CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

4.1.0 INTRODUCTION

Education is only a significant dimension that can promote rights, justice, tolerance, cooperation, social responsibility, civic responsibility, intellectual understanding, and respect for cultural diversity. The NCF document felt the growing levels of violence, intolerance, fanaticism, unsolved conflict and ethical action, peace and welfare facing new challenges. That is why the need to reorient education in school and school curriculum takes priority. Through planned and positive educational programmes, the negative tendencies and criminal attitudes that have so deeply permeated in our society can be controlled. Plans and programmes should be made to help children to develop skills and attitudes that empower and help them in making the right choices in life. That is why this research attempted to bring into spotlight two main aspects of children that is Values and Thinking though Stories. The data related to this have been carefully collected by the researcher by keeping an eye on all the set objectives.

Data analysis and interpretation are helpful to identify significant patterns to reduce the volume of information of massive amounts of data. There are two types of analysis Descriptive Analysis and Inferential Analysis. The descriptive statistical analysis limits generalization to the particular group of individuals observed whereas Inferential statistics can extend the conclusion about population by observing sample only (Best & Kahn, 2014). In the descriptive or qualitative data analysis includes organization of data, description of data and at last interpretation. Here the researcher has used both descriptive and inferential statistics. In the present study there are a total of six objectives set by the researcher. In order to fulfil objectives, there are 13 null hypotheses that have been formed by the researcher. For this, collected data have been analysed quantitatively with the use of statistical techniques like median, QD, Standard error of Median and U-test. Also, to avoid mistakes, here two software namely, SPSS and Jamovi have been used and crosschecked. A density graph that showed the visual of collected raw data. This graph gives an idea about scores of experimental and control group students that have been generated from Jamovi (2.5) software. These graphs have been provided after each analysis, separately.

The whole analysis process has been done in two parts, quantitative and qualitative as presented below. It has been done systematically and has given a number to each analysis for better understanding of the sequence it followed as provided in the figure here.

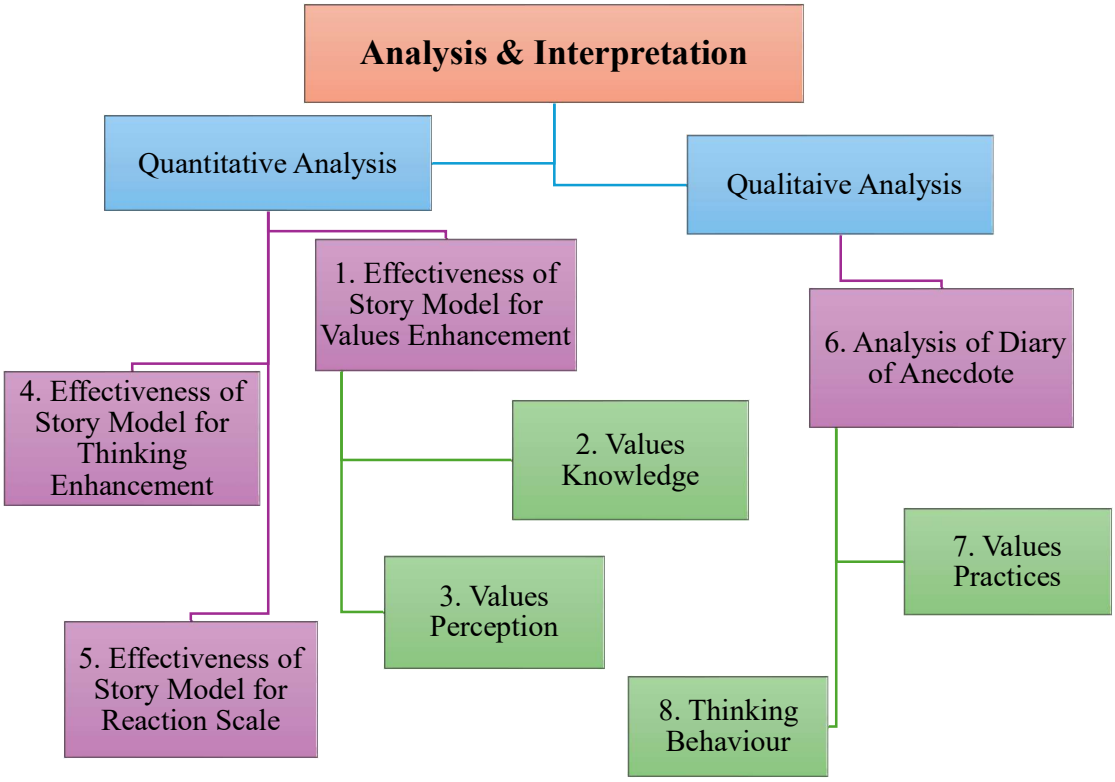

Figure 4.1: Sequence of Analysis of different Data

Here data analysis has been done based on four main headings: Effectiveness of the Story Model for Values enhancement and Effectiveness of the Story Model for Thinking enhancement and Effectiveness of the Story Model in terms of Reaction of the Students. At last Analysis of Diary of Anecdote done as a part of qualitative analysis. All of these are done in a systematic manner.

4.2.0 EFFECTIVENESS OF THE STORY MODEL FOR VALUES ENHANCEMENT

To test values enhancement among students, post-tests have been administered on both groups through Values Knowledge test and Values Perception Scale, for which statistical techniques have been used as discussed here. Perceptions come after knowledge about something, that is why two tests Value Knowledge and Value Perception separately administered on students. In order to achieve objective number 4, two tests for Values enhancement have been made: Value

Knowledge Test and Value Perception Scale. As previously discussed for value enhancement, the number of items equally distributed to each type of value, based on which items have been formed by the researcher. There were mainly three types of Values selected under this study, Personal, Social and Universal; based on these three types- the Median, Quartile Deviation (QD) and Standard Error of Median (SEM) of both experimental and control have been calculated separately. After this separate calculation has been done by applying Mann-Whitney U-test. Under U-test, Sum of Ranks, z-value and p-value also provided. It also included a visual representation of score secured by both groups through a density graph with each separate calculation. This density graph is made though Jamovi software gives ideas about the students' performances in the Value Knowledge Test. There were a total eight hypothesis formulated to fulfil objective number 4 of the present study. For Value Knowledge 4 hypothesis and for Value Perception there are 4 hypotheses, those have been discussed here separately in the next paragraphs.

4.2.1 EFFECTIVENESS OF STORY MODEL FOR VALUES KNOWLEDGE

In order to check if students have enhanced values among them, the values knowledge test was first preference before values Perception test. The test related to the values knowledge was administered on students of experimental and control group as well. Among thirteen, there are four null hypotheses formulated for the of Values Knowledge enhancement.

The following four hypotheses were formulated for Values Knowledge Enhancement.

H_0 1: There is no significant difference between the medians of Personal Values knowledge scores of elementary school children taught with and without the story model.

H_0 2: There is no significant difference between the medians of Social Values knowledge scores of elementary school children taught with and without the story model.

H_0 3: There is no significant difference between the medians of Universal Values knowledge scores of elementary school children taught with and without the story model.

H_0 4: There is no significant difference between the medians of Total Values knowledge scores of elementary school children taught with and without the story model.

There are eight tables dedicated to Values Knowledge analysis, dedicated to each type of value separately based on hypothesis. Table number 4.1 and 4.2 is statistical score of 'Personal

Value' of both experimental and control group. Table number 4.3 and 4.4 is about statistical score of 'Social Value' of both experimental and control group. Table number 4.5 and 4.6 is about 'Universal Value. And at the end, the overall score of all types of values of both experimental and control group provided in table number 4.7 and 4.8.

Table 4.1: Distribution of Personal Values Knowledge score of Experimental and Control groups in terms of Median, Quartile Deviation and Standard Error of Median

Groups	N	Median	QD	SEM
Experimental	20	23.5	1.625	0.831
Control	20	17.0	4.125	1.279

From Table number 4.1, it was found that Median value of Experimental group is 23.5 whereas control group is 17.0. The quartile deviation (QD) was found to be 1.625 and 4.125 of experimental and control group respectively. The standard errors of Median of experimental and control group are found to be 0.831 and 1.279 respectively. There has been a difference between the median values of both groups observed.

The median of experimental group was found to be more than the control group in terms of personal values knowledge score. Similarly, the QD of experimental group is found to be less which shows the experimental group was homogeneous in terms of personal values knowledge score. Similarly, the SEM of experimental group is found less than the control group. Whether the difference between medians of Personal values of both groups is significant or by chance, Mann Whitney U-test has been applied here on the scores of experimental and control groups. Data related to this has been provided on the next table.

Table 4.2: Distribution of Sum of Ranks, U-Value, z-value, and Probability between experimental and control group related to Personal Values Knowledge score

Groups	N	Sum of Ranks	U-Value	z- Value	p-Value
Experimental	20	582.5	27.50	-4.682	0.00003
Control	20	237.5			

From table no. 4.2, the sum of ranks of Experimental and control group was found to be 582.5 and 237.5 respectively with the U- value of 27.50. The z-value was found 4.862, with the probability (p) of 0.00003 level. This P value is less than the decided significance level of 0.05 and the test found to be significant here. Hence, the null hypothesis formulated for this (H_0 1), "There is no significant difference between the medians of Personal Values knowledge scores of elementary school children taught with and without the story model," has been rejected. So, it can be said that the experimental group scored significantly high in personal values knowledge score in comparison to control group which can be said to be due to effects the story model. From median values it is found that control group is more heterogenous which can also be seen from the graph below.

Figure 4.2: Personal Values Knowledge Score of Experimental (X) and Control (C) Groups

Table 4.3: Distribution of Social Values Knowledge score of Experimental and Control groups in terms of Median, Quartile Deviation and Standard Error of Median

Groups	N	Median	QD	SEM
Experimental	20	22.0	1.00	0.563
Control	20	14.5	3.125	1.091

Table number 4.3 contained score of Median, QD and Standard error of Median of Social values from Value knowledge scale of both experimental and control groups. It was found that Median is 22.0 of experimental group and 14.5 of control group. The QD of the experimental and control group was found to be 1.00 and 3.125 respectively. The Standard error of Median was found to be 0.563 and 1.091 respectively. Here it can be interpreted that the Median value of both the groups have differences of 7.5 points. Similarly, the QD of experimental group is found to be less which shows the experimental group was homogeneous in terms of personal values knowledge score. Similarly, the SEM of experimental group is found less than the control group. The Median value of experimental group was found to be more than the control group in terms of social values knowledge score. So, whether the difference between the median value is significant or by chance Mann Whiteney U-test has been applied, which result is presented here in the next table.

Table 4.4: Distribution of Sum of Ranks, U-Value, z-value, and Probability between experimental and control group related to Social Values Knowledge score

Groups	N	Sum of Ranks	U-Value	z- Value	p-Value
Experimental	20	594.5	15.50	-5.020	0.00003
Control	20	225.5			

Table no. 4.4 describes the score of U-test results. The sum of ranks of experimental group and control group are 594.5 and 225.5 respectively, with the U- value of 15.50. The z-value was found to be 5.020 with the probability of 0.00003, which is less than the decided value of 0.05 level. That is why the null hypothesis "H_0 2", has been rejected here. It means that there is significant difference between the experimental group and control group in terms of social values knowledge score. From this it can be interpreted that experimental group is varied and performed well in social values knowledge in comparison to control group because of the effect of the story model. Here the control group found to be more heterogenous, this is can also be observed from the graph also.

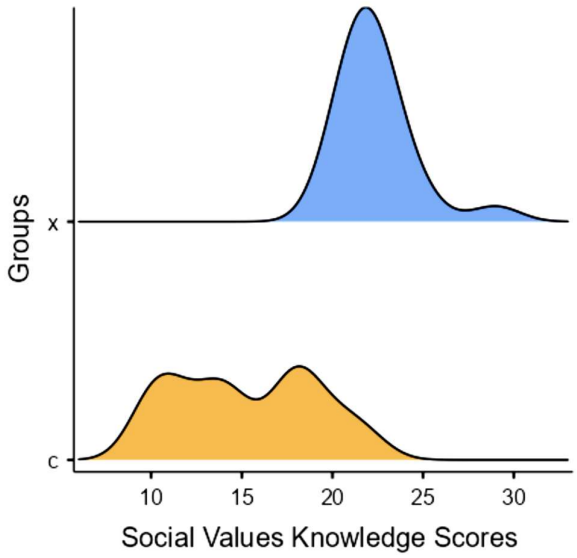

Figure 4.3: Social Values Knowledge Score of Experimental (X) and Control (C) Groups

Table 4.5: Distribution of Universal Values Knowledge score of Experimental and Control groups in terms of Median, Quartile Deviation and Standard Error of Median

Groups	N	Median	QD	SEM
Experimental	20	23.0	0.50	0.561
Control	20	18.0	3.75	1.215

From table 4.5 it was found that the medians of Experimental group and control group are 23 and 18.0 respectively. The QD of experimental group is 0.50 whereas QD of control group is 3.75. The SEM of experimental and control groups are 0.561 and 1.215 respectively. Here the QD of experimental group is found to be less, which shows the experimental group was homogeneous in terms of Universal values knowledge score. Similarly, the SEM of experimental group is found less than the control group. The noticed difference between both groups also showed that the median value of experimental group students is higher than the control group. Whether the difference between the median value of both groups is significant or by chance and to test the null hypothesis. The researcher has applied the U-test for this purpose, which result is given here.

Table 4.6: Distribution of Sum of Ranks, U-Value, z-value, and Probability between experimental and control group related to Universal Values Knowledge score

Groups	N	Sum of Ranks	U-Value	z- Value	p-Value
Experimental	20	580.0	30.00	-4.652	0.00003
Control	20	240.0			

Table no 4.6 included the details about the U-test results with the sum of ranks, z-value, and p-value. The sum of ranks of experimental group is 580 whereas the sum of ranks of control group is 240. The result of the calculation of U value is 30.00. The z-value is 4.652. with the probability of 0.00003 level, which is less than the decided value that is 0.05 level of significance. From this probability results, the null hypothesis formulated on this "H_0 3" has been rejected at the significance level of 0.05. It means that that a significant difference between both groups is exit in Universal values score and the experimental group score is significantly high here in comparison to control group which is due to the effects of the story model. A density graph of scores related to this has been provided here, where the control group's heterogeneity can be seen.

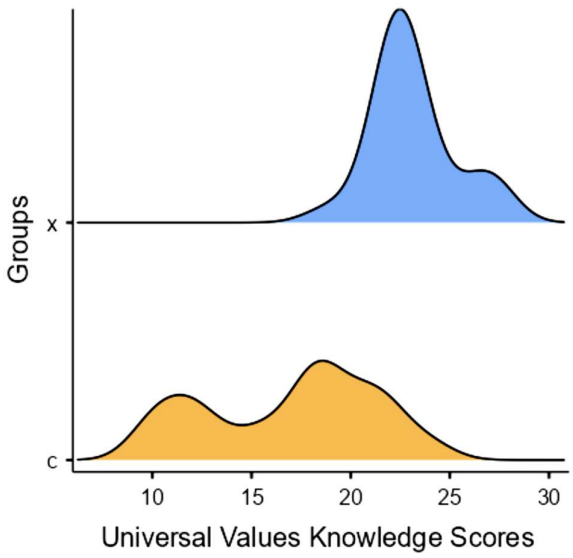

Figure 4.4: Universal Values Knowledge Score of Experimental and Control Groups

Table 4.7: Distribution of Total Values Knowledge score of Experimental and Control groups in terms of Median, Quartile Deviation and Standard Error of Median

Groups	N	Median	QD	SEM
Experimental	20	67.5	3.125	1.302
Control	20	51.5	11.25	3.234

Table no.4.7 covered all the sections inside the values knowledge test. The overall scores of students have been analysed here. Score of all types of Values; Personal, Social and Universal calculated and presented together in this table. It includes QD, Median and Standard Error of Median of both groups. The Medians of experimental group and control group are 67.5 and 51.5, respectively. The QD of experimental group is 3.125 whereas the QD of control group is 11.25. The SEM are 1.302 and 3.234 respectively. Median value of experimental group is differed by 16 from median value of control group. The median value of Experimental group was found to be more than the control group in total values knowledge score. Similarly, the QD and SEM of experimental group is found less than the control group in total values knowledge score. That is why, to test is there any significant difference between these two-group statistical calculation and separate table needed. Whether the difference between the medians Total values score in Value Knowledge Test of both groups is significant or by chance and to test the null hypothesis, U-test has been applied data derived from this has been provided in the next table.

Table 4.8: Distribution of Sum of Ranks, U-Value, z-value, and Probability between experimental and control group related to Total Values Knowledge score

Groups	N	Sum of Ranks	U-Value	z- Value	p-Value
Experimental	20	606	4.00	-5.319	0.00003
Control	20	214			

Table 4.8 showed the data related to overall scores of values of both experimental and control groups that is the result of non- parametric statistical calculation U-test. The sum of ranks of experimental group is 606 whereas sum of rank of control group is 214. The calculated U-value

was found to be 4.00. The z-value of the test is 5.319 with the probability of 0.00003 level, which is quite less than the value of 0.05 level of significance. So, the null hypothesis formulated for this calculation "H_0 4" has been rejected here at the significance level of 0.05. It means that there exist is significant difference between control and experimental group due to the story model effects in terms of the total values knowledge score. The difference between median values showed the heterogenicity of control groups. The visual representation of total score secured by both groups provided below here.

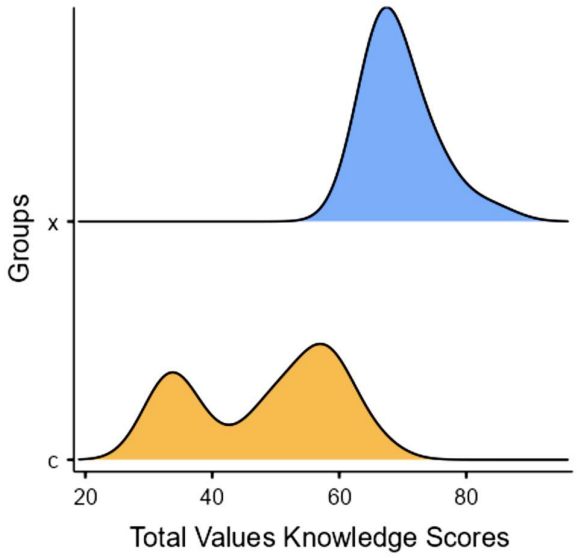

Figure 4.5: Total Values Knowledge Score of Experimental (X) and Control (C) Groups

The above density graph has been made based on the total scores of students in the Value Knowledge test. The experimental group graph is blue coloured and named as group 'X', its performance was found to be better than the control group students that is yellow in colour, named as 'C'.

These were all the descriptions of the Value Knowledge test results. Here, the three types of values were considered; Personal, Social and Universal Value that calculated separately. The results revealed that in total values knowledge score, the experimental group students are differentiated from control group students in a positive way. It means students of experimental group have better knowledge about these three types of values than the control group. This was because of the stories delivered to them and the effect of the story model. As previously

mentioned, the second tool to test values enhancement of students was Value Perception Scale, data related to this have been described next.

4.2.2 EFFECTIVENESS OF THE STORY MODEL FOR VALUES PERCEPTION

Value perception scale administered on students to test whether the experimental group were having any positive impact of the Story sessions on them. After Value knowledge test, a scale of Value Perception has been applied to the sample students of both experimental and control group. There were four hypotheses which have been formulated for Values Perception to fulfil Value Enhancement objectives.

H_0 5: There is no significant difference between the medians of Personal Values perception scores of elementary school children taught with and without the story model.

H_0 6: There is no significant difference between the medians of Social Values perception scores of elementary school children taught with and without the story model.

H_0 7: There is no significant difference between the medians of Universal Values perception scores of elementary school children taught with and without the story model.

H_0 8: There is no significant difference between the medians of Total Values Perception scores of elementary school children taught with and without the story model.

For each of these four hypotheses, descriptive statistics, and U- test have been applied separately. Under Values Perception, there are separate tables dedicated to each type of values, as hypothesis formulated separately for them. Table number 4.9 and 4.10 is statistical score of 'Personal Values'. Table number 4.11 and 4.12 is about statistical score of 'Social Values'. Table number 4.13 and 4.14 is about 'Universal Values of both experimental and control groups. And at the end, overall calculation of scores of all types of values of both experimental and control group is provided in table number 4.15 and 4.16. Tables have been formed according to this following with the brief interpretation.

Table 4.9: Distribution of Personal Values Perception score of Experimental and Control groups in terms of Median, Quartile Deviation and Standard Error of Median

Groups	N	Median	QD	SEM
Experimental	20	46.0	2.125	1.034
Control	20	43.0	2.75	1.245

Table no. 4.9 provided detailed information about descriptive calculation of the Median, QD and Standard Error of Median relating to personal value Perception score. The Medians of experimental group and control group are 46 and 43, respectively. The QD of experimental group is 2.125 whereas it is 2.75 control group. The SEM of experimental and control group are 1.034 and 1.245 respectively. Approx 3 points median difference between both groups have been identified here. Here the score of experimental group was found to be more than the control group in terms of personal values perception. The QD and SEM also found to be less than the control group. Though there is a small difference, non-parametric calculation is needed here. Whether the difference between the median value of Personal values score of both groups is significant or by chance, U-test for this purpose has been applied. The data related to this have been given below.

Table 4.10: Distribution of Sum of Ranks, U-Value, z-value, and Probability between experimental and control group related to Personal Values Perception score

Groups	N	Sum of Ranks	U-Value	z- Value	p-Value
Experimental	20	484.5	125.50	-2.024	0.044
Control	20	335.5			

Table number 4.10 includes the data related to the U-test that involves sum of ranks and z-value also. The sum of ranks of Experimental group is 484.5 and Control group is 335.5. The calculated U-value is 125.50. The z-value is 2.024 with the probability of 0.044, which is found to be smaller than the decided value that is 0.05. From this probability value, null hypothesis "H_0 5" has been rejected at 0.05 level. It means that there is a significant difference between Personal Value medians of experimental group and control group at 0.05 levels. The

experimental group scored high in personal value perception in comparison to the control group which can be said due to the effects of the story model. This can be seen from the graph given here.

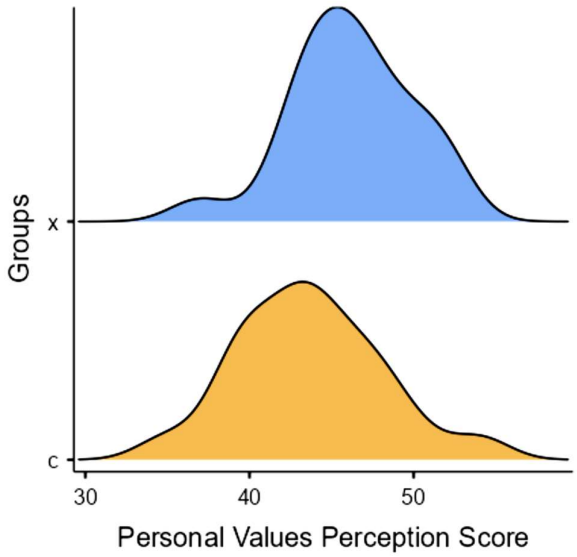

Figure 4.6: Personal Values Perception Score of Experimental (X) and Control (C) Groups

Table 4.11: Distribution of Social Values Perception score of Experimental and Control groups in terms of Median, Quartile Deviation and Standard Error of Median

Groups	N	Median	QD	SEM
Experimental	20	51.5	1.625	0.586
Control	20	50.0	1.125	0.816

Table no. 4.11 shows here, the Median, QD and SEM of Social values that comes under Value Perception Scale. Here, the QD of experimental group is 1.625 and control group is 1.125. Here Median of experimental group found to be 51.5 and control group is 50.0. The SEM of experimental group is 0.586 whereas the SEM of control group is 0.816. Here the QD of experimental group is little higher and SEM is lower than the control group. There is very little difference between these groups that can be seen from the above data, approximately 1.5 point of the median value. To check if the differences between them is significant or by chance, the statistical calculation needed. The next table showed data about U-test results.

Table 4.12: Distribution of Sum of Ranks, U-Value, z-value, and Probability between experimental and control group related to Social Values Perception score

Groups	N	Sum of Ranks	U-Value	z- Value	p-Value
Experimental	20	477	133.00	-1.832	0.069
Control	20	343			

Table no. 4.12 is about the data of U-test results of Social Values perception score. The sum of ranks of experimental group found to be 477 whereas the sum of ranks of control group is 343. Its U-test result value found to be 133.00. After this the z-value result came out, that is 1.832, which probability found 0.069. This p-value is not less than the decided value that is 0.05 level of significance. From this probability value, null hypothesis formulated to apply U-test on it "H_0 6" has been retained here with the 0.05 significance level. It means that, though the story sessions were not effective in social values scores of value perception scale on experimental group students, but it did not have any negative impacts, as there was no significant difference in social value Score between two groups. It means both groups were good in performance. Also, the difference in median value between two groups found where experimental group's median value was high as provided in the previous table No 4.11, which means control group is more heterogenous than experimental group. This can be observed from the graph provided here.

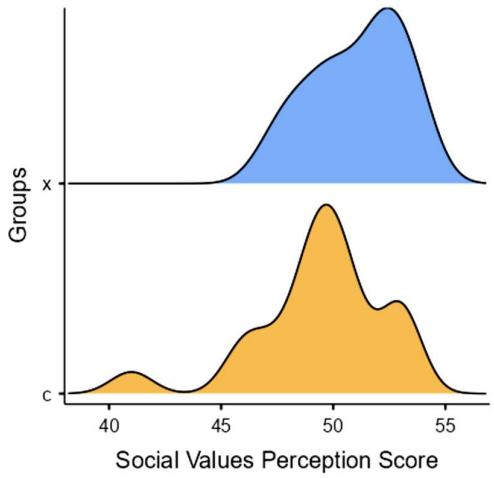

Figure 4.7: Social Values Perception Score of Experimental (X) and Control (C) Groups

Table 4.13: Distribution of Universal Values Perception score of Experimental and Control groups in terms of Median, Quartile Deviation and Standard Error of Median

Groups	N	Median	QD	SEM
Experimental	20	53.0	4.00	1.319
Control	20	50.0	3.125	1.120

Table no. 4.13 given data related to Median, QD, and SEM of experimental and control group separately of Universal values Score under the Value Perception Scale. The QD of the experimental group is 4.00 and QD of the control group is 3.125. The Median value of experimental group found to be 53.0 and Median of control group is 50.0. The SEM of experimental and control group are 1.319 and 1.120 respectively. The difference in the medians value between the two groups can be seen here is 3.0 points. Here the score of experimental group was found to be more than the control group in terms of universal values perception. Also, the QD and SEM also found to be less than the control group. To test this significant is whether difference or by chance, the need of statistical data felt which can be fulfilled by U-test calculations. The data related to these calculations using U-test have been provided in the next table.

Table 4.14: Distribution of Sum of Ranks, U-Value, z-value, and Probability between experimental and control group related to Universal Values Perception score

Groups	N	Sum of Ranks	U-Value	z- Value	p-Value
Experimental	20	476.0	134.00	-1.796	0.075
Control	20	344.0			

Table no. 4.14 showed the data after calculating U-test for the Universal Value under the Value perception Scale between experimental and control groups. The sum of ranks of experimental group, is 476.0 whereas sum of ranks of control group is 344.0. The U-value found to be 134.00. After this the z-value was 1.796, with the probability value of 0.075. Though it is low, still it is 0.2 greater than the decided value that is 0.05 significant level. That is why the above test is not significant, and the null hypothesis formulated for this "H_0 7" has been retained. It

means that there is no difference between experimental group and control group in Universal Value of Value perception Scale because of the story sessions. Though both the groups did not differ, there was no negative impact of story sessions, because there was a difference found between median values of both the groups as provided in the previous table 4.13. There were not much differences between the two groups, which indicates the good performances of both groups. This can be observed from the graph below.

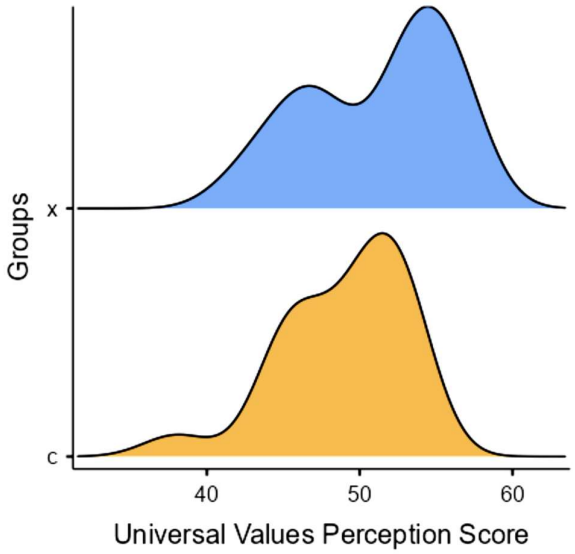

Figure 4.8: Universal Values Perception Score of Experimental (X) and Control (C) Groups

Table 4.15: Distribution of Total Values Perception score of Experimental and Control groups in terms of Median, Quartile Deviation and Standard Error of Median

Groups	N	Median	QD	SEM
Experimental	20	147	4.5	1.906
Control	20	144	4.625	2.495

Table no. 4.15, given information about the Median, QD and SEM of Scores of experimental and control groups related to total values perception. The Medians of experimental and control group found to be 147 and 144, respectively. The QD of experimental group is 4.5 and QD of control group is 4.625. The SEM of experimental group is 1.906 whereas SEM of control group is 2.495. Here the QD and SEM of experimental group found to be less. Also, the median

difference between two groups is 3.0 points. So, whether the significant is difference or by chance, it needs to be tested through statistical formula through U-test. The following table is dedicated to the data of the U-test results.

Table 4.16: Distribution of Sum of Ranks, U-Value, z-value, and Probability between experimental and control group related to Total Values Perception score

Groups	N	Sum of Ranks	U-Value	z- Value	p-Value
Experimental	20	483	127.00	-1.978	0.049
Control	20	337			

Table no. 4.16 showed data related to U-test results about Total Values Score of the Values perception scale of both the groups. There is a difference between the sum of ranks of both groups as Experimental group having 483 and control group having 337. The result of U-test value found was 127.00. Here z value is found to be 1.978 with the probability of 0.049 level. which is less than the decided value of 0.05 level. It means the test is significant at 0.05 level. Considering the probability value, null hypothesis formulated for this "H_0 8" has been rejected at 0.05 level of significance. It means the story sessions were helpful for experimental group students, that is why experimental group scored high and performed well on overall Values perception Scale. To understand the differences clearly, here is a graph of students' performances in both the groups provided below.

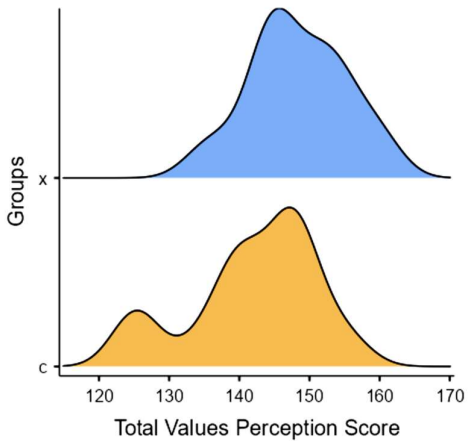

Figure 4.9: Total Values Perception Score of Experimental (X) and Control (C) Groups

These were all the discussions about the statistical results derived from Value Perception Scale. While talking about overall scores on values in this, the experimental group varies from control group in terms of having high value perception score. These were the results of the story sessions and the effects of the story model. Although in the case of separate calculations of social values and universal value types, the null hypotheses had to be retained- there were differences in the median values of social values and Universal values between experimental and control groups found, where students of experimental group scored high. The performance of both groups was good, but the Experimental group was having better performance in total Value score under the Value Perception than the control group. After this, to test the thinking enhancement of students, another test, that is Thinking scale also administered on students which has been discussed further.

4.3.0 EFFECTIVENESS OF THE STORY MODEL FOR THINKING ENHANCEMENT

There was a Thinking Scale that applied to test students' thinking enhancement expected through story sessions. The statistical tests stressed here are Median, QD, Standard error of Median (SEM), later U-test also applied. Under U-test, Sum of Ranks, z-value and p-value also provided. There were four types of thinking selected for this study that is Critical, Creative, Reflective and Moral thinking. In order to fulfil objective number 5, there were five different hypotheses that had been formulated, that have been given here.

H_0 9: There is no significant difference between the medians of Critical Thinking scores of elementary school children taught with and without the story model.

H_0 10: There is no significant difference between the medians of Creative Thinking scores of elementary school children taught with and without the story model.

H_0 11: There is no significant difference between the medians of Reflective Thinking scores of elementary school children taught with and without the story model.

H_0 12: There is no significant difference between the medians of Moral Thinking scores of elementary school children taught with and without the story mode.

H_0 13: There is no significant difference between the medians of Total Thinking scores of elementary school children taught with and without the story model.

There are ten different tables provided here, those are dedicated to the data and information about thinking scale here. The analysis done through table No. 4.17 and 4.18 are for Critical Thinking, table no. 4.19 and 4.20 are for Creative Thinking, table no. 4.21 and 4.22 are for Reflective Thinking, table no. 4.23 and 4.24 are for Moral Thinking. And at last, table number 4.25 and 4.26 are made for total thinking scores.

Table 4.17: Distribution of Critical Thinking score of Experimental and Control groups in terms of Median, Quartile Deviation and Standard Error of Median

Groups	N	Median	QD	SEM
Experimental	20	29.0	2.5	1.269
Control	20	27.5	3.0	0.828

Table no. 4.17 provided data related to Critical thinking under the Thinking Scale of both experimental and control groups. The median value of experimental group and control group are 29.0 and 27.5, respectively. The QD of the Experimental group is found to be 2.5 and the control group is 3.0. The SEM of experimental and control groups are 1.269 and 0.828 respectively. Here the QD of experimental group is lesser and SEM is higher than of control group. The difference between the median values of both groups has been identified here, as the experimental score is higher than that of control group in terms of critical thinking score. Whether the difference between median values is significant or by chance and to test null hypothesis, the U-test has been applied, which details have been given in the following table.

Table 4.18: Distribution of Sum of Ranks, U-Value, z-value, and Probability between experimental and control group related to Critical Thinking score

Groups	N	Sum of Ranks	U-Value	z- Value	p-Value
Experimental	20	461	149.00	-1.388	0.169
Control	20	359			

Table no. 4.18 has provided information about U-test results. The sum of ranks of is 461 of experimental groups which is higher than the control group that is 359. The calculated U- value

found to be 149.00. The z-value was found to be 1.388 with the probability of 0.169, which is not less than the decided value that is 0.05 level of significance. That is why the U-value was found to be not significant. The null hypothesis formulated for this "H_0 9" has been retained here at 0.05 level of significance. Here, it can be interpreted that the difference between two groups is not there because of the story sessions. But there was no negative impact of the story session because there is no difference between two groups, as the previous table no. 4.17, showed the difference between median values of two groups, where scores of experimental group students were high, it means the story model was not much but little effective to experimental group while considering critical thinking scores. It can be said both the groups scored good despite being little difference from each other. A visual representation of scores secured by both groups provided here.

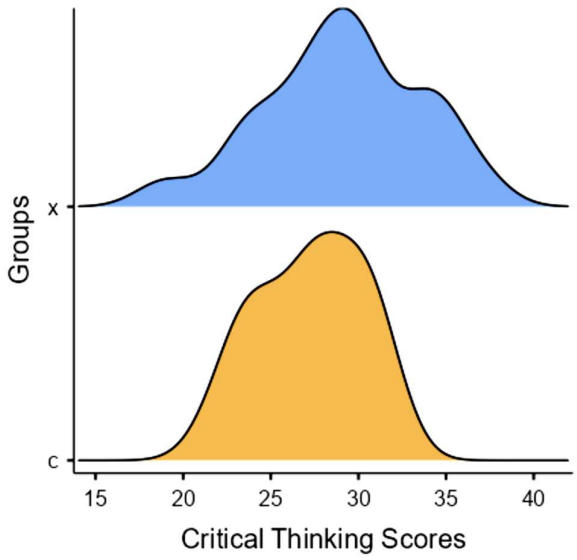

Figure 4.10: Critical Thinking Score of Experimental (X) and Control (C) Groups

Table 4.19: Distribution of Creative Thinking score of Experimental and Control groups in terms of Median, Quartile Deviation and Standard Error of Median

Groups	N	Median	QD	SEM
Experimental	20	30.0	2.0	0.989
Control	20	29.0	2.5	1.130

Table no. 4.19 provided detailed information about descriptive calculation of the Median, QD and SEM relating to Creative Thinking in thinking scale. The Median of experimental group and control group are found to be 30 and 29, respectively. The QD of experimental group found to be 2.0 and control group is 2.5. The SEM are 0.989 and 1.130 of experimental and control group respectively. There is small difference in the median values between both groups that have been identified here. The QD and SEM of experimental group were less than the control group. Whether the difference between the median values of Creative Thinking of both groups is significant or by chance, the non-parametric calculation can give a clearer idea about the differences. To check if the median difference between two groups is significant, U-test for this purpose has been applied. The data related to this have been given on the next table.

Table 4.20: Distribution of Sum of Ranks, U-Value, z-value, and Probability between experimental and control group related to Creative Thinking score

Groups	N	Sum of Ranks	U-Value	z- Value	p-Value
Experimental	20	414.50	195.50	-0.122	0.913
Control	20	405.50			

After applying the U-test, table no. 4.20 showed data related to its results about Creative Thinking Score under the Thinking scale of both the groups. The sum of ranks of Experimental group found to be 414.50 and control group found to be 405.50. Result of U-test value found is 195.50. Here, the z value found is 0.122 with the probability of 0.913, which is not less than the decided significance level of 0.05. It means the test is not significant at 0.05 level. Thus, the null hypothesis formulated on this "H_0 10", has been retained. It means the story sessions were not much impactful; but it was helpful for experimental group students, that is why they scored high and performed well on Creative thinking under Thinking Scale as shown in the previous table no. 4.19. It also means the performance of both groups was good with a small difference. To understand the differences clearly, here is a graph of students' performances in both the groups provided below.

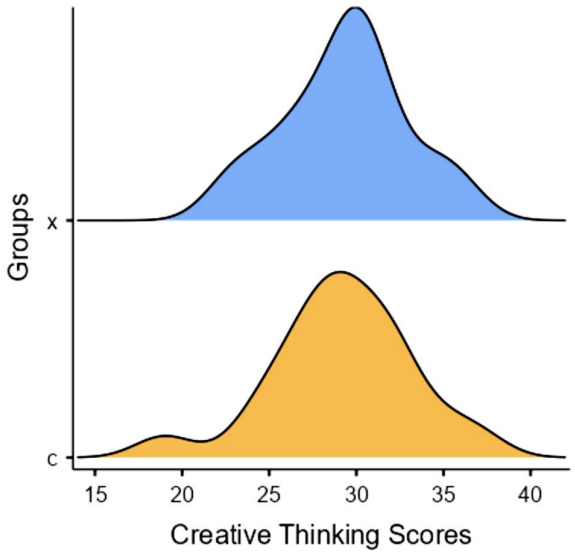

Figure 4.11: Creative Thinking Score of Experimental (X) and Control (C) Groups

Table 4.21: Distribution of Reflective Thinking score of Experimental and Control groups in terms of Median, Quartile Deviation and Standard Error of Median

Groups	N	Median	QD	SEM
Experimental	20	29.5	2.25	1.120
Control	20	27.0	2.125	1.012

Table no. 4.21 provided data related to Reflective thinking under the Thinking Scale of both experimental and control groups. The median values of experimental group and control group found to be 29.5 and 27.0, respectively. The QD of experimental and control group were found to be 2.25 and 2.125 respectively. The SEM of experimental group is 1.120 and control group is 1.012. There is not much difference in QD and SEM of both groups. Though it is small, the difference in the median values of both groups has been identified in terms of reflective thinking score, that is why it needs to be checked through inferential statistics. Whether the difference between median values is significant or by chance the U-test has been applied here, and its related data has been given in the following table.

Table 4.22: Distribution of Sum of Ranks, U-Value, z-value, and Probability between experimental and control group related to Reflective Thinking score

Groups	N	Sum of Ranks	U-Value	z- Value	p-Value
Experimental	20	528.50	81.50	-3.218	0.001
Control	20	291.50			

Table no. 4.22 given data related to U-test results. The sum of ranks of experimental group found to be 528.50 whereas the sum of ranks of control group was found to be 291.5. Its U-test value result showed 81.50. After this the z-value found to be 3.218. From this p-value found was 0.001, which is less than the decided level of 0.05 significance. Hence, the null hypothesis formulated to apply U-test on it "H_0 11", has been rejected here at the 0.05 significance level. It means that the story sessions were helpful to experimental group students while considering reflective thinking category and that is why there is significant difference found in Reflective Thinking Score between two groups because of the effects of the story model. Score secured by both groups presented here with a graph.

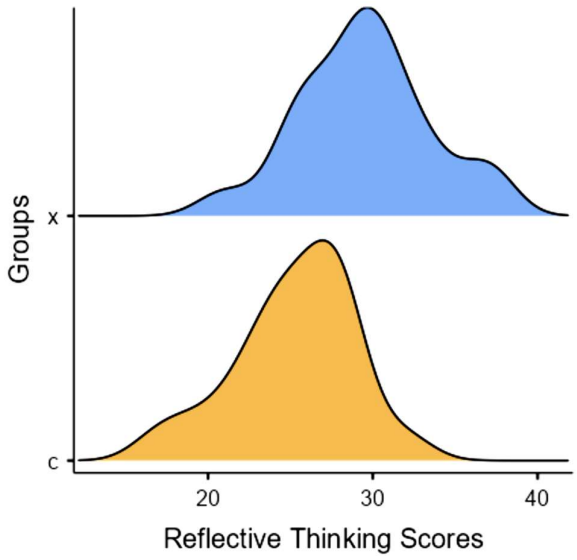

Figure 4.12: Reflective Thinking Score of Experimental (X) and Control (C) Groups

Table 4.23: Distribution of Moral Thinking score of Experimental and Control groups in terms of Median, Quartile Deviation and Standard Error of Median

Groups	N	Median	QD	SEM
Experimental	20	29.0	2.625	0.907
Control	20	26.0	1.5	0.775

Table no. 4.23, given information about the Median, QD and SEM of Scores of experimental and control groups considering Moral Thinking. The Median of experimental and control group is 29.0 and 26.0, respectively. The QD of experimental group was found to be 2.625 whereas QD of control group is 1.5. The SEM of experimental and control groups found to be 0.907 and 0.775 respectively. There is very little difference in the QD and SEM of both groups. Here the difference in median values between the two groups noticed is about 3.0 points. Whether the significant is difference or by chance, it has to be tested through statistical U-test. The next table is dedicated to the data related to the U-test results.

Table 4.24: Distribution of Sum of Ranks, U-Value, z-value, and Probability between experimental and control group related to Moral Thinking score

Groups	N	Sum of Ranks	U-Value	z- Value	p-Value
Experimental	20	483.50	126.50	-2.006	0.046
Control	20	336.50			

Table number 4.24 includes the data related to the U-test that involves sum of ranks, u test result, z-value, and p-value. The sum of ranks of Experimental group found to be 483.50 and Control group is 336.50. The calculated U-value was found to be 126.50. The z-value found 2.006 with the probability it 0.046 level, which is just less than the decided value that is 0.05. That is why the null hypothesis formulated for this "H_0 12", is supposed to be rejected at 0.05 level. It means that there is a significant difference between Moral Thinking median values of experimental group and control group at 0.05 level because of the story model, where the students of experimental group performed well. A visual representation of scores secured by both groups provided here.

Figure 4.13: Moral Thinking Score of Experimental (X) and Control (C) Groups

Table 4.25: Distribution of Total Thinking score of Experimental and Control groups in terms of Median, Quartile Deviation and Standard Error of Median

Groups	N	Median	QD	SEM
Experimental	20	117	5.9	2.607
Control	20	109	4.75	2.269

Table no. 4.25 provided detailed information about descriptive calculations relating to all the sections of Thinking Scale. The Median of experimental group was found 117 whereas the median of control group was found 109. The QD of experimental group was found to be 5.9 and it is 4.75 of control group. The SEM of experimental group is 2.607 and control group is 2.269. There is little difference in QD and SEM of both groups. But the difference between the median values of both groups has been identified here with the 8 points in terms of the total thinking score. So, the non-parametric calculation needed here to check whether the difference between the medians of Total Score of Thinking Scale of both groups is significant or by chance U-test has been applied. For this purpose, the null hypothesis testing and the data related to the statistical applications have been provided here.

Table 4.26: Distribution of Sum of Ranks, U-Value, z-value, and Probability between experimental and control group related to Total Thinking score

Groups	N	Sum of Ranks	U-Value	z- Value	p-Value
Experimental	20	515.0	95.00	-2.844	0.005
Control	20	305.0			

Table no. 4.26 provided with data of U-test results about Total Thinking Score under the Thinking Scale of both the groups, after the application of U-test. There is a big difference between the sum of ranks of both groups found in between Experimental group and control group with 515 and 305 ranks respectively. The result of the U-test found value is 95.00. Here, the probability(p) value after test result of z-value ascertain is 0.005 level. This is less than the decided value that is 0.05 level of significance. It means the test is significant at 0.05 level. Thus, the null hypothesis formulated on this "H_0 13", has been rejected. It means the story sessions were helpful for experimental group students, that is why they scored high and performed well on overall sections of Thinking Scale. To understand the differences clearly, here is a graph of students' performances in both the groups provided.

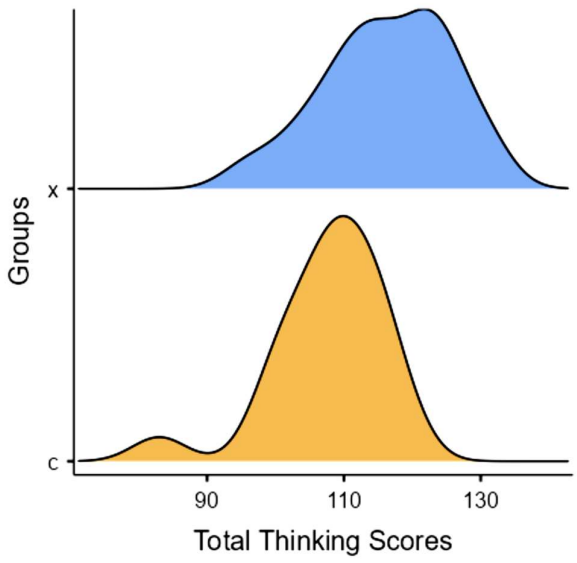

Figure 4.14: Total Thinking Score of Experimental (X) and Control (C) Groups

The above density graph has been made based on the total scores of students in the Thinking Scale including different types of it. So, in this graph it can be assumed that experimental group students' graph that is blue coloured and control group students that is yellow in colour.

The above analysis and discussion were about thinking enhancement and the test results of thinking scale indicated that though the differences between experimental and control groups did not recognize in critical and creative thinking (from table No. 4. 17, 18, 19 and 20) but the overall score differences noticed in table no. 4. 25 and 26. All types of Thinking that are included in this study; Critical, Creative, Reflective and Moral Thinking under the Thinking Scale have been calculated together, which result was elaborated before. It clearly indicated that the performance of experimental group students is quite better than the control group because of story sessions intervention. The main differences are also observed in table no. 4. 21, 22, 23 and 24 dedicated to the Reflective and Moral type of thinking. The differences found are due to the effects of the story model and not by chance as calculated data showed the proof. Students have enhanced their thinking ability. The story model was effective in terms of overall thinking scores to the experimental group students. The effectiveness of the story model from the reactions of students has also been checked that could be presented in the next part of description.

4.4.0 EFFECTIVENESS OF THE STORY MODEL IN TERMS OF REACTION OF STUDENTS

A reaction scale had been formed by the researcher to get feedback from students about the story sessions they have attended. This was the Likert Type scale where Strongly Agree (SA), Agree(A), Undecide (UD), Disagree (D), Strongly Disagree (SD) options were given to the students. All the items formed by considering some important components under it. Basically, it covers the knowledge, understanding and application of the delivered story sessions to the students. Here, the reaction scale consisted 25 number of items based on five different contents; item number 1-5, if students' awareness about different values and thinkings through stories also if it were relatable, 6-10- was about the Interest and Participation of Students, item number 11-15 covered the content of 'What new things they have learned', item number 16-20 was about the Knowledge and Understanding of students and at last item number 21-25 was related to the Applicability of knowledge and usefulness of story session. For calculating Intensity Index (I.I.), the following formula has been applied:

Intensity Index = [(F1×5) + (F2×4) + (F3×3) + (F4×2) + (F5×1)] / F1 + F2 + F3 + F4 + F5

Where F1, F2, F3, F4 and F5 are frequency of SA, A, UD, D, SD, respectively. After calculation of individual items, at last, the average Intensity Index calculated by adding all the calculated intensity index for each item and divided by the total number of Items. Here, frequency of responses of the students calculated and then intensity Index of it provided in Table 4.27. Under the frequency of responses of students, calculated percentage of it also provided.

Table 4.27: Reaction of the students towards different components of the Story Sessions in terms of Percentage and Intensity Index

Sr.	Statements	SA	A	U	D	SD	I.I.
1.	I got to know about different types of values through the stories.	17 85%	01 5%	00	02 10%	00	4.65
2.	I like the activities related to values inside a story.	16 80%	04 20%	00	00	00	4.80
3.	I enjoyed the activities related to thinking inside a story.	17 85%	02 10%	01 5%	00	00	4.80
4.	Stories helped me in enhancing my thinking capacity.	15 75%	03 15%	02 10%	00	00	4.65
5.	I feel some changes in my mindset after story sessions.	17 85%	03 15%	00	00	00	4.85
6.	I liked the way of story presentation.	20 100%	00	00	00	00	5.00
7.	The story sessions make me active participant.	15 75%	05 25%	00	00	00	4.75

8.	The session based on stories was enjoyable.	16 80%	03 15%	01 5%	00	00	4.75
9.	These sessions made me feel relief from boredom.	16 80%	03 15%	01 5%	00	00	4.75
10.	I found all the stories interesting.	17 85%	03 15%	00	00	00	4.85
11.	These sessions helped me with my self-expression.	14 70%	05 25%	01 5%	00	00	4.65
12.	Stories were related to our academic subjects.	15 75%	05 25%	00	00	00	4.75
13.	It helped me in using new words and sentences, at the right moment.	17 85%	03 15%	00	00	00	4.85
14.	Stories are useful to understand real life problems also.	14 70%	06 30%	00	00	00	4.70
15.	Stories were helpful and relatable to my life.	17 85%	03 15%	00	00	00	4.85
16.	Through stories, tricky things can be understood easily.	15 75%	01 5%	04 20%	00	00	4.55
17.	I understood what the morals of the stories were.	15 75%	03 15%	01	00	01	4.50
18.	Through the story sessions, I was able to know about the things where I was wrong.	16 80%	02 10%	02 10%	00	00	4.70
19.	Concept when related to a story, it becomes understandable.	09 45%	09 45%	02 10%	00	00	4.35

20.	Through this, I able to understand 'how to be a good human being.'	17 85%	03 15%	00	00	00	4.85
21.	I wish my teacher also uses stories to make us understand different topics.	17 85%	03 15%	00	00	00	4.85
22.	After these sessions, I could build my personality correctly.	16 80%	03 15%	01 5%	00	00	4.75
23.	I used many ideas in life that are derived from story sessions.	14 70%	05 25%	01 5%	00	00	4.65
24.	The story sessions were useful in terms of my character development.	15 75%	05 25%	00	00	00	4.75
25.	I will use the values, teaches though stories sessions in my real life.	20 100%	00	00	00	00	5.00
Average Intensity Index							**4.74**

Considering table no. 4.27, the reactions of the students towards 25 statements have been explained here one by one.

Reaction of the students for statement 1, "I got to know about different types of values through the stories", were like 85%, 5% and 10% of the respondents falls under the Strongly Agree, Agree and Disagree section. The intensity index of 4.65 indicates that most of the respondents were having positive reactions towards this statement. Here it can be said that most of the students were known about the different types of values from story sessions.

There were 80% in Strongly Agree and 20% in Agree sections, in reaction to the statement 2, "I like the activities related to values inside a story". Here the intensity index is 4.80 that refers to the favourable reactions of the students towards the story session in terms of the different types of activities carried out for values enhancement.

Students' reactions towards the statement 3, that is "I enjoyed the activities related to thinking inside a story", 85%, 10% and 5% of the respondents who were on the sections of Strongly

Agree, Agree and Undecided. Again, the intensity index was also 4.80 here. So, it can be interpreted that most of the students were having positive reactions towards the story sessions, and they enjoyed the activities related to the enhancement of thinking.

The reactions of students for statement 4, “Stories helped me in enhancing my thinking capacity”. that 75%, 15% and 10% respondents fall under Strongly Agree, Agree and Undecided section. Alo, here the 4.65 intensity index showed the strong positive reactions of many students. It indicated that students were able to enhance their thinking power in someways.

Students’ reactions to statement 5, “I feel some changes in my mindset after story sessions”. The respondents of 85% were Strongly Agree and 15% were Agree. Again, 4.85 intensity index refers that students were strongly supporter of this statement. It means that students have felt that their mindset towards different phenomena has been changed during and after the story sessions.

For statement 6, “I liked the way of story presentation”, there were all 20 students, who were Strongly Agree to this. As 100% were under Strongly Agree and its calculated intensity index found was 5.00 which shows students high positive reaction. Here it can be said that students liked the presentation methods of stories very much.

Statement 7, “The story sessions make me active participant”, brought reaction of 75% of the respondents to the Strongly Agree and 25% to the Agree section, which Calculated Intensity Index was found 4.75, which shows students’ strong positive reaction in this. This indicates that students were active respondents during the story sessions.

The reactions of students for statement 8, “The session based on stories was enjoyable”. There were 80%, 15% and 5% in Strongly Agree, Agree and Undecided sections. The intensity index found to be here is 4.75, which shows students expected and favourable reaction towards the story session. It indicates that the story sessions, not just simply received by students but also brought enjoyment to them.

In reaction to statement number 9, “These sessions made me feel relief from boredom”, respondents with 80% Strongly Agree, 15% Agree and 5% Undecided. The intensity index 4.75, which shows that most of the respondents were having a strong positive reaction to this statement. It refers that most of the students were not feeling bored during the story session.

Statement number 10, “I found all the stories interesting”, have reactions of the respondents 85% in strongly agree and 15% in agree towards it. The intensity index of 4.85 reflects that almost all students agreed to this statement. Here it can be said that stories were interesting to the students and not just simple source of learning.

While considering reaction to statement number 11, “These sessions helped me with my self-expression”, 70% of the respondents were Strongly Agree, 25% were Agree and 5% were undecided. Its intensity index found to be 4.65, which shows positive reaction of students. May be 5% were found to be confused here, but rest have agreed that story sessions were helpful in their self-expression.

Reactions of students to statement 12, “Stories were related to our academic subjects”, found 75% in strongly agree and 25% in Agree. The calculated intensity index here 4.75 reflects that students had favorable reaction here. Students have found story session relevant to their academic subject also.

To statement number 13, “It helped me in using new words and sentences at the right moment”, 85% of the respondent were Strongly Agree and 15% were Agree. Its intensity index was found to be 4.85, which reflects that many students were the supporters of this statement. It can be said that mostly all students have not only learnt new words and sentences but also learned how to use those words and sentences.

Statement number 14 was “Stories are useful to understand real life problems also”, where 70% respondents were Strongly Agree and 30% were Agree. The calculated intensity index of 4.70 reflects a favourable reaction towards this statement. This showed students have understood many practical problems of life through stories delivered to them.

Reaction to statement 15, “Stories were helpful and relatable to my life”, were found 85% of students in strongly agree and 15% of students in agree. The intensity index was found to be 4.85 reflects a strongly positive reactions of students to this statement. This also indicates that students found stories related to their life.

Students’ reaction to statement 16, “Through stories, tricky things can be understood easily”, were found 75%, 5% and 20% in the Strongly Agree, Agree and Undecided section. The calculated intensity index found here was 4. 55, reflected not all but most of the students were

in favour of this statement. It can be said that there were some difficult and tricky things related to academic and non-academic fields, those were understood during the story sessions.

The reactions of students to the 17 number statement, “I understood what the morals of the stories were”, 75% were in the strongly agree and 15% in Agree. The intensity index of 4.50 showed students’ strongly agreed reaction to this statement. This also implies that students were able to understand the morals of the stories.

In reaction to statement number 18, “Through the story sessions, I was able to know about the things where I was wrong”, 80% were Strongly agreed, 10% were agreed and 10% were undecided. Here, the intensity index of 4.70 reflected the students’ positive reaction to the statement where it can be said that students got to know about their mistakes in different circumstances through stories.

Statement number 19 “Concept when related to a story, it becomes understandable”, brought reactions of students 45% in Strongly Agree, 45 % in Agree and rest 10% in Undecided section. For this statement 4.35 intensity index found, which means students’ reactions were favorable here. It can be said that students understand a concept well when it is related to a story.

In reaction to statement number 20, “Through this, I able to understand ‘how to be a good human being”, there were 85% Strongly Agree and 15% Agree. The intensity index of 4.85 reflected students’ strong favourable reaction. It indicated that how to be good humans, they understood through the stories taught to them.

There were reactions of 85% and 15% of respondents to the Strongly Agree and Agree, respectively to the statement 21, “I wish my teacher also uses stories to make us understand different topics”. The intensity index of 4.85 showed that students were in strong favour of this statement. Students wanted it to be better if the teacher started presenting stories often by linking them with some topics.

In terms of statement 22, “After these sessions, I can build my personality correctly”, the reactions of students found were 80% in Strongly Agree, 15% in Agree and 5% in undecided section. The intensity index of 4.75 showed a favourable reaction to this statement. This implies that students found stories helpful in building their personality in the correct way.

In reaction to statement 23, “I used many ideas in life that are derived from story sessions”, 70% of respondents were Strongly Agree, 20% Agree and 5% were Undecided. The calculated intensity index was found 4.65, reflecting most of the students’ positive reactions to the statement here. It means that stories were beneficial to students in getting many ideas from them.

There were respondents 75% Strongly Agree and 25% Agree to the statement number 24, “The story sessions were useful in terms of my character development”. The intensity index of 4.75 reflects a strong reaction of students. It means stories were helpful in shaping students’ characters in the right way.

From statement 25, “I will use the values, teaches though stories sessions in my real life”, there were 100% of the respondents Strongly Agreed. The intensity index of 5.00 point showed the high level of positive reaction of students towards the statement here. It can be interpreted that students were likely to use those values in their life learned through the story sessions.

From table no. 4.27 and above analysis and interpretation, it can be said that students’ reaction was so positive towards the story sessions. The Average Intensity Index found to be 4.74, which indicates having strongly positive reaction of students towards the story sessions. In all other items also the calculated intensity index was found to be higher than at least 4 points and most responses lied in Strongly Agree and Agree options, only a few found in Undecided. It means that students from every angle appreciate the Story sessions and the researcher’s effort. It showed that the story sessions and the story model were effective in terms of reactions of students.

Here items were dedicated to the five different fields. The items number 1 to 5 involve the statements like, if they find a story containing some value message and scope for thinking inside it. Item numbers 6 to 10 covered the items that focussed on students’ interest and participation. Students were curious during the experimental period and students showed so much interest in the story sessions. Also, they enjoyed themselves and participated fully throughout the sessions. It means students love the story also love to give feedback on it. The researcher also took into consideration any extra learning that took place due to the story session or new things learnt by students during the story session like self-expression, relation with real life situation, learning new and innovative words, linkage with academic subjects, which dealt with statements of item numbers 11 to 15. Then the reaction scale also included

students' knowledge and understanding about the content presented in story sessions. The statements related to this range from 16 to 20. It can be said that sometime the story content might be difficult to understand but the values and thinking it contained were comprehensive. From item number 21 to 25 the content like applicability and usefulness of learning through story session been included. Here, students have agreed that the sessions were useful also they are going to use them in their day-to-day life. This revealed that students strongly agree towards the statements of applicability of knowledge they gained from story sessions.

The numeric data collected after conducting tests has been analysed and interpreted through different statistical tests that have been discussed in the previous analysis sections. The discussed tests result were analysis of Value Knowledge and Perception Scale, Thinking Scale and Reaction scale, which was part of quantitative analysis. For more detailed and accurate information, after standardized test administration which has been analysed quantitatively, the qualitative analysis is also preferred by the researcher. In the current research the researcher's note which was the Diary of Anecdotes analysed in a descriptive way here.

4.5.0 ANALYSIS AND INTERPRETATION OF DIARY OF ANECDOTE

Apart from the quantitative analysis in terms of values and thinking, the qualitative support was also taken in the study. The researcher has also followed a diary of anecdote where students' noticeable behaviours have been recorded. There was a total of 32 cognitive lesson plans prepared by the researcher. One story allotted to one period or one lesson only. The one lesson plan denoted one story session. Each day after the story session the responses of students of all activities have been recorded through Dairy of Anecdote. The observed changeable behaviours of students and small incidences taken place at school because of the story sessions written in a diary. Here, the researcher was an experimenter, teacher, and a storyteller at the same time. After referring to Patton (1990), the researcher has done qualitative analysis.

Through the anecdote diary, the investigator observed and noted down all the inside classroom activities. The researcher tried to observe the desirable 'values' and 'thinking' that expected though the story sessions. The diary had included some other incidents that were noticed by the experimenter outside the classroom during the experimental period. The information also collected from teachers' staff about students' behaviour. The Dairy consisted of the behaviour of students and incidences during and after story sessions. Some of the behaviour/incidences highlighted here.

- Students learnt to raise hands before asking questions, as they taught about discipline and patience through story sessions (Story of Chanakya and Being Patience). Earlier students were making noises and impatience to ask or respond to the questions.
- There was always a small or big fight between experimental group students and upper standard students but through story sessions many of them understood that fighting can only disturb mental peace. In this way they have learnt Unity, love, and Kindness value.
- There was also discrimination related to castes, that had been explained in many different stories that we need to eradicate all the discrimination (Story of Abdul Kalam, God, or Allah) and focus on clearing own goal. This has enhanced their Universal values, quality of equality and brotherhood.
- Students have correlated various ideas and could establish relationships between them, which noticed throughout the story sessions and in the time of activities also. In this way they have enhanced their critical thinking and imagination power.
- Students also learnt to give reflections on every story. Also, they were able to identify the character role inside a story. They also learnt and derived some character from the story and applied that in their real life (As you think, so you become and Two Precious Diamonds). They also learnt to utilize the values shared through story in real life also.

The researcher was visiting the school every other day to take English and Math class of students. As the researcher was a regular visitor to the school, during the story sessions and its effect after a session or any other day has been noted by the researcher. As per the conceptual framework and methodology of the studies, from the side of values enhancements, there were three types (Personal, Social and Universal Value) of it, and from the side of thinking enhancement there were four types (Critical, Creative, Reflective and Moral Thinking). The following recordings through anecdotal diary have been made.

4.5.1 RECORDED VALUES PRACTICES AMONG STUDENTS

Each story contained some value in it and the story highlighted those values throughout story presentation also through a special activity. The noticed behaviour of students related to values due to stories can be discussed here. As per the statistical analysis results students have enhanced their value knowledge and perception in terms of Personal values.

Personal Values: The personal values included qualities like Honesty, Cleanliness, Punctuality, Self-confidence, and Discipline. As per the information of diary also, students

found to be enhanced their Personal value, as the investigator noticed some behavioural changes related to their personality. In terms of Personal Values, students' behaviour can be discussed here point wise.

- Behaviour like not to cheat in exams and telling truth when asking about any small fighting happened between children, have been noticed. Students learnt to return someone missing items, if found by them as inspired from the story of 'Two Percious Dimond'.
- The behaviour like wearing clean clothes, keeping a hanky with them, cleaning bench after eating have been noticed after seeing story video of "What You Choose-Makes a Big difference".
- Students have asked to prepare a routine of cleanliness activities, that they followed, it is later crosschecked by teacher.
- Students started reaching the classroom on time, they also finished their homework and other activities timely. They motivated from the stories presented to them like- A lazy Boy' and 'Value the Time'.
- Students who were a little shy to ask questions found to be developed confidence in participating in the activities and they did not hesitate to contribute to any work. The stories like "As you think-so you become", "Prince Abhimanyu", "Inner beauty" and "Self-Worth" help students to develop confidence in them.
- Earlier tudents were making noises while answering questions, but they learnt to raise their hands before answering the questions. Students have learnt to be patient, controlling angry emotions, inspired from the stories of 'Chanakya', "Please be Patient" and "A Lazy Boy".

Social Values: Likewise, social values practices among students that are recorded in the diary can be explained here. The social values included the qualities like Teamwork, Unity, Kindness, Co-operation, and Leadership. In the quantitative analysis Students found to be enhanced their social values knowledge but in perception test of it, the result was neutral. Anyway, the investigator noticed some behavioural changes related to Students' social values. This has been discussed here.

- supporting each other inside a team and identifying a good quality while in a team. As they motivated from story of 'Contemporary Story of Rabbit and Tortoise'.

- Students shortened out their previous grudges and made new friends despite looking into castes, colour, disability etc. making friends, accepting differences of other religion and supporting each other by removing jealousness. The stories like 'Bhagwan aur Alla', Self-Worth and "Two headed Bird", "Together we Can" and "Heaven and Hell" had developed a sense of Unity among students.
- As discussed in the classroom, students found to show sympathy to old people and beggars outside the school and helped special children in the classroom. Kindness nature introduced to students through stories conveyed to them, like "The Kindness" and "Please be patient".
- Students started co-operating with other students in sports and games, in handling family issues and other personal issues. Many students enhanced the quality of leadership that was helpful in completing the different activities in the school.

Universal Values: Similarly, values practices in terms of universal values are also noted. Universal values included qualities like Love, Respect, Helpfulness, Equality and Brotherhood. In the statistical test, the results showed that students have enhanced value knowledge, but in case of value perception score, it did not find significant. But some of the behavioural changes noticed related to universal values are noted in the diary which is mentioned here.

- Students have shared their emotions towards their loved ones in some story sessions by sharing some incidents with their brother, sister, mother, father- students realized the value of a family. The stories like "Burnt Roti" and "A Special Tree".
- The other story like "Comparison is the thief of Joy" and Importance of Positive Attitude", have revives a sense of respect for everybody despite of differences among human and animals.
- They have learnt to thank the people who helped them, making others comfortable, helping the needy, not to be ungrateful. as the result of stories like "Together we can" and "Inner Beauty".
- As noted in the diary, students showed respect to the lower caste students by sitting beside them, they stopped teasing friends by their looks inside the classroom.
- As per the noticed behaviour, students have tried a little more to establish good relationships with different stages of students after hearing story like "A Monkey's Sad Story".

- During sessions many students said that they were and will be with their friends in needy time.

These were all noticeable, either for the short or long period but it was due to the effect of stories delivered to the students. No doubt there was some behaviour previously already developed among students, but stories gave them a chance to boost those learnt values. From the above analysis it can be interpreted as that students have enhanced value knowledge and perception about Personal and Social values but not much of the behaviour related to Universal values noticed.

4.5.2 RECORDED BEHAVIOUR OF STUDENTS RELATED TO THINKING

There were four types of thinking: Critical, Creative, Reflective and Moral, that were highlighted by the researcher in this study. Under those different components of thinking were also included. Every story contained a particular component of thinking in it for which a special activity also had been planned by the researcher. During the storytelling students have been given opportunity to think and after the storytelling again activities carried out by the investigator to enhance their thinking ability. This part of analysis can be explained as below.

Critical Thinking: This component of critical thinking included Analysing, Inferring, Observation, Decision-making and Problem solving. In the quantitative analysis the test did not find significant. But as noted in the anecdotal diary some of the behaviour of students showed that they have enhanced some of these abilities which have been observed by the investigator through the activities after or during storytelling. The following behaviours related to critical thinking have been observed.

- During storytelling students have been asked to think about the next situation in the story, where they were able analyse the situation and could guess correctly.
- After storytelling, some of the evaluation task results showed that students have inferred many ideas and applied that in daily life, ideas from stories about what options are available in different situations of life.
- It is noticed during the story session that observing behaviour of studnets improving day by day. They were to explain about the pictures and situation inside a story.
- Students learnt to take the right decision while in a problematic situation as described in the story like “What you Choose make a Big Difference” and As You Think-so You Become”.

- Inside stories students have asked to identify the problem, where they could relate the problem with their life and understand many solution techniques. The activities like odd man out and matching items, helped students in the problem solving.

Creative Thinking: Creative thinking includes Fluency, Flexibility, Elaboration, Originality, and Integration. In the quantitative analysis, the result of creative thinking score was not significant. But it can be cross-checked with qualitative data that was recorded through the Anecdotal Diary. The investigator noticed the following behaviour of students related to thinking ability.

- Students gained fluency through the activities of story, picture making, drawing, and making arts out of clay and paper also made students fluent.
- By learning about different characters from stories, students realized how to deal with the different situation with different techniques. They have used flexible ideas for drawing the pictures they have imagined and recreating situations and stories from them.
- Students elaborated things through the activities of the story, like completing sentences, explanation of words, and describing about birds and animals.
- Students have done some creative tasks of creating something original from their own ideas related to story session, by this they learnt to use these types of idea in real life also.
- Students tried to integrate different ideas like linking one story with another, linking a story with their history lesson, also completing stories etc.

Reflective Thinking: The behaviour noticed in terms reflective thinking can also be present here. Systematic, Judgmental, Logical, Self-assessment and Using Insight come under this type. In the statistical analysis part, the test was found to be significant, where it showed students have enhanced their reflective thinking ability, which was the results of stories presented to them. In order to cross-check the result, the anecdotal report can be referred. In terms of reflective thinking the following behaviours have been observed by the investigator.

- Students' behaviour reflected from stories as they followed a systematic pattern to complete a work in some activities provided to them at the end of the story session.
- Students could differentiate between good and bad, as a story "Two farmers in the Heaven", taught to them.

- The planning goes wrong, if we don't use logic, students understood this from the story of 'Two Beggars'. Not to rely on fake information and our own rigid thought as the story "Inner Beauty" taught to them.
- Students were able to know their strengths and weaknesses, as they were able to know about themselves through different stories.
- Students have assumed the situation in between of stories correctly most of the time.
- In the time of performing activities, students independently completed many activities like making animals from clays and paper.

Moral Thinking: Moral thinking basically includes applying rules to life and it gives a standard of life, following guidelines, knowing right and wrong, reasoning ethically and taking moral action. As every story had some moral lesson in it. The statistical data showed that students have enhanced their moral thinking because of the story session. Here in the recorded Diary also, students found to have experienced much moral information during story sessions, some of their behaviour was highlighted by the researcher below here.

- Many students have made a daily routine of cleanliness and started following that.
- The guidelines, like not polluting the pond, throwing waste inside a dustbin, wearing clean clothes, cutting nails etc. have been discussed between students during the story session, as they seen from the story video of "what You Choose makes a Big difference".
- In the beginning many students were using slang and disrespecting seniors, also were not taking seriously to Junior but through story sessions they have realized that they need to enjoy the happy moment in life without disrespecting anyone.
- Students taught not to hurt anyone emotions specially the loved one through the story "Burnt Roti" and to have empathy towards others through "Importance of positive Attitude" and "Story of Abdul Kalam".
- They learnt by valuing the time and not to disrespect anyone as they learnt from story sessions to follow ethical principles. Moral actions in some students also observed may be inspired from the story like "Search for the Priest" and "Two Precious Dimond"

The above analyses were noticeable behaviour of students as recorded in the diary of anecdote. There was not much noticeable behaviour related to thinking found outside of classroom, this was the data recorded during the conduction of activities only. Where it is noticed that the

thinking of students has been enhanced to a little higher than before. Students were taught about those concepts which were never or very little introduced to them. This was the result of little effort from the part of the researcher, that gave some positive results. It means that storytelling could be the best way for enhancing students' values and thinking. Storytelling could be traditional, but much loved by everyone, especially children. It stressed different domains of children where values and thinking are included. The qualitative data was in favour of values and thinking enhancement through story.

4.6.0 CONCLUSION

The above-described chapter dealt with data analysis and interpretation of collected data. The quantitative and qualitative analysis gave a clear idea about the results of the study here. The analysis and interpretation based on the tools and hypotheses researcher had formulated. There were five important tools used by the researcher here: Diary of Anecdote, Value Knowledge Test, value Perception Scale, Thinking Scale and Reaction scale. Here the researcher considered both quantitative followed by interpretation based on the collected information or data. The data recorded through Diary have been qualitative analysis considering some points. The analysis contained the information of three main things that is in terms of Values, in terms of Thinking and Reactions of the student. In the beginning of it, a figure (4.1) was provided to understand the sequence of current analysis, because it was vast that includes both numeric and phrases analysis. Finally, a systematic and serial analysis has been made by the researcher here. The next chapter can provide a reflection of the study that includes a summary of the study with major findings and its discussion.