210. Both will share similar topics for analysis, while the difference lies in the change of teaching method in Post-test examination for the experimental group. For Pre-tests the selected topic is 'My Pet' while for the Post-test procedure the topic was 'The Dancing Daffodils'. Collectively these two topics are referred to as Story 'F'. The two excel sheets obtained from the data collection and evaluations for analysis are as follows:

Participant	GROUP	STORY	PRE TEST	POST TEST
101	CON	F	10	14
102	CON	F	12	15
103	CON	F	15	12
104	CON	F	13	14
105	CON	F	19	15
106	CON	F	12	16
107	CON	F	14	19
108	CON	F	13	19
109	CON	F	17	14
110	CON	F	17	15

Fig-4.47 Excel Sheet Data for Controlled Group – Topic F

Participant	GROUP	STORY	PRE TEST	POST TEST
201	EXP	F	12	24
202	EXP	F	18	32
203	EXP	F	11	30
204	EXP	F	14	19
205	EXP	F	13	30
206	EXP	F	16	32
207	EXP	F	8	31
208	EXP	F	17	35
209	EXP	F	18	31
210	EXP	F	18	29

Fig-4.48 Excel Sheet Data for Experimental Group – Topic F

When the command to execute the organized data is passed onto the software, it affirms the following particulars:

T-TEST PAIRS=PRE-TEST WITH POST-TEST (PAIRED)

/CRITERIA=CI (.9500)

/MISSING=ANALYSIS

These rules state the formula being followed by the software, that is the formation of a pair where Pre-test values are linked with Post-test values. The difference and means are calculated up till 95% accuracy without any missing samples. Following these rules, the data for Controlled

Group presented in Fig-4.47, contains Pre-test and Post-test values which have been linked together will be analyzed. No measures have been taken before the conduction of the Post-test procedure to enhance creativity in writing. The results for the Pre-test topic 'My Pet' and the Post-test topic 'The Dancing Daffodils' have been statistically outlined as:

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE TEST	14.20	10	2.781	0.879
	POST TEST	15.30	10	2.214	0.700

Fig-4.49 Paired Samples Statistics for Controlled Group – Topic F

Pair 1 in Fig-4.49 presents an overview of the Pre-test and Post-test statistics which will play a role in the Paired Samples T-Test. Here, N symbolizes the total number of participants being observed for the two tests in this Controlled Group. The mean value for the Pre-test results of participants 101 to 110 is 14.20 while that of the Post-test scores of these same participants is 15.30. While the Post-test mean value is greater than that of the Pre-test, the magnitude is not significant enough. The Standard Error of Mean represents how far the calculated value may be from the real mean. The Pre-test error of 0.879 and the Post-test error of 0.700 are both negligible. Now, the values of these variables are paired up to calculate their difference.

Paired Samples Test									
		Paired Differences					t	df	Sig (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Difference of (CI)				
					Lower	Upper			
Pair 1	PRE TEST- POST TEST	-1.100	3.784	1.197	-3.807	1.607	-0.919	9	0.382

Fig-4.50 Paired Samples Test for Controlled Group – Topic F

Here, Pair 1 undergoes the Pair Samples Test for Controlled Group in the sixth examination following the pattern 'Pre-test – Post-test' which means that the test evaluates the difference between these two variables. The mean difference between the Pre-test and Post-test values is -1.100, which is an insignificant difference since the magnitude is quite small. The Upper and Lower values have been recorded as 1.607 and -3.807 respectively, which determine that by following the 95% confidence interval, the standard deviation among the values in the Pair 1 is 3.784. The Standard Error settles at a negligible value of 1.197.

Now using this data, the t-value can be calculated with the formula: t= Mean-0/Std. Error of Mean. This value must be far removed from zero to reject the possibility of a null hypothesis that is that no change exists between the two values. Since the value of t in Fig-4.50 is – 0.919, the magnitude is insignificant. Similarly, the probability value 'p' needs to be fall below 0.05 to assert that any change is worthwhile. Here, the p-value 0.382 is greater than 0.05 and so the test has been proven as statistically insignificant.

In Fig-4.48, we have been presented with the second excel sheet contained the data now for the Experimental group. The values of the Experimental Group Pre-test and Post-test have been paired together and labelled as Pair 2. The topics for this sixth examination have collectively been categorized as F, where the topic for the Pre-test examination was 'My Pet' and that for the Post-test procedure was 'The Dancing Daffodils'. The statistical graph for this experiment has been given as:

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 2	PRE TEST	14.50	10	3.472	1.098
	POST TEST	29.300	10	4.5717	1.4457

Fig-4.51 Paired Samples Statistics for Experimental Group – Topic F

The Pre-test and Post-test data has been depicted visually as a pair of two variables with related data. Here, N denotes the total number of participants undergoing investigation, as in this case both have an equal number of ten, ID numbers 201 to 210. The variables have been groups together as Pair 2, for the experimental group given in Fig. 4.48, for the data obtained from conducting experiments using the stories grouped as 'F'. The mean value for the Pre-test scores has been estimated as 14.50. This supposed value may be proven slightly off from the actual mean value by a margin of 1.098. This 1.098 is referred to as the Standard Error of mean for the Pre-test data. As for the Post-test scores, the mean value calculated is 29.30, which differs significantly from that of Pre-test mean. These scores have been calculated after a session of interactive learning where participants were shown pictures to ignite their descriptive faculties and improve their creative writing. The standard error of mean for Post-test is 1.4457 which represents how much the actual mean value for the Post-test may be.

Paired Samples Test									
		Paired Differences					t	df	Sig
		Mean	Std. Deviation	Std. Error Mean	95% Difference of (CI)				
					Lower	Upper			
Pair 2	PRE TEST POST TEST	-14.800	4.9844	1.5762	-18.3656	-11.2344	-9.390	9	0.000

Fig-4.51 Paired Samples Test for Experimental Group – Topic F

Fig-4.51 presents the Paired Samples Test for the Experimental group when evaluating the difference between the Pre-test and Post-test scores for Topic F. The Post-test scores are generated after a 30-minutes session where participants are shown pictures to enhance their descriptive writing. The results of the difference between the variables presented in Fig.-4.51 follows the pattern 'Pre-test – Post-test'. The Mean difference, then, is -14.800. This Mean value needs to be as farther away from zero as possible to assert that a difference between the variables is

noteworthy. The negative sign here depicts that the greatness in magnitude is in favor of Post-test scores. This Mean value of -14.800 may only differ from the actual by an error of 1.5762.

The next part of Fig-4.51 which is of value to this research is the t-value which measures the variation among the variables. This value needs to be far removed from zero to depict how the null hypothesis has been rejected. Here, the value of t is -9.390, which is quite greater than the value zero of a null hypothesis. The null hypothesis is then rejected and leaves room to explore the probability value 'p'. The p-value must be less than 0.05 to affirm that the difference between variables is significant. The p-value in Fig-4.51 is 0.000 which makes far lesser than the required >0.05. Hence, the dataset affirms that the assumed hypothesis is highly significant.

4.2.7 Seventh Examination of Pre-Test and Post-Test

Finally, concluding the series of experimentation for testing Pre-test and Post-test scores of the two groups, controlled and experimental, the data has been arranged into two excel files. The scores have been collected after grading the student's' written scripts in order to calculate the ability with which they can write coherently descriptive stories. Two datasets have been arranged for the seventh examination in the form of excel files, where each file stands for the data of each group of ten participants. The controlled group consists of participants 101 to 110, while the experimental group has participants 201 to 210. These latter ten participants differ from the former by a session where they have been shown pictures to enhance their descriptive writing skills for an improved Post-test score. To assess the students, both groups are given the topic 'My Favorite Uncle' for their Pre-test and the topic 'Celebration of 'Eid' as their Post-test story. These two stories form a pair in themselves, so that they can be collectively labeled as 'G'. The datasets organized for evaluation are as follows:

Participant	GROUP	STORY	PRE TEST	POST TEST
101	CON	G	17	14
102	CON	G	16	15
103	CON	G	14	12
104	CON	G	14	14
105	CON	G	13	15
106	CON	G	10	16
107	CON	G	10	19
108	CON	G	10	19
109	CON	G	12	14
110	CON	G	11	15

Fig-4.52 Excel Sheet Data for Controlled Group – Topic

Participant	GROUP	STORY	PRE TEST	POST TEST
201	EXP	G	12	30
202	EXP	G	19	32
203	EXP	G	11	28
204	EXP	G	14	19
205	EXP	G	13	30
206	EXP	G	16	32
207	EXP	G	8	31
208	EXP	G	17	35
209	EXP	G	18	31
210	EXP	G	18	29

Fig-4.53 Excel Sheet Data for Experimental Group – Topic G

The software ensures certain measures must be followed when executing a command for a Paired Samples T-Test in SPSS. These measures are:

T-TEST PAIRS=PRE-TEST WITH POST-TEST (PAIRED)

/CRITERIA=CI (0.9500)

/MISSING=ANALYSIS

The software will affirm that the provided data is suitable to be paired up together, such that the Pre-test values are linked to the Post-test values. The confidence interval must be set at 0.9500 to regulate an accurate analysis without leaving behind any values provided in the data. With these principles at the core of the analysis, Fig-4.52 presents the data for the Controlled group containing a Pre-test and Post-test columns that are the paired variables. In the investigation of this group's writing, no additional guidance or instruction has been imparted to the students before taking the Post-test examination. The scores achieved for the Pre-test topic 'My Favorite Uncle' and the Post-test topic 'Celebration of 'Eid' have been statistically elaborated as:

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE TEST	12.70	10	2.541	0.803
	POST TEST	15.30	10	2.214	0.700

Fig-4.54 Paired Samples Statistics for Controlled Group – Topic G

Fig- 4.54 demonstrates a statistic outline of all the Pre-Test and Post-Test values given in the Controlled group data for the participants. N denotes the total number of participants whose data has been coordinated to evaluate the mean values in this seventh examination. For the participants 101 to 110, the mean value of all the Pre-test examinations has been recorded as 12.70 while the Post-test values average at 15.30. The Post-test might converge at a value that seems greater than that of the Pre-test mean value, though it is not significant in magnitude. The Standard Error of mean for the Pre-test mean is 0.803 while that of the Post-test mean is 0.700. The Standard Error of Mean represents how much the actual mean may vary from the one calculated, since both are negligible, it can be assumed that the difference between the two may not be great.

Paired Samples Test							
	Paired Differences				t	df	Sig
	Mean	Std. Deviatio	Std. Error	95% Difference of (CI)			

					Lower	Upper			
Pair 1	PRE TEST POST TEST	-2.600	4.326	1.368	-5.694	0.494	-1.901	9	0.090

Fig-4.55 Paired Samples Test for Controlled Group – Topic G

In this Paired Samples Test, Pair 1 is formed for the estimating the difference and variation among the values of the Pre-test and Post-test achieved by Controlled group. Pair 1 follows the construction 'Pre-test – Post-test' which calculates the mean difference between the two variables at -2.600. Since this value is not great in itself, the difference can be considered as negligible. The Standard Error of Mean is 1.368 asserts that the estimated mean difference is not far from what the actual mean may be.

The t-value has been calculated by the formula t= Mean-0/Std. Error of Mean, where the value of t is -1.901. The value of t determines the variation between the two variables that are being tested. This value needs to be farther from zero to ensure that the test escapes the null hypothesis. Since -1.901 is not great, the difference is not significant. The p-value, also known as the probability value, calculates a test's significance. It requires that the p-value should be less than 0.05 to assume that a difference between paired variables is significant. Here. 0.090 is not less than 0.05 and so, the variables of pair 1 are not significantly different from one another.

Moving on to the investigation the Experimental group, Fig-4.53 contains the dataset which will constitute the next pair of variables eligible for SPSS analysis. The variables are Pre-test scores and Post-test scores of the participants of the Experimental group, and they are collectively labelled as pair 2. In this investigation, the topic given during the Pre-test procedure was 'My Favorite Uncle' while the topic during the Post-test examination was 'Celebration of 'Eid'. In Fig.-4.56, these topics have been categorized together as G. A statistical overview of both variables has been given as:

Paired Samples Statistics

		Mean	N	Standard Deviation	Std. Error Mean
Pair 2	PRE TEST	14.60	10	3.596	1.137
	POST TEST	29.70	10	4.218	1.334

Fig-4.56 Paired Samples Statistics for Experimental Group – Topic G

The statistical data presented in Fig-4.56 elaborates upon the N number of participants of the two variables, Pre-test and Post-test values, for the Experimental group. The number of participants for each variable within the group is ten. The two variables come together to form Pair 2 fit for an SPSS analysis, where the specimen for the analysis will be the results obtained by the students for stories categorized under G. The mean value for the Pre-test scores has been measured to be 14.60, where the actual mean may differ from the calculated mean by a Standard Error of 1.137. A session has been conducted where the students are shown various pictures that enable them to improve their creative writing skills and write descriptively. Then, the Post-test mean value has been recorded as 29.70 for these ten participants in the Experimental group. The supposed mean may differ by a slight variation of 1.334 from the actual mean value; an insignificant difference.

Paired Samples Test									
		Paired Differences					t	df	Sig
		Mean	Std. Deviation	Std. Error Mean	95% Difference of (CI)				
					Lower	Upper			
Pair 2	PRE TEST POST TEST	-15.100	4.886	1.545	-18.596	-11.604	-9.772	9	0.000

Fig-4.57 Paired Samples Test for Experimental Group – Topic G

In the Paired Samples Test for Pair 2, Fig-4.57 shows that while considering the topic G for the participants of the experimental group, we calculate the difference between the two variables: Pre-test grades and Post-test grades. This Post-test examination follows the condition that pictures and visual aid has been provided to the students prior to be conduction of the test to study how it influences their descriptive writing for the better. The calculation of this difference is directed as 'Pre-test – Post-test'. This results in the Mean difference of -15.100 for Pair 2 in Fig-4.57. The number itself is large in size and thus opens the possibility for a larger t-value. The negative sign along with the mean difference shows that the greatness is in favor of a larger Post-test average. This supposed mean has been calculated under the condition of a 95% accurate result, such that the actual mean may only differ by 1.545.

The t-value is calculated using the formula: t= Mean-0/Std. Error of Mean. The t-value is calculated to judge how far away the difference of the two variables is from the value zero of the null hypothesis. The null hypothesis dictates that there has been no noteworthy change from Pre-test to Post-test examinations and the difference is zero. In Fig-4.57, the t-value is -9.772 which is far removed from zero, thus negating the null hypothesis. We establish that in such a case the difference ought to be significant. For that a p-value is calculated. This value is also known as probability value and settles at 0.000 in Fig-4.57. The probability values states that for a t-test to be considered significant, the p-value must lie below 0.05. Here, the condition has been met as 0.05 is remarkably greater than 0.000.

CONCLUSION

Writing serves as a conduit for conveying thoughts and ideas through the medium of marks and symbols on paper. It involves organizing ideas in a sequential manner, reflecting the thinking process of the writer. Creative writing, in particular, demands innovative thinking and cognitive skills to produce skillful compositions. However, traditional teaching methods often struggle to cultivate this skill effectively, leading to challenges in student engagement and proficiency.

The integration of pictures into the teaching process offers a promising avenue to enhance descriptive writing skills. By stimulating imagination and providing visual cues, pictures encourage students to explore ideas and express themselves creatively. Moreover, they facilitate

vocabulary expansion and sensory engagement, making the learning environment more dynamic and conducive to learning.

Through experimental design and quantitative analysis, this research underscores the significant impact of utilizing pictures in teaching descriptive writing. The findings highlight improvements in student motivation, engagement, and writing proficiency when pictures are incorporated into the instructional process. Additionally, they emphasize the importance of active student participation and multisensory learning experiences in fostering effective writing skills.

In conclusion, visual aids, such as pictures, play a vital role in enhancing writing skills by providing context, stimulation, and engagement. Their integration into the classroom environment offers educators a valuable tool to enrich the teaching and learning process and promote creativity and proficiency in writing.

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