

## CHAPTER IV- DATA ANALYSIS AND INTERPRETATION OF DATA

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## CHAPTER IV- DATA ANALYSIS AND INTERPRETATION OF DATA

### 4.01 Introduction

Data analysis is defined as, "Processing the information or data that has been gathered in order to draw conclusion." It is the process of systematically applying statistical and logical techniques to describe. Summarize and compare data. Data interpretation is results, trends etc., shown by collected data.

It is very important for a researcher to properly analyze and interpret the data which would lead the investigator to achieve the objectives which were intended to start particular work.

In the previous chapter a complete account of the approach to collect the required data for the present study was presented. The present chapter is devoted to the analysis and interpretation of the collected data according to the objectives and the hypothesis of the present study formulated in the chapter I.

The major objectives of the present study as described in the first chapter are the development of CAI and studying its effectiveness in terms of students test scores in the achievement test and their personal response about the developed CAI in the reaction scale.

To study the effectiveness of CAI, a scholastic achievement test was administered as post-test as the design was post-test only control group design. In the present chapter, collected data has been analysed to test the null hypothesis employing statistical techniques.

### 4.02 Procedure for Matched Groups for Conducting the Study

Post-test data in initial and final Try-out were analyzed using ANOVA. (Wikipedia, Analysis of variance, 2013) In statistics, **analysis of variance (ANOVA)** is a collection of statistical models, and their associated procedures, in which the observed variance in a particular variable is partitioned into components attributable to different sources of variation. In its simplest form, ANOVA provides a statistical test of whether or not the means of several groups are all equal, and therefore generalizes *t*-test to more than two groups. Doing multiple two-sample *t*-tests would result in an increased chance of committing a type I error. For this reason, ANOVAs are useful in comparing two, three, or more means.

In order to use ANOVA the following conditions or assumptions should be satisfied.

- i. The data are randomly sampled



- ii. The variances of each sample are assumed equal
- iii. The residuals are normally distributed

For condition (i) investigator selected three groups using lottery method (initial and final Try-out). Scores of students are normally distributed for condition (iii). For condition (ii) equivalent groups were formed using mean and standard deviation. Three matched groups were formed (for ANOVA purpose). The groups were matched on the basis of mean and standard deviation.

The following table shows the formation of equivalent groups in initial Try-out, groups were formed using standard seven marks.

**Table 4.1 Formation of Equivalent Groups using VII Standard Marks for the purpose of AVONA for Initial Try-out**

SEC A: Experimental Group B		SEC B: Experimental Group A		SEC C: Control Group	
1	35	1	35	1	37
2	35	2	35	2	39
3	35	3	35	3	39
4	38	4	35	4	35
5	40	5	40	5	37
6	45	6	40	6	46
7	52	7	52	7	52
8	56	8	59	8	56
9	76	9	77	9	54
10	55	10	51	10	57
11	64	11	69	11	57
12	61	12	78	12	74
13	93	13	79	13	99
Sum	688	Sum	685	Sum	682
Average	52.92	Average	52.69	Average	52.46
SD	18.27321	SD	17.81097	SD	17.96578
Standard Error	5.07	Standard Error	4.94	Standard Error	4.98

The following table shows the formation of equivalent groups in final Try-out, groups were formed using mathematics achievement test prepared by the investigator; obtained marks are converted into equivalent percentage.

**Table 4.2: Formation of Equivalent Group using Mathematics Achievement Test Marks for the purpose of AVONA for Final Try-out**

SEC A: Experimental Group B		SEC B: Experimental Group A		SEC C: Control Group	
1	60.00	1	60.00	1	60.00
2	66.67	2	66.67	2	66.67
3	66.67	3	66.67	3	66.67
4	66.67	4	66.67	4	66.67
5	66.67	5	66.67	5	66.67
6	73.33	6	80.00	6	73.33
7	80.00	7	80.00	7	80.00
8	86.67	8	86.67	8	80.00
9	86.67	9	86.67	9	86.67
10	86.67	10	86.67	10	86.67
11	86.67	11	86.67	11	86.67
12	86.67	12	86.67	12	86.67
13	93.33	13	93.33	13	93.33
14	93.33	14	93.33	14	93.33
15	93.33	15	93.33	15	93.33
16	93.33	16	93.33	16	93.33
17	93.33	17	93.33	17	93.33
18	93.33	18	93.33	18	93.33
19	100.00	19	100.00	19	100.00
20	100.00	20	100.00	20	100.00
Sum	1673.33	Sum	1680	Sum	1666.67
Average	83.67	Average	84	Average	83.33
SD	12.51432	SD	12.31174	SD	12.52

#### 4.03 Data Collection for the study

Data was collected in the following stages in the initial and final Try-out; the collected data in the form of posttest is below.

The following table shows the Post test score of the students in the initial Try-out in percentage.



**Table 4.3: Post-test score of the students (Marks out of 100) in Initial Try-out**

Student No.	Control Group	Experimental Group A	Experimental Group B
1	40.00	26.67	93.33
2	46.67	33.33	80.00
3	53.33	33.33	66.67
4	53.33	40.00	73.33
5	60.00	40.00	93.33
6	40.00	40.00	73.33
7	60.00	20.00	60.00
8	33.33	46.67	73.33
9	60.00	20.00	60.00
10	33.33	40.00	46.67
11	40.00	40.00	46.67
12	53.33	46.67	60.00
13	26.67	46.67	80.00

The following table shows the Post test score of the students in the final try out in percentage.

**Table 4.4: Post-test score of the students (Marks out of 100) for Final Try-out**

Student No.	Control Group	Experimental Group A	Experimental Group B
1	35	40	40
2	86.67	45	53.33
3	66.67	73.33	86.67
4	93.33	80	80
5	66.67	93.33	93.33
6	35	86.67	100
7	45	86.67	100
8	40	86.67	100
9	80	93.33	100
10	33.33	86.67	100
11	86.67	80	100
12	93.33	86.67	86.67
13	45	86.67	100
14	80	50	40
15	86.67	80	73.33
16	93.33	73.33	100
17	40	50	80
18	80	66.67	86.67
19	93.33	66.67	93.33
20	86.67	86.67	100

#### 4.04 Analysis of Data using ANOVA for Initial Try-out

ANOVA was calculated using the online calculator (Kirkman, 1996). The following table shows the Mean, Variance, Standard Deviation and Standard Error of the post test score of the initial try-out.

**Table 4.5: Data Summary for Initial Try-out**

Samples	Control	Exp A	Exp B	Total
N	13	13	13	39
$\Sigma X$	599.99	473.34	906.66	1979.99
Mean	46.1531	36.4108	69.7431	50.769
$\Sigma X^2$	29243.4223	18267.3334	65953.9112	113464.6669
Variance	129.3365	86.055	226.7211	340.5949
SD	11.3726	9.2766	15.0573	18.4552
Standard Error	3.1542	2.5729	4.1761	2.9552

The following table shows the calculation of ANOVA for initial try-out.

**Table 4.6: ANOVA Summary for Initial Try-out**

Source	SS	df	MS	F	P
Treatment [between groups]	7637.2547	2	3818.6274	23.22	<.0001
Error	3947.1602	24	164.465		
Subjects	1358.1904	12			
Total	12942.6054	38			

From the above table it clear that there is significant difference between the groups at .05 level of significance. But between which groups there is significant difference is not known using the table. In order to know this, investigator further analysed the data using post hoc test, she used Tukey HSD Test for further analysis.

(Abdi & Williams, 2010) When an analysis of variance (ANOVA) gives a significant result, this indicates that at least one group differs from the other groups. Yet, the omnibus test does not inform on the pattern of differences between the means. In order to analyse the pattern of difference between means, the ANOVA is often followed by specific comparisons, and the most commonly used involves comparing two means (the so called “pairwise comparisons”). An easy and frequently used pairwise comparison technique was developed by Tukey under the name of the honestly significant difference (HSD) test.



The following is the graphical representation of the differences between the means from the result of ANOVA for initial try-out.

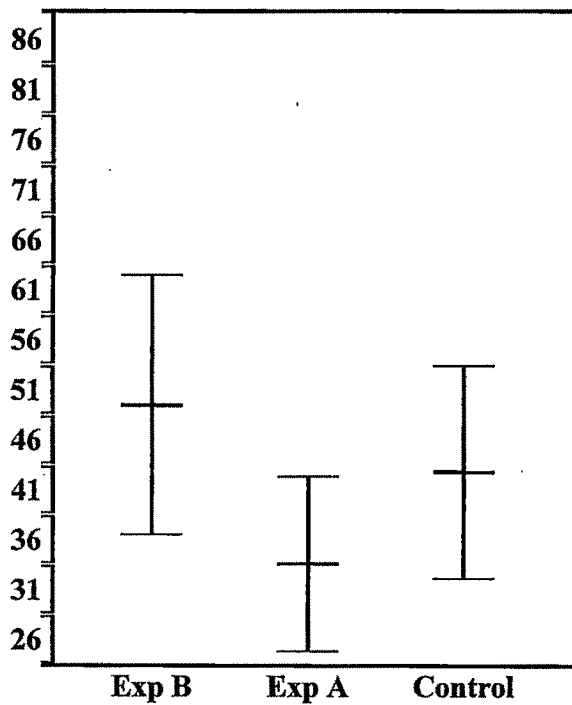


Figure 4.1 Graphical Representation of ANOVA Result of Final Try-out

Control Group:

Mean = 46.15

Standard Deviation = 11.4

High = 60.00 and Low = 26.67, Median = 46.67

Average Absolute Deviation from Median = 9.74

Experimental Group A:

Mean = 36.41

Standard Deviation = 9.28

High = 46.67 and Low = 20.00, Median = 40.00

Average Absolute Deviation from Median = 6.67

Experimental Group B:

Mean = 69.74

Standard Deviation = 15.1

High = 93.33 and Low = 46.67, Median = 73.33

Average Absolute Deviation from Median = 11.8.

The following table gives the result of Tukey HSD test for initial try-out.

**Table 4.7 Result of Tukey HSD Test for Initial Try-out**

HSD[.05]=12.57; HSD[.01]=16.19 M1 vs M2 $P < .01$ M1 vs M3 $P < .01$ M2 vs M3 non-significant	M1 = mean of Exp B M2 = mean of Exp A M3 = mean of Control Group
	HSD = the absolute [unsigned] difference between any two sample means required for significance at the designated level. HSD[.05] for the .05 level; HSD[.01] for the .01 level.

#### **4.05 Findings of the ANOVA Result for Initial Try-out**

Initial try out using inferential statistics ANOVA at .05 level of significance it was found that there was significant difference between the mean achievement score of Experimental Group A, Experimental Group B and the Control Group. Further using Tukey HSD Test it was found that

- i. There was no significant difference between the mean achievement score of Experimental Group A (only CAI) and the Control Group (Conventional Method).
- ii. There was significant difference between the mean achievement score of Experimental Group B (CAI with simultaneous discussion) and the Control Group (Conventional Method)
- iii. There was significant difference between the mean achievement score of Experimental Group A (only CAI) and the Experimental Group B (CAI with simultaneous discussion)

#### **4.06 Analysis of Data using ANOVA for Final Try-out**

ANOVA was calculated using the online calculator (Kirkman, 1996). The following table shows the Mean, Variance, Standard Deviation and Standard Error of the post test score of the final try-out.



**Table 4.8 Data Summary for Final Try-out**

Samples	Control	Exp A	Exp B	Total
N	20	20	20	60
$\Sigma X$	1366.67	1498.35	1713.33	4578.35
Mean	68.3335	74.9175	85.6665	76.3058
$\Sigma X^2$	103789.3779	117472.1557	154177.4223	375438.9559
Variance	547.3702	274.7116	389.602	442.1041
SD	23.3959	16.5744	19.7383	21.0263
Standard Error	5.2315	3.7062	4.4136	2.7145

The following table shows the calculation of ANOVA for final try-out.

**Table 4.9 ANOVA Summary for Final Try-out**

Source	SS	df	MS	F	P
Treatment [between groups]	3062.153	2	1531.0765	4.73	0.014644
Error	12303.0214	38	323.7637		
Subjects	10718.9695	19			
Total	26084.1439	59			

From the above table it clear that there is significant difference between the groups at .05 level of significance. But between which groups there is significant difference is not known using the above table. In order to know this, investigator further analysed the data using post hoc test, she used Tukey HSD Test for further analysis.

The following is the graphical representation of the differences between the means from the result of ANOVA for final try-out.

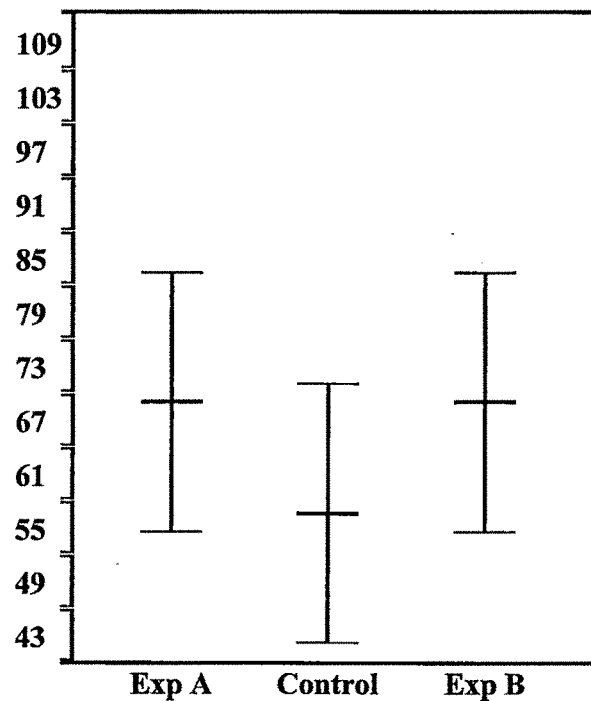


Figure 4.2 Graphical Representation of ANOVA Result of Final Try-out

Control Group:

Mean = 68.33

Standard Deviation = 23.4

High = 93.33 and Low = 33.33, Median = 80.00

Average Absolute Deviation from Median = 19.7

Experimental Group A:

Mean = 74.92

Standard Deviation = 16.6

High = 93.33 and Low = 40.00, Median = 80.00

Average Absolute Deviation from Median = 12.4

Experimental Group B:

Mean = 85.67

Standard Deviation = 19.7

High = 100 and Low = 40.00, Median = 93.33

Average Absolute Deviation from Median = 13.7



The following table gives the result of Tukey HSD test for final try-out.

**Table 4.10: Result of Tukey HSD Test for Final Try-out**

HSD[.05]=13.88; HSD[.01]=17.65 M1 vs M2 non-significant M1 vs M3 non-significant M2 vs M3 P<.05	M1 = mean of Exp A M2 = mean of Control Group M3= Mean of Exp B
	HSD = the absolute [unsigned] difference between any two sample means required for significance at the designated level. HSD[.05] for the .05 level; HSD[.01] for the .01 level.

#### 4.07 Findings of the ANOVA Result for Final Try-out

Final try out using inferential statistics ANOVA at .05 level of significance it was found that there was significant difference between the mean achievement score of Experimental Group A, Experimental Group B and the Control Group. Further using Tukey HSD Test it was found that

- i. There was no significant difference between the mean achievement score of Experimental Group A (only CAI) and the Control Group (Conventional Method).
- ii. There was significant difference between the mean achievement score of Experimental Group B (CAI with simultaneous discussion) and the Control Group (Conventional Method)
- iii. There was no significant difference between the mean achievement score of Experimental Group A (only CAI) and the Experimental Group B (CAI with simultaneous discussion).

#### 4.08 Statement wise Analysis of Reaction Scale for Initial Try-out

Positive polarity statements are given points as follows

**Table 4.11 Points for Positive polarity statements**

Response	Strongly Agree	Agree	Not Decided	Disagree	Strongly Disagree
Points	5	4	3	2	1

Negative polarity statements are given points as follows

**Table 4.12 Points for Negative polarity statements**

Response	Strongly Disagree	Disagree	Not Decided	Agree	Strongly Agree
Points	5	4	3	2	1

Level of Significance is .05 for analysis using Chi Square for all statements. Chi Square was calculated using online calculator (Tools for science).

(Tools for science)The Chi Square statistic compares the tallies or counts of categorical responses between two (or more) independent groups. Chi-square is a statistical test commonly used to compare observed data with data we would expect to obtain according to a specific hypothesis. Then we might want to know about the "goodness to fit" between the observed and expected. Were the deviations (differences between observed and expected) the result of chance, or were they due to other factors. How much deviation can occur before you, the investigator, must conclude that something other than chance is at work, causing the observed to differ from the expected? The chi-square test is always testing what scientists call the **null hypothesis**, which states that there is no significant difference between the expected and observed result.

Most common application for chi-squared is in comparing observed counts of particular cases to the expected counts.

We can calculate  $\chi^2$ :

$$\begin{aligned} \chi^2 &= \frac{(x_1 - E_1)^2}{E_1} + \frac{(x_2 - E_2)^2}{E_2} + \dots + \frac{(x_k - E_k)^2}{E_k} \\ &= \sum_{i=1}^k \frac{(x_i - E_i)^2}{E_i} \end{aligned}$$

Data were analysed through the statistical technique  $\chi^2$ .

Note: Exp Gp denote Experimental Group

**Statement 1:** I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.

Polarity: Positive

**Experimental Group A : Responses of the students in percentage**

**Table 4.13 Responses of Exp Gp A students in percentage for statement 1 for Initial Try-out**

Points	Exp Gp A
5	25.93
4	40.74
3	11.11
2	22.22
1	0.00

25.93% of the students strongly agree with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

40.74% of the students agree with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

11.11% of the students not decided with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

22.22% of the students disagree with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

0.00% of the students strongly disagree with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.14 Responses of Exp Gp B students in percentage for statement 1 for Initial Try-out**

Points	Exp Gp B
5	41.67
4	37.50
3	4.17
2	16.67
1	0.00

41.67% of the students strongly agree with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

37.50% of the students agree with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

4.17% of the students not decided with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

16.67% of the students disagree with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

0.00% of the students strongly disagree with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

### Graphical Representation of analysis of statement 1 in Percentage

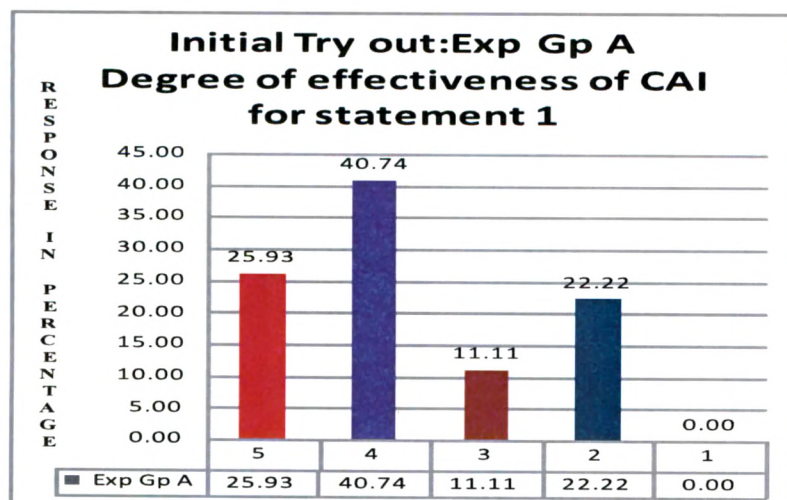


Figure 4.3 Graphical Representation of analysis of statement 1 in Percentage for Exp Gp A for Initial Try-out

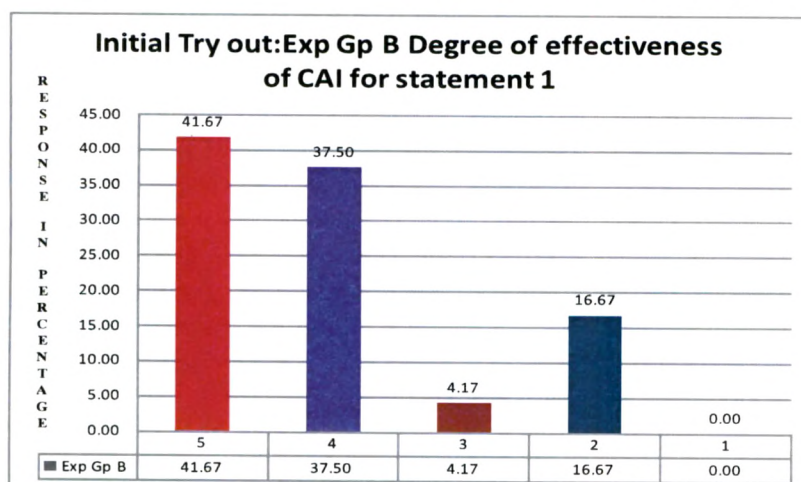


Figure 4.4 Graphical Representation of analysis of statement 1 in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.15 Chi Square Table for Exp Gp A for Statement 1 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	7	5.4
4	11	5.4
3	3	5.4
2	6	5.4
1	0	5.4

Expected Frequency = Sum of observed frequencies/5

chi-square = 12.8

degrees of freedom = 4

probability = 0.012

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures".

### **Experimental Group B**

**Table 4.16 Chi Square Table for Exp Gp B for Statement 1 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	10	4.8
4	9	4.8
3	1	4.8
2	4	4.8
1	0	4.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 17.2

degrees of freedom = 4

probability = 0.002

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures".

**Statement 2:** I like illustrations given in the slides, which actually made me learn the lesson.

Polarity: Positive

**Experimental Group A : Responses of the students in percentage**

**Table 4.17 Responses of Exp Gp A students in percentage for statement 2 for Initial Try-out**

Points	Exp Gp A
5	23.08
4	73.08
3	0.00
2	3.85
1	0.00

23.08% of the students strongly agree with the statement "I like illustrations given in the slides, which actually made me learn the lesson".

73.08% of the students agree with the statement "I like illustrations given in the slides, which actually made me learn the lesson".

0.00% of the students not decided with the statement "I like illustrations given in the slides, which actually made me learn the lesson".

3.85% of the students disagree with the statement "I like illustrations given in the slides, which actually made me learn the lesson".

0.00% of the students strongly disagree with the statement "I like illustrations given in the slides, which actually made me learn the lesson".

**Experimental Group B: Responses of the students in percentage**

**Table 4.18 Responses of Exp Gp B students in percentage for statement 2 for Initial Try-out**

Points	Exp Gp B
5	54.17
4	20.83
3	8.33
2	12.50
1	4.17

54.17% of the students strongly agree with the statement "I like illustrations given in the slides, which actually made me learn the lesson".

20.83% of the students agree with the statement "I like illustrations given in the slides, which actually made me learn the lesson".

8.33% of the students not decided with the statement “I like illustrations given in the slides, which actually made me learn the lesson”.

12.50% of the students disagree with the statement “I like illustrations given in the slides, which actually made me learn the lesson”.

4.17% of the students strongly disagree with the statement “I like illustrations given in the slides, which actually made me learn the lesson”.

#### Graphical Representation of analysis of statement 2 in Percentage

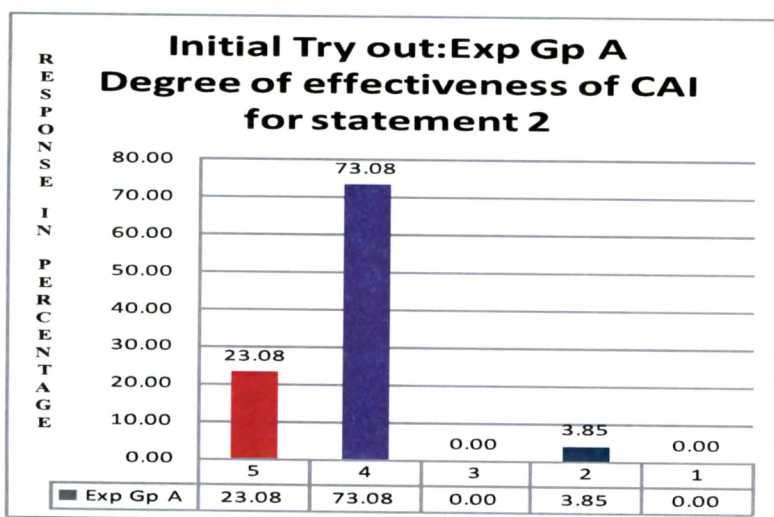


Figure 4.5 Graphical Representation of analysis of statement 2 in Percentage for Exp Gp A for Initial Try-out

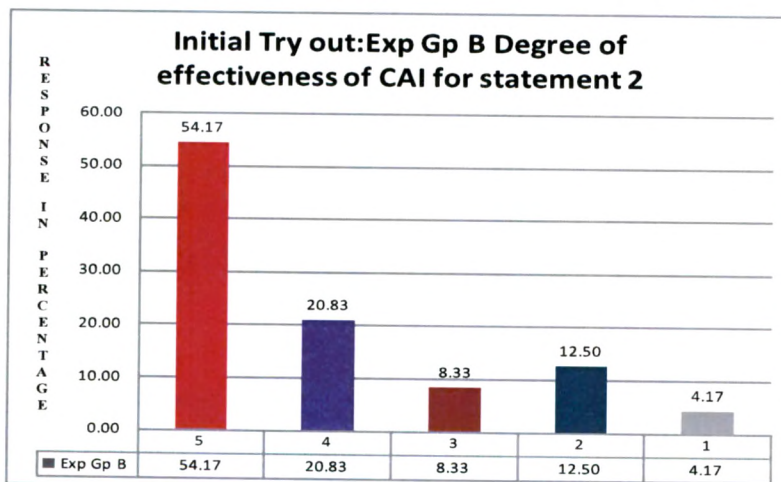


Figure 4.6 Graphical Representation of analysis of statement 2 in Percentage for Exp Gp B for Initial Try-out

#### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale



### Experimental Group A

**Table 4.19 Chi Square Table for Exp Gp A for Statement 2 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	6	5.2
4	19	5.2
3	0	5.2
2	1	5.2
1	0	5.2

chi-square = 50.5

degrees of freedom = 4

probability = 0.000

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "I like illustrations given in the slides, which actually made me learn the lesson."

### Experimental Group B

**Table 4.20 Chi Square Table for Exp Gp B for Statement 2 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	13	4.8
4	5	4.8
3	2	4.8
2	3	4.8
1	1	4.8

chi-square = 19.3

degrees of freedom = 4

probability = 0.001

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "I like illustrations given in the slides, which actually made me learn the lesson."

**Statement 3:** Illustrations didn't help me to relate what we learned in mathematics to real life situation.

Polarity: Negative

**Experimental Group A : Responses of the students in percentage**

**Table 4.21 Responses of Exp Gp A students in percentage for statement 3 for Initial Try-out**

Points	Exp Gp A
5	7.14
4	57.14
3	25.00
2	3.57
1	7.14

7.14% of the students strongly disagree with the statement "Illustrations didn't help me to relate what we learned in mathematics to real life situation."

57.14% of the students disagree with the statement "Illustrations didn't help me to relate what we learned in mathematics to real life situation."

25.00% of the students not decided with the statement "Illustrations didn't help me to relate what we learned in mathematics to real life situation."

3.57% of the students agree with the statement "Illustrations didn't help me to relate what we learned in mathematics to real life situation."

7.14% of the students strongly agree with the statement "Illustrations didn't help me to relate what we learned in mathematics to real life situation."

**Experimental Group B: Responses of the students in percentage**

**Table 4.22 Responses of Exp Gp B students in percentage for statement 3 for Initial Try-out**

Points	Exp Gp B
5	16.67
4	12.50
3	50.00
2	12.50
1	8.33

16.67% of the students strongly disagree with the statement "Illustrations didn't help me to relate what we learned in mathematics to real life situation."

12.50% of the students disagree with the statement "Illustrations didn't help me to relate what we learned in mathematics to real life situation."

50.00% of the students not decided with the statement “Illustrations didn’t help me to relate what we learned in mathematics to real life situation.”

12.50% of the students agree with the statement “Illustrations didn’t help me to relate what we learned in mathematics to real life situation.”

8.33% of the students strongly agree with the statement “Illustrations didn’t help me to relate what we learned in mathematics to real life situation.”

**Graphical Representation of analysis of statement 3 in Percentage**

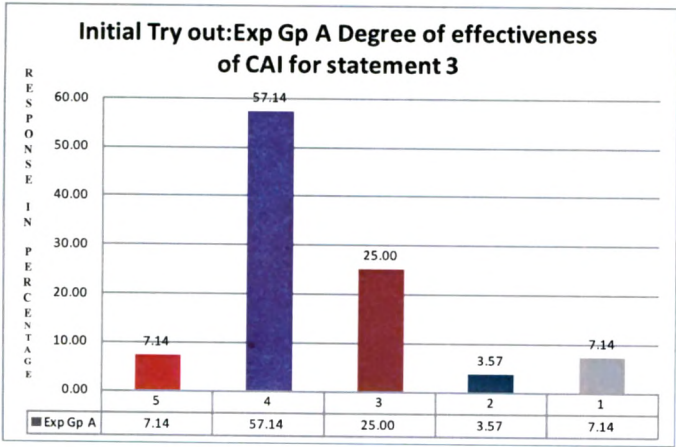


Figure 4.7 Graphical Representation of analysis of statement 3 in Percentage for Exp Gp A for Initial Try-out

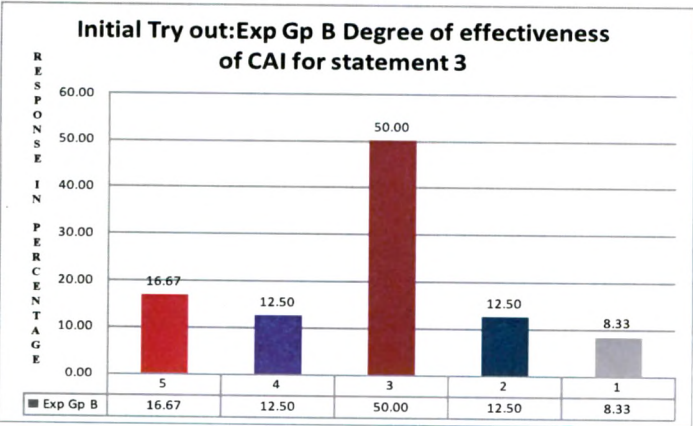


Figure 4.8 Graphical Representation of analysis of statement 3 in Percentage for Exp Gp B for Initial Try-out

**Data Analysis using Chi Square**

$H_0$  Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

**Experimental Group A**

**Table 4.23 Chi Square Table for Exp Gp A for Statement 3 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	2	5.6
4	16	5.6
3	7	5.6
2	1	5.6
1	2	5.6

chi-square = 28.1

degrees of freedom = 4

probability = 0.000

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on disagree therefore most of the students disagree with the statement “Illustrations didn’t help me to relate what we learned in mathematics to real life situation.”

**Experimental Group B**

**Table 4.24 Chi Square Table for Exp Gp B for Statement 3 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	4	4.8
4	3	4.8
3	12	4.8
2	3	4.8
1	2	4.8

chi-square = 13.9

degrees of freedom = 4

probability = 0.008

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on not decided therefore most of the students not decided with the statement “Illustrations didn’t help me to relate what we learned in mathematics to real life situation.”

**Statement 4:** CAI is effective way of presentation because there is little stress in learning situation.

Polarity: Positive

**Experimental Group A : Responses of the students in percentage**

**Table 4.25 Responses of Exp Gp A students in percentage for statement 4 for Initial Try-out**

Points	Exp Gp A
5	11.11
4	22.22
3	44.44
2	18.52
1	3.70

11.11% of the students strongly agree with the statement “CAI is effective way of presentation because there is little stress in learning situation.”

22.22% of the students agree with the statement “CAI is effective way of presentation because there is little stress in learning situation.”

44.44% of the students not decided with the statement “CAI is effective way of presentation because there is little stress in learning situation.”

18.52% of the students disagree with the statement “CAI is effective way of presentation because there is little stress in learning situation.”

3.70% of the students strongly disagree with the statement “CAI is effective way of presentation because there is little stress in learning situation.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.26 Responses of Exp Gp B students in percentage for statement 4 for Initial Try-out**

Points	Exp Gp B
5	16.67
4	8.33
3	58.33
2	12.50
1	4.17

16.67% of the students strongly agree with the statement “CAI is effective way of presentation because there is little stress in learning situation.”

8.33% of the students agree with the statement “CAI is effective way of presentation because there is little stress in learning situation.”

58.33% of the students not decided with the statement “CAI is effective way of presentation because there is little stress in learning situation.”

12.50% of the students disagree with the statement “CAI is effective way of presentation because there is little stress in learning situation.”

4.17% of the students strongly disagree with the statement “CAI is effective way of presentation because there is little stress in learning situation.”

**Graphical Representation of analysis of statement 4 in Percentage**

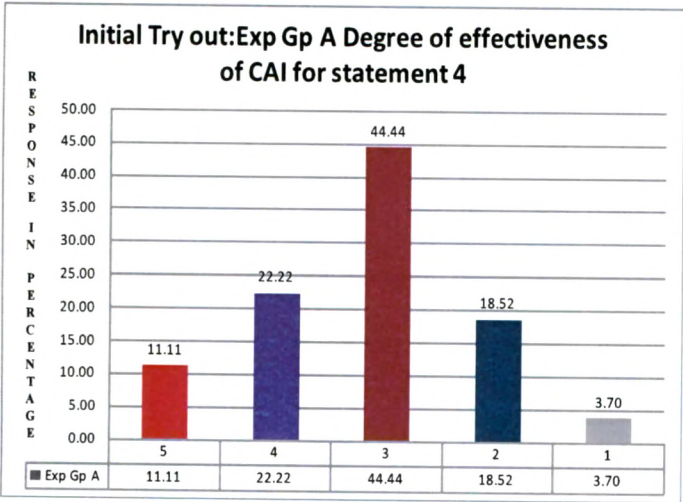


Figure 4.9 Graphical Representation of analysis of statement 4 in Percentage for Exp Gp A for Initial Try-out

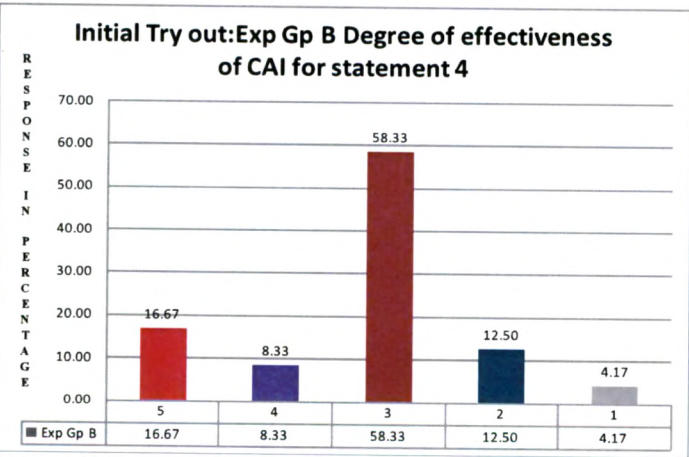


Figure 4.10 Graphical Representation of analysis of statement 4 in Percentage for Exp Gp B for Initial Try-out

**Data Analysis using Chi Square**

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

**Experimental Group A**

**Table 4.27 Chi Square Table for Exp Gp A for Statement 4 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	3	5.4
4	6	5.4
3	12	5.4
2	5	5.4
1	1	5.4

chi-square = 12.8

degrees of freedom = 4

probability = 0.012

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on not decided therefore most of the students not decided with the statement “CAI is effective way of presentation because there is little stress in learning situation.”

**Experimental Group B**

**Table 4.28 Chi Square Table for Exp Gp B for Statement 4 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	4	4.8
4	2	4.8
3	14	4.8
2	3	4.8
1	1	4.8

chi-square = 23.1

degrees of freedom = 4

probability = 0.000

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on not decided therefore most of the students not decided with the statement “CAI is effective way of presentation because there is little stress in learning situation”.



**Statement 5:** I can learn with my own speed.

Polarity: Positive

**Experimental Group A : Responses of the students in percentage**

**Table 4.29 Responses of Exp Gp A students in percentage for statement 5 for Initial Try-out**

Points	Exp Gp A
5	46.15
4	34.62
3	7.69
2	7.69
1	3.85

46.15% of the students strongly agree with the statement “I can learn with my own speed.”

34.62% of the students agree with the statement “I can learn with my own speed.”

7.69% of the students not decided with the statement “I can learn with my own speed.”

7.69% of the students disagree with the statement “I can learn with my own speed.”

3.85% of the students strongly disagree with the statement “I can learn with my own speed.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.30 Responses of Exp Gp B students in percentage for statement 5 for Initial Try-out**

Points	Exp Gp B
5	58.33
4	29.17
3	8.33
2	0.00
1	4.17

58.33% of the students strongly agree with the statement “I can learn with my own speed.”

29.17% of the students agree with the statement “I can learn with my own speed.”

8.33% of the students not decided with the statement “I can learn with my own speed.”

0.00% of the students disagree with the statement “I can learn with my own speed.”

4.17% of the students strongly disagree with the statement “I can learn with my own speed.”

Graphical Representation of analysis of statement 5 in Percentage

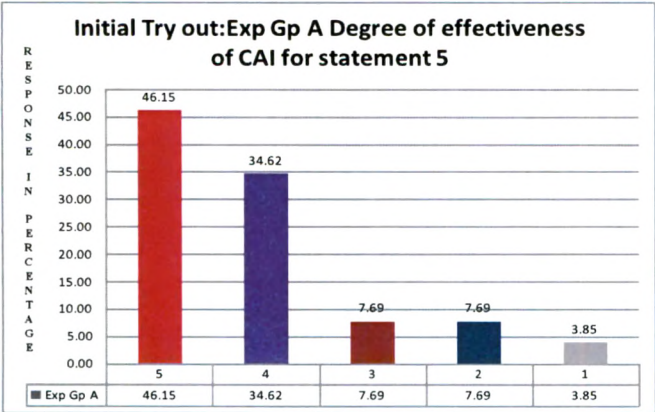


Figure 4.11 Graphical Representation of analysis of statement 5 in Percentage for Exp Gp A for Initial Try-out

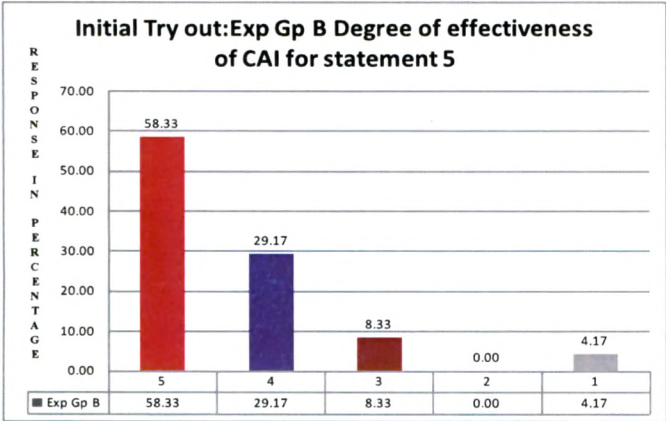


Figure 4.12 Graphical Representation of analysis of statement 5 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.31 Chi Square Table for Exp Gp A for Statement 5 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	12	5.2
4	9	5.2
3	2	5.2
2	2	5.2
1	1	5.2

chi-square = 19.0

degrees of freedom = 4

probability = 0.001

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement “I can learn with my own speed.”

**Experimental Group B**

**Table 4.32 Chi Square Table for Exp Gp B for Statement 5 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	14	4.8
4	7	4.8
3	2	4.8
2	0	4.8
1	1	4.8

chi-square = 28.1

degrees of freedom = 4

probability = 0.000

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore students strongly agree with the statement “I can learn with my own speed”.

**Statement 6:** I can immediately test myself because there is lot of practice exercise.

Polarity: Positive

**Experimental Group A : Responses of the students in percentage**

**Table 4.33 Responses of Exp Gp A students in percentage for statement 6 for Initial Try-out**

Points	Exp Gp A
5	22.22
4	37.04
3	37.04
2	3.70
1	0.00

22.22% of the students strongly agree with the statement “I can immediately test myself because there is lot of practice exercise.”

37.04% of the students agree with the statement “I can immediately test myself because there is lot of practice exercise.”

37.04% of the students not decided with the statement “I can immediately test myself because there is lot of practice exercise.”

3.70% of the students disagree with the statement “I can immediately test myself because there is lot of practice exercise.”

0.00% of the students strongly disagree with the statement “I can immediately test myself because there is lot of practice exercise.”

### **Experimental Group B: Responses of the students in percentage**

**Table 4.34 Responses of Exp Gp B students in percentage for statement 6 for Initial Try-out**

Points	Exp Gp B
5	25.00
4	41.67
3	25.00
2	8.33
1	0.00

25.00% of the students strongly agree with the statement “I can immediately test myself because there is lot of practice exercise.”

41.67% of the students agree with the statement “I can immediately test myself because there is lot of practice exercise.”

25.00% of the students not decided with the statement “I can immediately test myself because there is lot of practice exercise.”

8.33% of the students disagree with the statement “I can immediately test myself because there is lot of practice exercise.”

0.00% of the students strongly disagree with the statement “I can immediately test myself because there is lot of practice exercise.”

Graphical Representation of analysis of statement 6 in Percentage

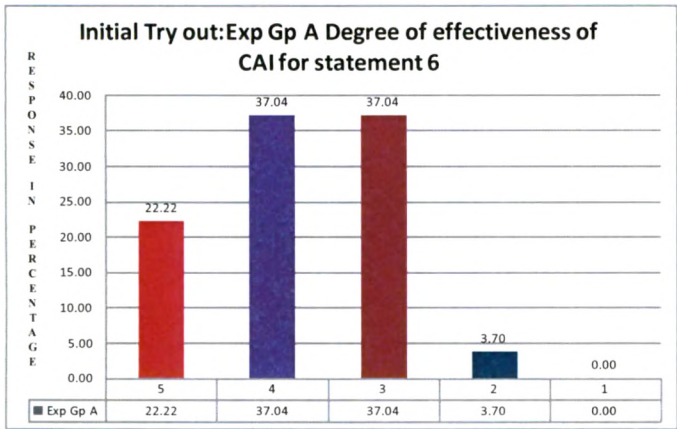


Figure 4.13 Graphical Representation of analysis of statement 6 in Percentage for Exp Gp A for Initial Try-out

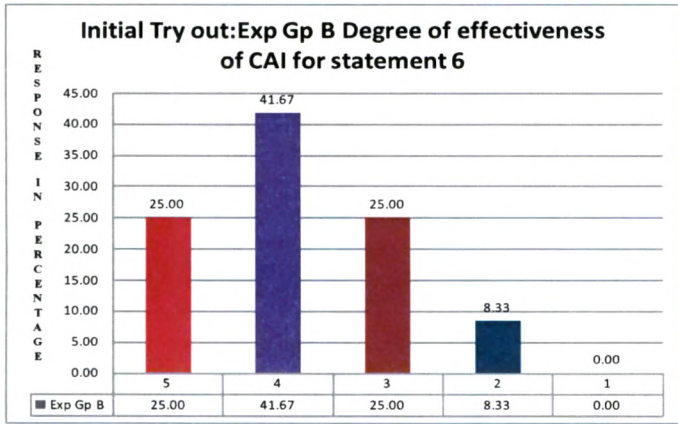


Figure 4.14 Graphical Representation of analysis of statement 6 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.35 Chi Square Table for Exp Gp A for Statement 6 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	6	5.4
4	10	5.4
3	10	5.4
2	1	5.4
1	0	5.4

chi-square = 16.9

degrees of freedom = 4

probability = 0.002

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. Equal load is on agree and not decided therefore there are equal number of students who agree as well as who are undecided with the statement "I can immediately test myself because there is lot of practice exercise."

### **Experimental Group B**

**Table 4.36 Chi Square Table for Exp Gp B for Statement 6 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	6	4.8
4	10	4.8
3	6	4.8
2	2	4.8
1	0	4.8

chi-square = 12.7

degrees of freedom = 4

probability = 0.013

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "I can immediately test myself because there is lot of practice exercise."

**Statement 7:** This method is having more freedom to learn.

Polarity: Positive

### **Experimental Group A : Responses of the students in percentage**

**Table 4.37 Responses of Exp Gp A students in percentage for statement 7 for Initial Try-out**

Points	Exp Gp A
5	22.22
4	40.74
3	25.93
2	7.41
1	3.70

22.22% of the students strongly agree with the statement “This method is having more freedom to learn.”

40.74% of the students agree with the statement “This method is having more freedom to learn.”

25.93% of the students not decided with the statement “This method is having more freedom to learn.”

7.41% of the students disagree with the statement “This method is having more freedom to learn.”

3.70% of the students strongly disagree with the statement “This method is having more freedom to learn.”

### **Experimental Group B: Responses of the students in percentage**

**Table 4.38 Responses of Exp Gp B students in percentage for statement 7 for Initial Try-out**

Points	Exp Gp B
5	41.67
4	29.17
3	12.50
2	12.50
1	4.17

41.67% of the students strongly agree with the statement “This method is having more freedom to learn.”

29.17% of the students agree with the statement “This method is having more freedom to learn.”

12.50% of the students not decided with the statement “This method is having more freedom to learn.”

16.67% of the students disagree with the statement “This method is having more freedom to learn.”

4.17% of the students strongly disagree with the statement “This method is having more freedom to learn.”

### Graphical Representation of analysis of statement 7 in Percentage

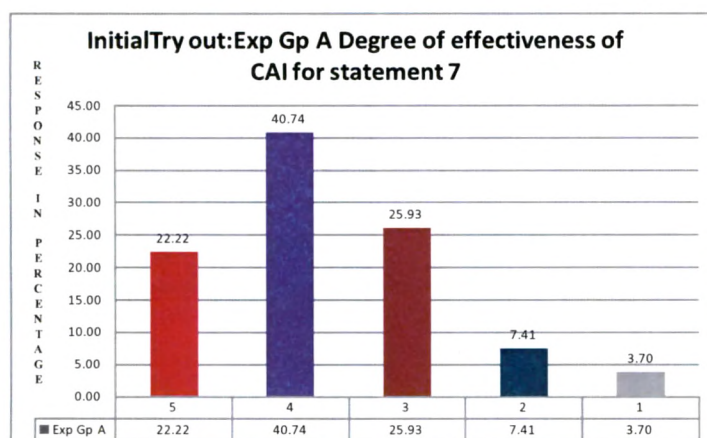


Figure 4.15 Graphical Representation of analysis of statement 7 in Percentage for Exp Gp A for Initial Try-out

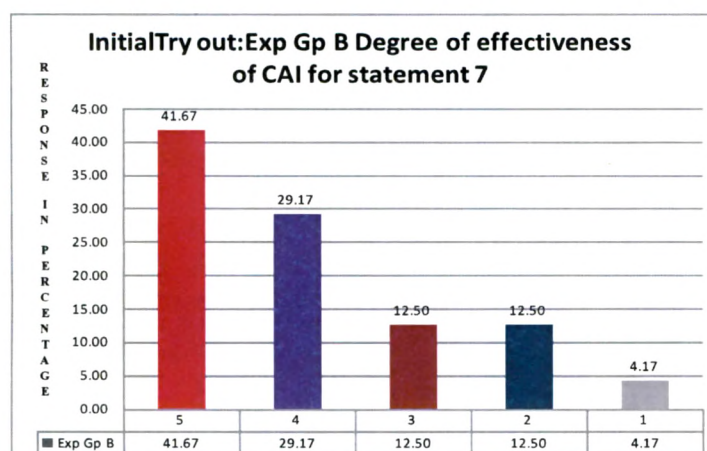


Figure 4.16 Graphical Representation of analysis of statement 7 in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.39 Chi Square Table for Exp Gp A for Statement 7 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	6	5.4
4	11	5.4
3	7	5.4
2	2	5.4
1	1	5.4



chi-square = 12.1

degrees of freedom = 4

probability = 0.017

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "This method is having more freedom to learn."

### **Experimental Group B**

**Table 4.40 Chi Square Table for Exp Gp B for Statement 7 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	10	4.8
4	7	4.8
3	3	4.8
2	3	4.8
1	1	4.8

chi-square = 11

degrees of freedom = 4

probability = 0.0266

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "This method is having more freedom to learn."

**Statement 8:** CAI did not focus on more freedom situation.

Polarity: Negative

### **Experimental Group A : Responses of the students in percentage**

**Table 4.41 Responses of Exp Gp A students in percentage for statement 8 for Initial Try-out**

Points	Exp Gp A
5	18.52
4	18.52
3	44.44
2	14.81
1	3.70

18.52% of the students strongly disagree with the statement “CAI didn’t focus on more freedom situation.”

18.52% of the students disagree with the statement “CAI didn’t focus on more freedom situation.”

44.44% of the students not decided with the statement “CAI didn’t focus on more freedom situation.”

14.81% of the students agree with the statement “CAI didn’t focus on more freedom situation.”

3.70% of the students strongly agree with the statement “CAI didn’t focus on more freedom situation.”

#### **Experimental Group B: Responses of the students in percentage**

**Table 4.42 Responses of Exp Gp B students in percentage for statement 8 for Initial Try-out**

Points	Exp Gp B
5	25.00
4	12.50
3	33.33
2	20.83
1	8.33

25.00% of the students strongly disagree with the statement “CAI didn’t focus on more freedom situation.”

12.50% of the students disagree with the statement “CAI didn’t focus on more freedom situation.”

33.33% of the students not decided with the statement “CAI didn’t focus on more freedom situation.”

20.83% of the students agree with the statement “CAI didn’t focus on more freedom situation.”

8.33% of the students strongly agree with the statement “CAI didn’t focus on more freedom situation.”

### Graphical Representation of analysis of statement 8 in Percentage

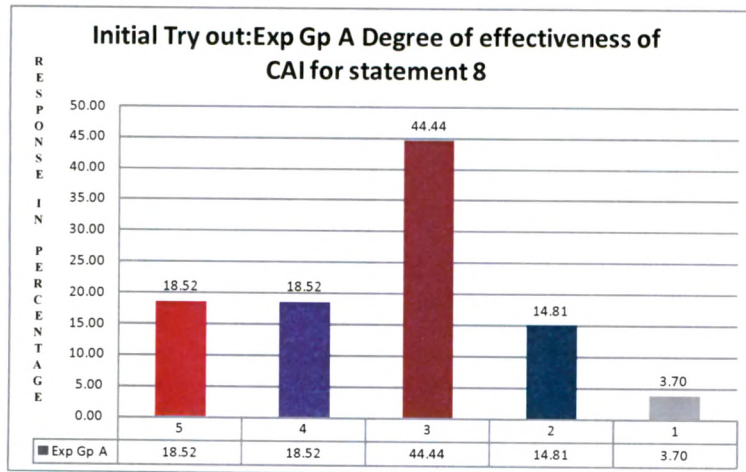


Figure 4.17 Graphical Representation of analysis of statement 8 in Percentage for Exp Gp A for Initial Try-out

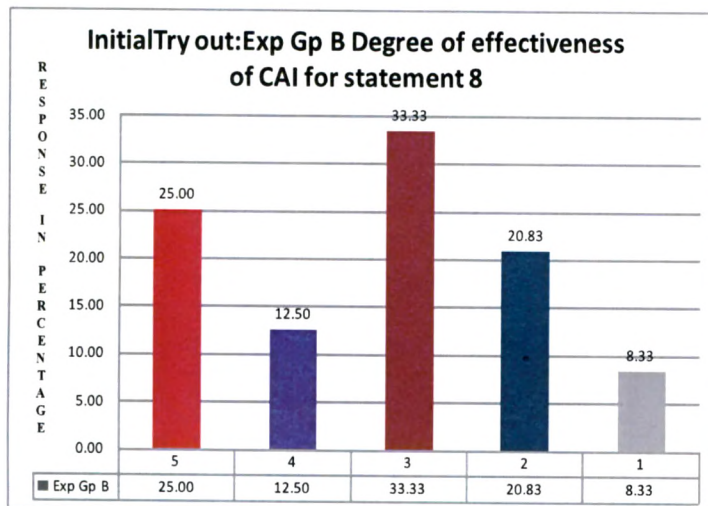


Figure 4.18 Graphical Representation of analysis of statement 8 in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.43 Chi Square Table for Exp Gp A for Statement 8 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	5	5.4
4	5	5.4
3	12	5.4
2	4	5.4
1	1	5.4

chi-square = 12.07

degrees of freedom = 4

probability = 0.0168

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on not decided therefore most of the students not decided with the statement "CAI didn't focus on more freedom situation."

### Experimental Group B

**Table 4.44 Chi Square Table for Exp Gp B for Statement 8 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	6	4.8
4	3	4.8
3	8	4.8
2	5	4.8
1	2	4.8

chi-square = 4.75

degrees of freedom = 4

probability = 0.314

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 9:** Learning mathematics is fun in this CAI method.

Polarity: Positive

**Experimental Group A : Responses of the students in percentage**

**Table 4.45 Responses of Exp Gp A students in percentage for statement 9 for Initial Try-out**

Points	Exp Gp A
5	25.93
4	40.74
3	18.52
2	11.11
1	3.7

25.93% of the students strongly agree with the statement “Learning mathematics is fun in this CAI method.”

40.74% of the students agree with the statement “Learning mathematics is fun in this CAI method.”

18.52% of the students not decided with the statement “Learning mathematics is fun in this CAI method.”

11.11% of the students disagree with the statement “Learning mathematics is fun in this CAI method.”

3.70% of the students strongly disagree with the statement “Learning mathematics is fun in this CAI method.”

**Experimental Group B: Responses of the students in percentage**

**Table 4.46 Responses of Exp Gp B students in percentage for statement 9 for Initial Try-out**

Points	Exp Gp B
5	45.83
4	4.17
3	29.17
2	12.50
1	8.33

45.83% of the students strongly agree with the statement “Learning mathematics is fun in this CAI method.”

4.17% of the students agree with the statement “Learning mathematics is fun in this CAI method.”

29.17% of the students not decided with the statement “Learning mathematics is fun in this CAI method.”

12.50% of the students disagree with the statement “Learning mathematics is fun in this CAI method.”

8.33% of the students strongly disagree with the statement “Learning mathematics is fun in this CAI method.”

Graphical Representation of analysis of statement 9 in Percentage

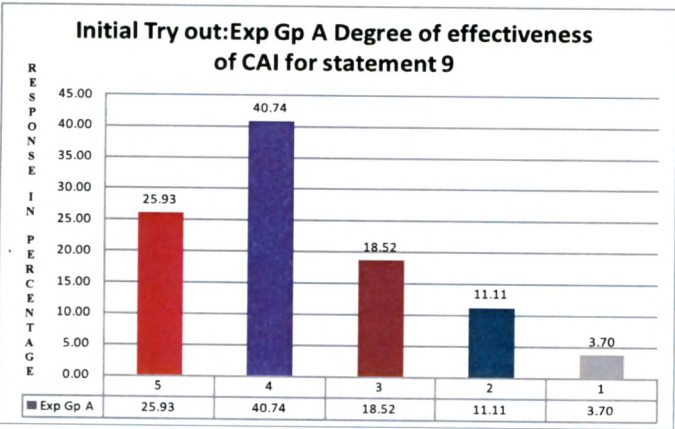


Figure 4.19 Graphical Representation of analysis of statement 9 in Percentage for Exp Gp A for Initial Try-out

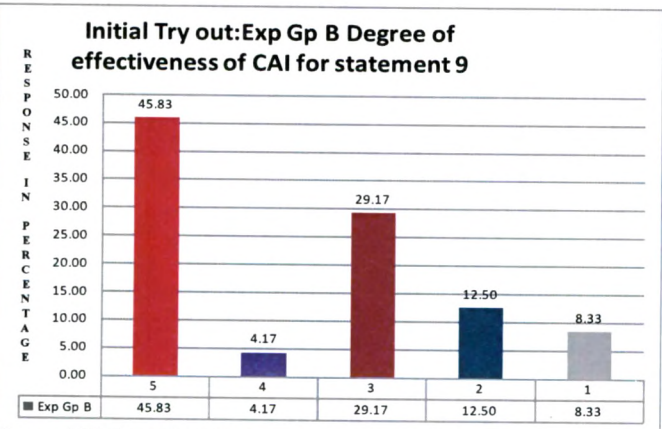


Figure 4.20 Graphical Representation of analysis of statement 9 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.47 Chi Square Table for Exp Gp A for Statement 9 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	7	5.4
4	11	5.4
3	5	5.4
2	3	5.4
1	1	5.4

chi-square = 10.96

degrees of freedom = 4

probability = 0.027

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Learning mathematics is fun in this CAI method".

### Experimental Group B

**Table 4.48 Chi Square Table for Exp Gp B for Statement 9 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	11	4.8
4	1	4.8
3	7	4.8
2	3	4.8
1	2	4.8

chi-square = 14.3

degrees of freedom = 4

probability = 0.006

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "Learning mathematics is fun in this CAI method".

**Statement 10:** This method is not good in learning mathematics because my doubts are not cleared.

Polarity: Negative

### **Experimental Group A : Responses of the students in percentage**

**Table 4.49 Responses of Exp Gp A students in percentage for statement 10 for Initial Try-out**

Points	Exp Gp A
5	7.14
4	39.29
3	21.43
2	25.00
1	7.14

7.14% of the students strongly disagree with the statement “This method is not good in learning mathematics because my doubts are not cleared.”

39.29% of the students disagree with the statement “This method is not good in learning mathematics because my doubts are not cleared.”

21.43% of the students not decided with the statement “This method is not good in learning mathematics because my doubts are not cleared.”

25.00% of the students agree with the statement “This method is not good in learning mathematics because my doubts are not cleared.”

7.14% of the students strongly agree with the statement “This method is not good in learning mathematics because my doubts are not cleared.”

### **Experimental Group B: Responses of the students in percentage**

**Table 4.50 Responses of Exp Gp B students in percentage for statement 10 for Initial Try-out**

Points	Exp Gp B
5	25.00
4	20.83
3	25.00
2	12.50
1	16.67

25.00% of the students strongly disagree with the statement “This method is not good in learning mathematics because my doubts are not cleared.”

20.83% of the students disagree with the statement “This method is not good in learning mathematics because my doubts are not cleared.”

25.00% of the students not decided with the statement “This method is not good in learning mathematics because my doubts are not cleared.”



12.50% of the students agree with the statement “This method is not good in learning mathematics because my doubts are not cleared.”

16.67% of the students strongly agree with the statement “This method is not good in learning mathematics because my doubts are not cleared.”

### Graphical Representation of analysis of statement 10 in Percentage

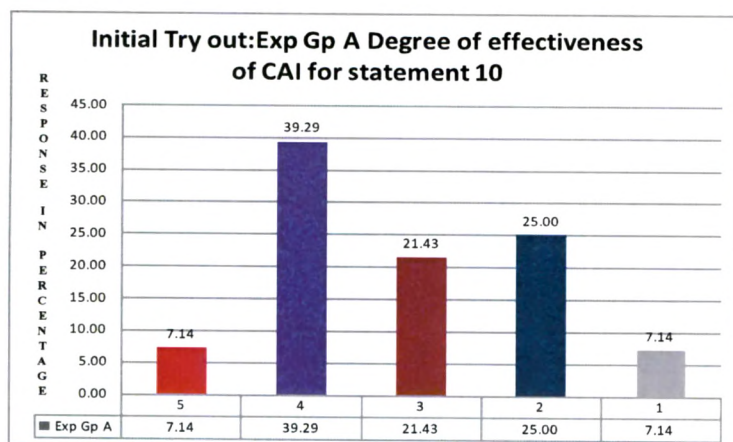


Figure 4.21 Graphical Representation of analysis of statement 10 in Percentage for Exp Gp A for Initial Try-out

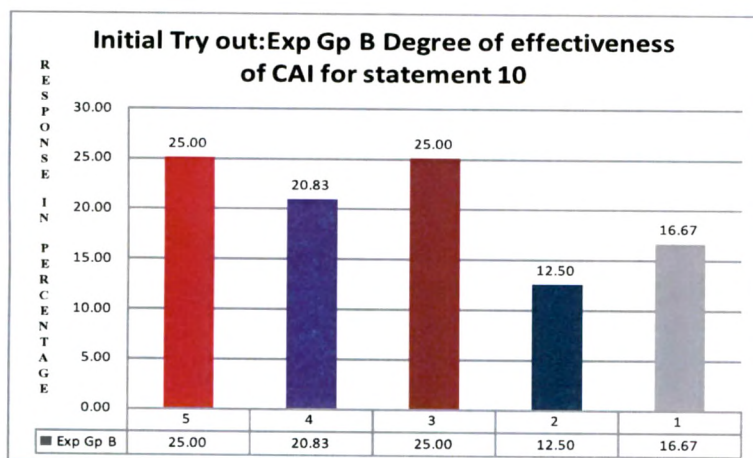


Figure 4.22 Graphical Representation of analysis of statement 10 in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.51 Chi Square Table for Exp Gp A for Statement 10 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	2	5.6
4	11	5.6
3	6	5.6
2	7	5.6
1	2	5.6

chi-square = 10.2

degrees of freedom = 4

probability = 0.037

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on disagree therefore most of the students disagree with the statement "This method is not good in learning mathematics because my doubts are not cleared."

### Experimental Group B

**Table 4.52 Chi Square Table for Exp Gp B for Statement 10 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	6	4.8
4	5	4.8
3	6	4.8
2	3	4.8
1	4	4.8

chi-square = 1.42

degrees of freedom = 4

probability = 0.841

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 11:** In CAI I can teach myself (self-study) without the help of others.

Polarity: Positive

### **Experimental Group A : Responses of the students in percentage**

**Table 4.53 Responses of Exp Gp A students in percentage for statement 11 for Initial Try-out**

Points	Exp Gp A
5	29.63
4	37.04
3	7.41
2	25.93
1	0.00

29.63% of the students strongly agree with the statement “In CAI I can teach myself (self-study) without the help of others.”

37.04% of the students agree with the statement “In CAI I can teach myself (self-study) without the help of others.”

7.41% of the students not decided with the statement “In CAI I can teach myself (self-study) without the help of others.”

25.93% of the students disagree with the statement “In CAI I can teach myself (self-study) without the help of others.”

0.00% of the students strongly disagree with the statement “In CAI I can teach myself (self-study) without the help of others.”

### **Experimental Group B: Responses of the students in percentage**

**Table 4.54 Responses of Exp Gp B students in percentage for statement 11 for Initial Try-out**

Points	Exp Gp B
5	20.83
4	33.33
3	12.50
2	25.00
1	8.33

20.83% of the students strongly agree with the statement “In CAI I can teach myself (self-study) without the help of others.”

33.33% of the students agree with the statement “In CAI I can teach myself (self-study) without the help of others.”

12.50% of the students not decided with the statement “In CAI I can teach myself (self-study) without the help of others.”

25.00% of the students disagree with the statement “In CAI I can teach myself (self-study) without the help of others.”

8.33% of the students strongly disagree with the statement “In CAI I can teach myself (self-study) without the help of others.”

**Graphical Representation of analysis of statement 11 in Percentage**

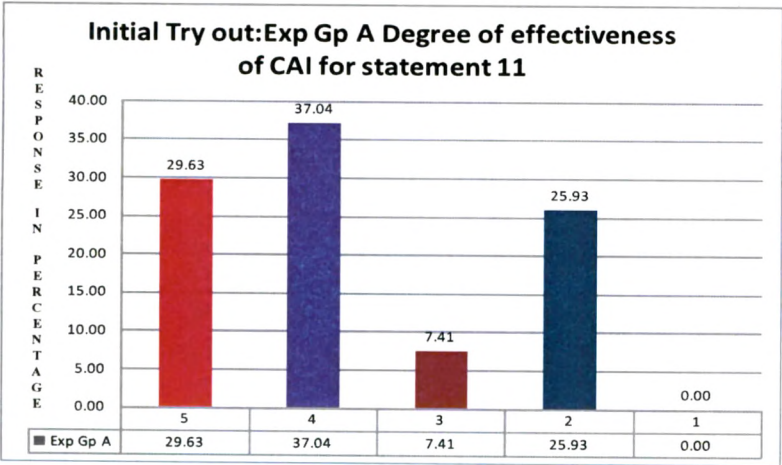


Figure 4.23 Graphical Representation of analysis of statement 11 in Percentage for Exp Gp A for Initial Try-out

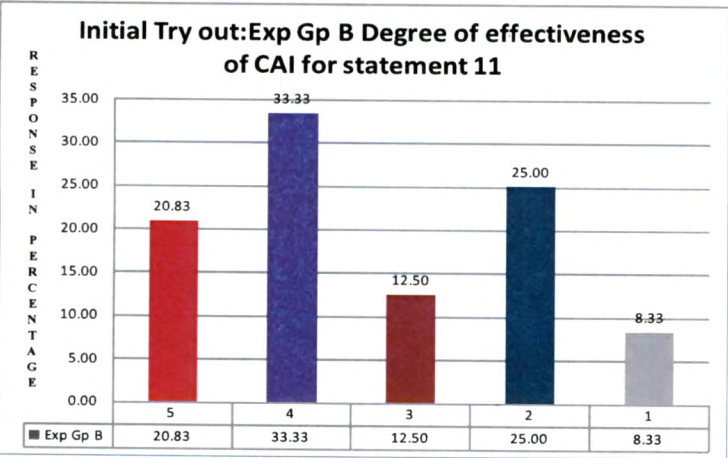


Figure 4.24 Graphical Representation of analysis of statement 11 in Percentage for Exp Gp B for Initial Try-out

**Data Analysis using Chi Square**

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.55 Chi Square Table for Exp Gp A for Statement 11 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	8	5.4
4	10	5.4
3	2	5.4
2	7	5.4
1	0	5.4

chi-square = 13.2

degrees of freedom = 4

probability = 0.010

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "In CAI I can teach myself (self-study) without the help of others."

### Experimental Group B

**Table 4.56 Chi Square Table for Exp Gp B for Statement 11 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	5	4.8
4	8	4.8
3	3	4.8
2	6	4.8
1	2	4.8

chi-square = 4.75

degrees of freedom = 4

probability = 0.314

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 12:** Matter presented in CAI is not very clear.

Polarity: Negative

### **Experimental Group A : Responses of the students in percentage**

**Table 4.57 Responses of Exp Gp A students in percentage for statement 12 for Initial Try-out**

Points	Exp Gp A
5	10.71
4	17.86
3	28.57
2	28.57
1	14.29

10.71% of the students strongly disagree with the statement "Matter presented in CAI is not very clear."

17.86% of the students disagree with the statement "Matter presented in CAI is not very clear."

28.57% of the students not decided with the statement "Matter presented in CAI is not very clear."

28.57% of the students agree with the statement "Matter presented in CAI is not very clear."

14.29% of the students strongly agree with the statement "Matter presented in CAI is not very clear."

### **Experimental Group B: Responses of the students in percentage**

**Table 4.58 Responses of Exp Gp B students in percentage for statement 12 for Initial Try-out**

Points	Exp Gp B
5	25.00
4	41.67
3	16.67
2	12.50
1	4.17

25.00% of the students strongly disagree with the statement "Matter presented in CAI is not very clear."

41.67% of the students disagree with the statement "Matter presented in CAI is not very clear."

16.67% of the students not decided with the statement "Matter presented in CAI is not very clear."

12.50% of the students agree with the statement "Matter presented in CAI is not very clear."

4.17% of the students strongly agree with the statement "Matter presented in CAI is not very clear."

Graphical Representation of analysis of statement 12 in Percentage

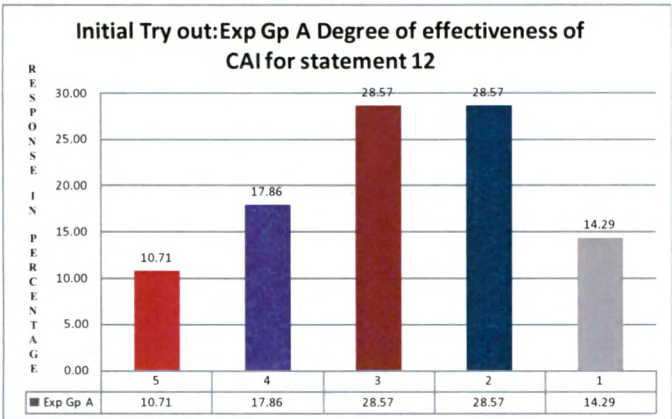


Figure 4.25 Graphical Representation of analysis of statement 12 in Percentage for Exp Gp A for Initial Try-out

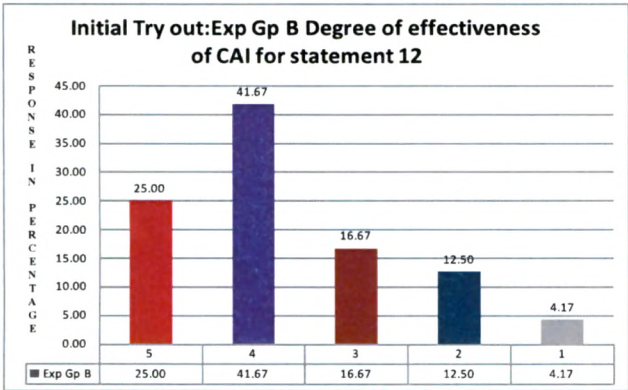


Figure 4.26 Graphical Representation of analysis of statement 12 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.59 Chi Square Table for Exp Gp A for Statement 12 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	3	5.6
4	5	5.6
3	8	5.6
2	8	5.6
1	4	5.6

chi-square = 3.79

degrees of freedom = 4

probability = 0.436

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### **Experimental Group B**

**Table 4.60 Chi Square Table for Exp Gp B for Statement 12 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	6	4.8
4	10	4.8
3	4	4.8
2	3	4.8
1	1	4.8

chi-square = 9.75

degrees of freedom = 4

probability = 0.0449

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Matter presented in CAI is not very clear."

**Statement 13:** CAI is easy to understand.

Polarity: Positive

### **Experimental Group A : Responses of the students in percentage**

**Table 4.61 Responses of Exp Gp A students in percentage for statement 13 for Initial Try-out**

Points	Exp Gp A
5	35.71
4	32.14
3	21.43
2	10.71
1	0.00

35.71% of the students strongly agree with the statement "CAI is easy to understand."

32.14% of the students agree with the statement "CAI is easy to understand."



21.43% of the students not decided with the statement “CAI is easy to understand.”

10.71% of the students disagree with the statement “CAI is easy to understand.”

0.00% of the students strongly disagree with the statement “CAI is easy to understand.”

### Experimental Group B: Responses of the students in percentage

**Table 4.62 Responses of Exp Gp B students in percentage for statement 13 for Initial Try-out**

Points	Exp Gp B
5	29.17
4	29.17
3	20.83
2	16.67
1	4.17

29.17% of the students strongly agree with the statement “CAI is easy to understand.”

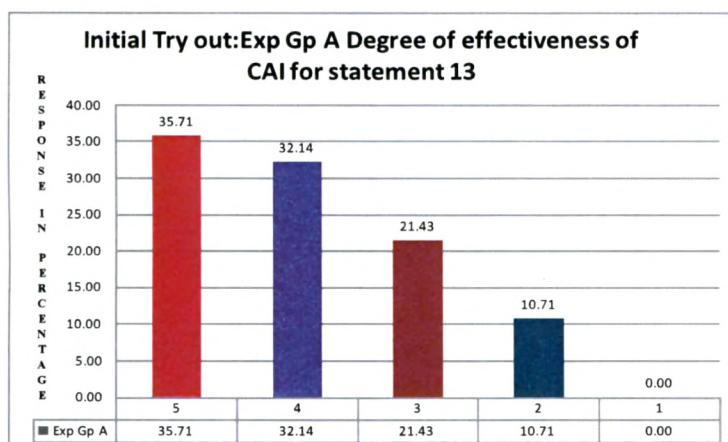
29.17% of the students agree with the statement “CAI is easy to understand.”

20.83% of the students not decided with the statement “CAI is easy to understand.”

16.67% of the students disagree with the statement “CAI is easy to understand.”

4.17% of the students strongly disagree with the statement “CAI is easy to understand.”

### Graphical Representation of analysis of statement 13 in Percentage



**Figure 4.27 Graphical Representation of analysis of statement 13 in Percentage for Exp Gp A for Initial Try-out**

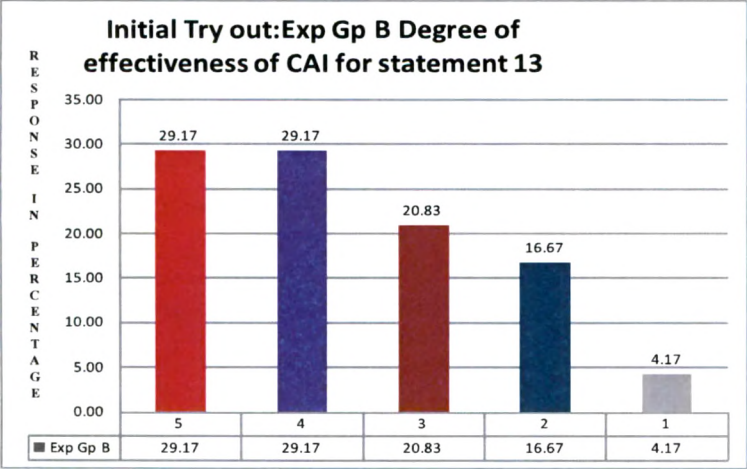


Figure 4.28 Graphical Representation of analysis of statement 13 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.63 Chi Square Table for Exp Gp A for Statement 13 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	10	5.6
4	9	5.6
3	6	5.6
2	3	5.6
1	0	5.6

chi-square = 12.4

degrees of freedom = 4

probability = 0.015

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement “CAI is easy to understand.”

**Experimental Group B****Table 4.64 Chi Square Table for Exp Gp B for Statement 13 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	7	4.8
4	7	4.8
3	5	4.8
2	4	4.8
1	1	4.8

chi-square = 5.17

degrees of freedom = 4

probability = 0.271

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 14:** Animations are distracting in understanding the concept.

Polarity: Negative

**Experimental Group A : Responses of the students in percentage****Table 4.65 Responses of Exp Gp A students in percentage for statement 14 for Initial Try-out**

Points	Exp Gp A
5	10.71
4	25.00
3	32.14
2	17.86
1	14.29

10.71% of the students strongly disagree with the statement “Animations are distracting in understanding the concept.”

25.00% of the students disagree with the statement “Animations are distracting in understanding the concept.”

32.14% of the students not decided with the statement “Animations are distracting in understanding the concept.”

17.86% of the students agree with the statement “Animations are distracting in understanding the concept.”

14.29% of the students strongly agree with the statement “Animations are distracting in understanding the concept.”

#### **Experimental Group B: Responses of the students in percentage**

**Table 4.66 Responses of Exp Gp B students in percentage for statement 14 for Initial Try-out**

Points	Exp Gp B
5	45.83
4	12.50
3	8.33
2	8.33
1	25.00

45.83% of the students strongly disagree with the statement “Animations are distracting in understanding the concept.”

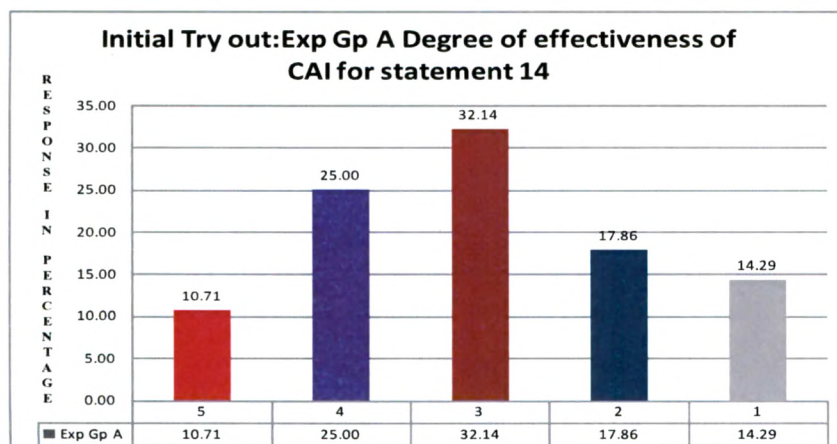
12.50% of the students disagree with the statement “Animations are distracting in understanding the concept.”

8.33% of the students not decided with the statement “Animations are distracting in understanding the concept.”

8.33% of the students agree with the statement “Animations are distracting in understanding the concept.”

25.00% of the students strongly agree with the statement “Animations are distracting in understanding the concept.”

#### **Graphical Representation of analysis of statement 14 in Percentage**



**Figure 4.29 Graphical Representation of analysis of statement 14 in Percentage for Exp Gp A for Initial Try-out**

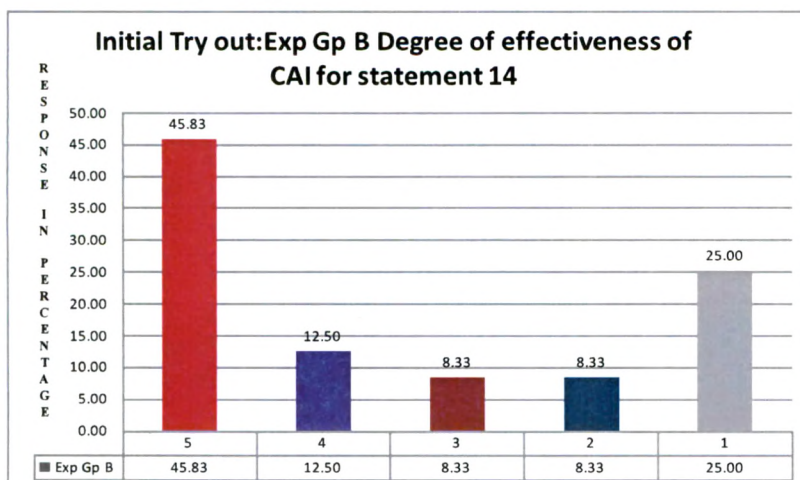


Figure 4.30 Graphical Representation of analysis of statement 14 in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.67 Chi Square Table for Exp Gp A for Statement 14 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	3	5.6
4	7	5.6
3	9	5.6
2	5	5.6
1	4	5.6

chi-square = 4.14

degrees of freedom = 4

probability = 0.387

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.



### Experimental Group B

**Table 4.68 Chi Square Table for Exp Gp B for Statement 14 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	11	4.8
4	3	4.8
3	2	4.8
2	2	4.8
1	6	4.8

chi-square = 12.25

degrees of freedom = 4

probability = 0.063

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "Animations are distracting in understanding the concept."

**Statement 15:**CAI took more time to understand the concept than usual classroom teaching.

Polarity: Negative

### Experimental Group A : Responses of the students in percentage

**Table 4.69 Responses of Exp Gp A students in percentage for statement 15 for Initial Try-out**

Points	Exp Gp
5	17.86
4	25.00
3	25.00
2	10.71
1	21.43

17.86% of the students strongly disagree with the statement "CAI took more time to understand the concept than usual classroom teaching."

25.00% of the students disagree with the statement "CAI took more time to understand the concept than usual classroom teaching."

25.00% of the students not decided with the statement "CAI took more time to understand the concept than usual classroom teaching."

10.71% of the students agree with the statement “CAI took more time to understand the concept than usual classroom teaching.”

21.43% of the students strongly agree with the statement “CAI took more time to understand the concept than usual classroom teaching.”

**Experimental Group B: Responses of the students in percentage**

**Table 4.70 Responses of Exp Gp B students in percentage for statement 15 for Initial Try-out**

Points	Exp Gp B
5	33.33
4	16.67
3	20.83
2	16.67
1	12.50

33.33% of the students strongly disagree with the statement “CAI took more time to understand the concept than usual classroom teaching.”

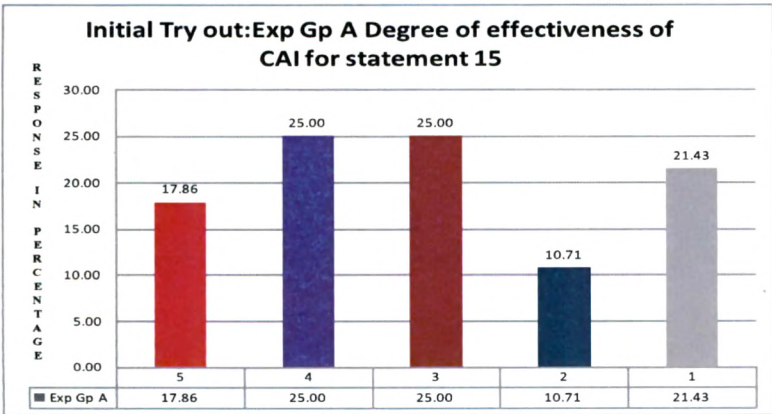
16.67% of the students disagree with the statement “CAI took more time to understand the concept than usual classroom teaching.”

20.83% of the students not decided with the statement “CAI took more time to understand the concept than usual classroom teaching.”

16.67% of the students agree with the statement “CAI took more time to understand the concept than usual classroom teaching.”

12.50% of the students strongly agree with the statement “CAI took more time to understand the concept than usual classroom teaching.”

**Graphical Representation of analysis of statement 15 in Percentage**



**Figure 4.31 Graphical Representation of analysis of statement 15 in Percentage for Exp Gp A for Initial Try-out**

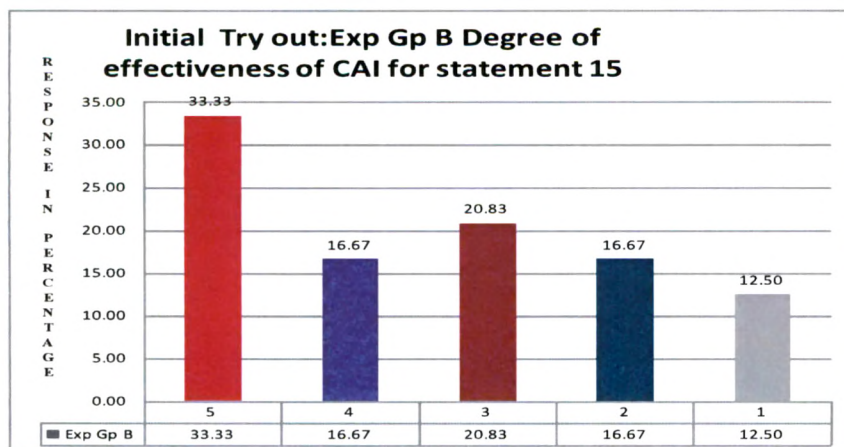


Figure 4.32 Graphical Representation of analysis of statement 15 in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.71 Chi Square Table for Exp Gp A for Statement 15 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	5	5.6
4	7	5.6
3	7	5.6
2	3	5.6
1	6	5.6

Chi-square = 2.00

degrees of freedom = 4

probability = 0.736

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.



### Experimental Group B

Table 4.72 Chi Square Table for Exp Gp B for Statement 15 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	8	4.8
4	4	4.8
3	5	4.8
2	4	4.8
1	3	4.8

chi-square = 3.08

degrees of freedom = 4

probability = 0.544

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 16:** Illustrations given in CAI are enough to understand the concept clearly.

**Polarity: Positive**

### Experimental Group A : Responses of the students in percentage

Table 4.73 Responses of Exp Gp A students in percentage for statement 16 for Initial Try-out

Points	Exp Gp A
5	25.00
4	32.14
3	14.29
2	17.86
1	10.71

25.00% of the students strongly agree with the statement "Illustrations given in CAI are enough to understand the concept clearly."

32.14% of the students agree with the statement "Illustrations given in CAI are enough to understand the concept clearly."

14.29% of the students not decided with the statement "Illustrations given in CAI are enough to understand the concept clearly."

17.86% of the students disagree with the statement "Illustrations given in CAI are enough to understand the concept clearly."

10.71% of the students strongly disagree with the statement “Illustrations given in CAI are enough to understand the concept clearly.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.74 Responses of Exp Gp B students in percentage for statement 16 for Initial Try-out**

Points	Exp Gp B
5	25.00
4	33.33
3	8.33
2	25.00
1	8.33

25.00% of the students strongly agree with the statement “Illustrations given in CAI are enough to understand the concept clearly.”

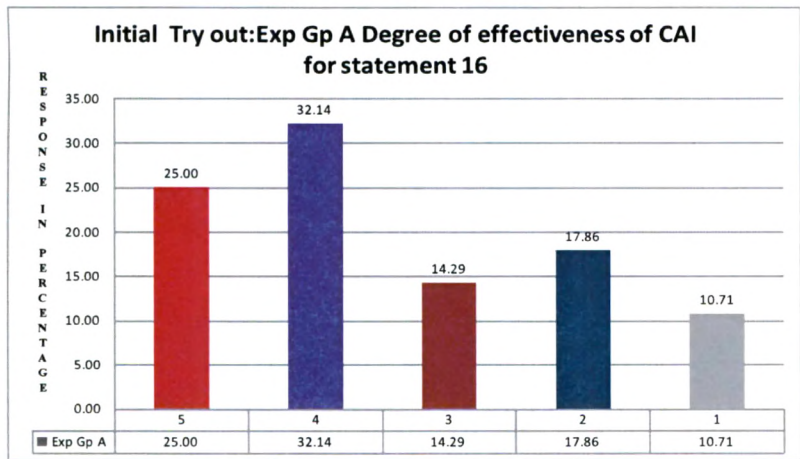
33.33% of the students agree with the statement “Illustrations given in CAI are enough to understand the concept clearly.”

8.33% of the students not decided with the statement “Illustrations given in CAI are enough to understand the concept clearly.”

25.00% of the students disagree with the statement “Illustrations given in CAI are enough to understand the concept clearly.”

8.33% of the students strongly disagree with the statement “Illustrations given in CAI are enough to understand the concept clearly.”

**Graphical Representation of analysis of statement 16 in Percentage**



**Figure 4.33 Graphical Representation of analysis of statement 16 in Percentage for Exp Gp A for Initial Try-out**

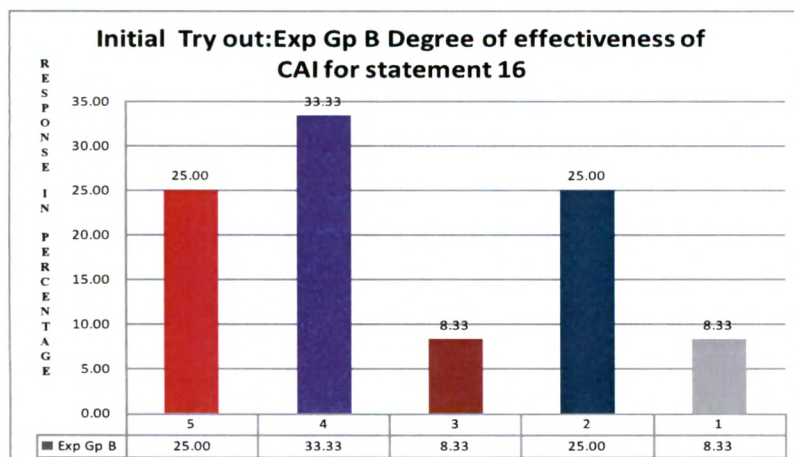


Figure 4.34 Graphical Representation of analysis of statement 16 in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.75 Chi Square Table for Exp Gp A for Statement 16 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	7	5.6
4	9	5.6
3	4	5.6
2	5	5.6
1	3	5.6

chi-square = 4.14

degrees of freedom = 4

probability = 0.387

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

**Table 4.76 Chi Square Table for ExpGp B for Statement 16 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	6	4.8
4	8	4.8
3	2	4.8
2	6	4.8
1	2	4.8

chi-square = 6.00

degrees of freedom = 4

probability = 0.199

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 17:** Matter presented in CAI was logically arranged.

Polarity: Positive

### Experimental Group A : Responses of the students in percentage

**Table 4.77 Responses of Exp Gp A students in percentage for statement 17 for Initial Try-out**

Points	Exp Gp A
5	32.14
4	35.71
3	21.43
2	3.57
1	7.14

32.14% of the students strongly agree with the statement "Matter presented in CAI was logically arranged."

35.71% of the students agree with the statement "Matter presented in CAI was logically arranged."

21.43% of the students not decided with the statement "Matter presented in CAI was logically arranged."

3.57% of the students disagree with the statement "Matter presented in CAI was logically arranged."

7.14% of the students strongly disagree with the statement "Matter presented in CAI was logically arranged."

### Experimental Group B: Responses of the students in percentage

Table 4.78 Responses of Exp Gp B students in percentage for statement 17 for Initial Try-out

Points	Exp Gp B
5	20.83
4	20.83
3	33.33
2	12.50
1	12.50

20.83% of the students strongly agree with the statement “Matter presented in CAI was logically arranged.”

20.83% of the students agree with the statement “Matter presented in CAI was logically arranged.”

33.33% of the students not decided with the statement “Matter presented in CAI was logically arranged.”

12.50% of the students disagree with the statement “Matter presented in CAI was logically arranged.”

12.50% of the students strongly disagree with the statement “Matter presented in CAI was logically arranged.”

### Graphical Representation of analysis of statement 17 in Percentage

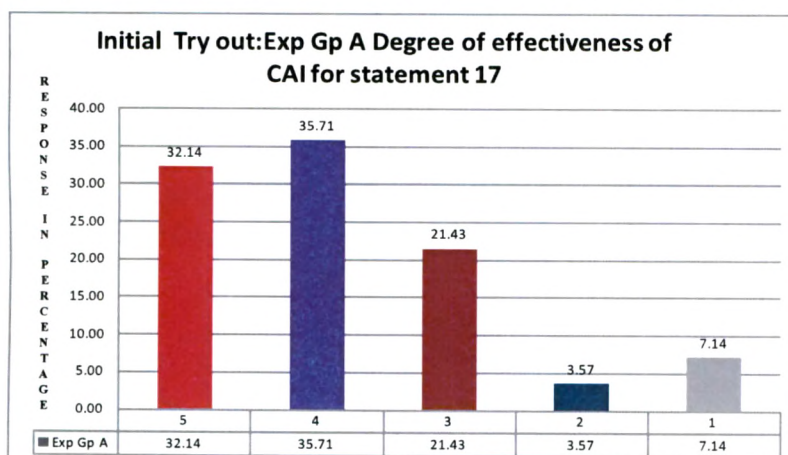


Figure 4.35 Graphical Representation of analysis of statement 17 in Percentage for Exp Gp A for Initial Try-out



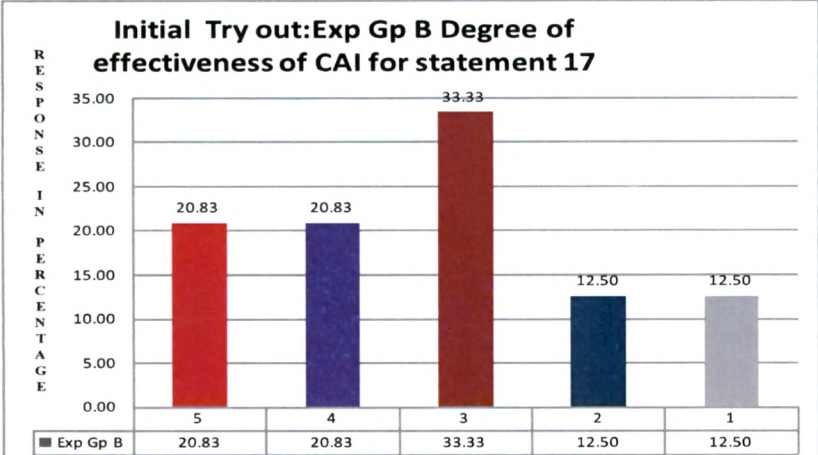


Figure 4.36 Graphical Representation of analysis of statement 17 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.79 Chi Square Table for Exp Gp A for Statement 17 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	9	5.6
4	10	5.6
3	6	5.6
2	1	5.6
1	2	5.6

chi-square = 11.6

degrees of freedom = 4

probability = 0.020

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement “Matter presented in CAI was logically arranged.”

### Experimental Group B

**Table 4.80 Chi Square Table for Exp Gp B for Statement 17 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	5	4.8
4	5	4.8
3	8	4.8
2	3	4.8
1	3	4.8

chi-square = 3.50

degrees of freedom = 4

probability = 0.478

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 18:** Learning through CAI was waste of time.

**Polarity: Negative**

### Experimental Group A : Responses of the students in percentage

**Table 4.81 Responses of Exp Gp A students in percentage for statement 18 for Initial Try-out**

Points	Exp Gp A
5	6.90
4	48.28
3	31.03
2	13.79
1	0.00

6.90% of the students strongly disagree with the statement“Learning through CAI was waste of time.”

48.28% of the students disagree with the statement“Learning through CAI was waste of time.”

31.03% of the students not decided with the statement “Learning through CAI was waste of time.”

13.79% of the students agree with the statement“Learning through CAI was waste of time.”

0.00% of the students strongly agree with the statement“Learning through CAI was waste of time.”

### **Experimental Group B: Responses of the students in percentage**

**Table 4.82 Responses of Exp Gp B students in percentage for statement 18 for Initial Try-out**

Points	Exp Gp B
5	20.83
4	12.50
3	45.83
2	4.17
1	16.67

20.83% of the students strongly disagree with the statement“Learning through CAI was waste of time.”

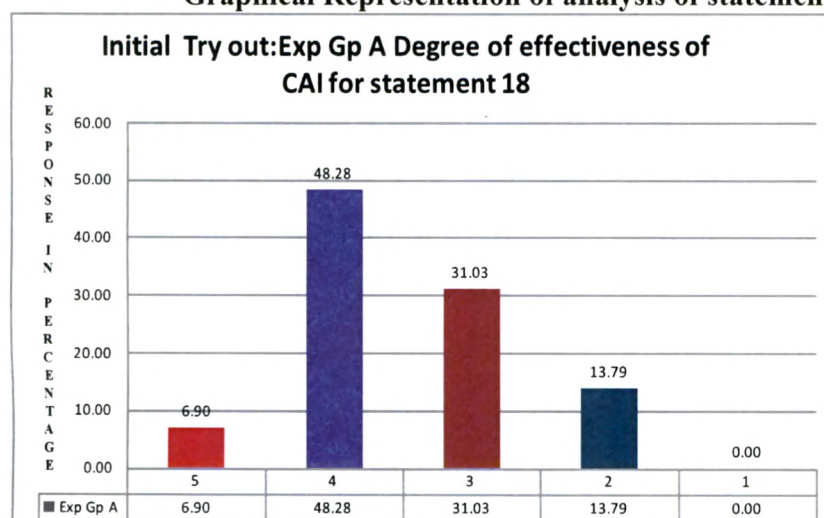
12.50% of the students disagree with the statement“Learning through CAI was waste of time.”

45.83% of the students not decided with the statement“Learning through CAI was waste of time.”

4.17% of the students agree with the statement“Learning through CAI was waste of time.”

16.67% of the students strongly agree with the statement“Learning through CAI was waste of time.”

### **Graphical Representation of analysis of statement 18 in Percentage**



**Figure 4.37 Graphical Representation of analysis of statement 18 in Percentage for Exp Gp A for Initial Try-out**



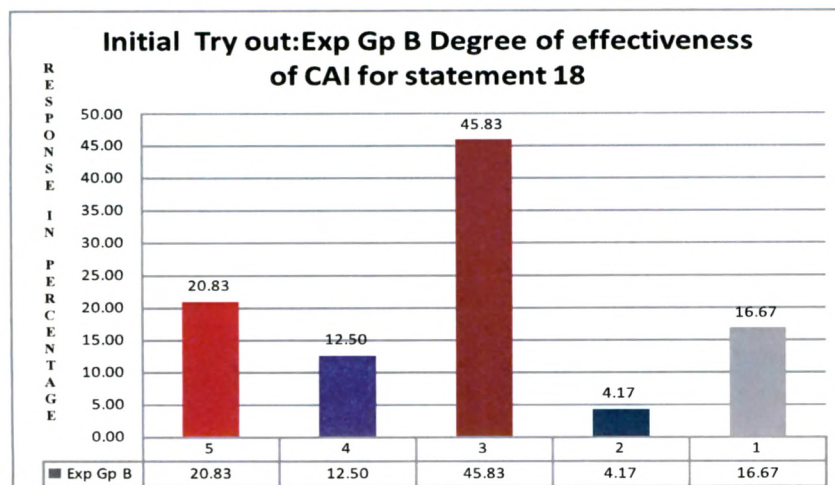


Figure 4.38 Graphical Representation of analysis of statement 18 in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.83 Chi Square Table for Exp Gp A for Statement 18 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	2	5.8
4	14	5.8
3	9	5.8
2	4	5.8
1	0	5.8

chi-square = 22.2

degrees of freedom = 4

probability = 0.000

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on disagree therefore most of the students disagree with the statement “Learning through CAI was waste of time.”

### Experimental Group B

**Table 4.84 Chi Square Table for Exp Gp B for Statement 18 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	5	4.8
4	3	4.8
3	11	4.8
2	1	4.8
1	4	4.8

chi-square = 11.8

degrees of freedom = 4

probability = 0.019

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on not decided therefore most of the students not decided with the statement "Learning through CAI was waste of time".

**Statement 19:** Illustrations given in CAI are related to day today life experiences.

Polarity: Positive

### Experimental Group A : Responses of the students in percentage

**Table 4.85 Responses of Exp Gp A students in percentage for statement 19 for Initial Try-out**

Points	Exp Gp A
5	39.29
4	25.00
3	28.57
2	7.14
1	0.00

39.29% of the students strongly agree with the statement "Illustrations given in CAI are related to day today life experiences."

25.00% of the students agree with the statement "Illustrations given in CAI are related to day today life experiences."

28.57% of the students not decided with the statement "Illustrations given in CAI are related to day today life experiences."

7.14% of the students disagree with the statement "Illustrations given in CAI are related to day today life experiences."

0.00% of the students strongly disagree with the statement“Illustrations given in CAI are related to day today life experiences.”

### **Experimental Group B: Responses of the students in percentage**

**Table 4.86 Responses of Exp Gp B students in percentage for statement 19 for Initial Try-out**

Points	Exp Gp B
5	50.00
4	20.83
3	20.83
2	8.33
1	0.00

50.00% of the students strongly agree with the statement“Illustrations given in CAI are related to day today life experiences.”

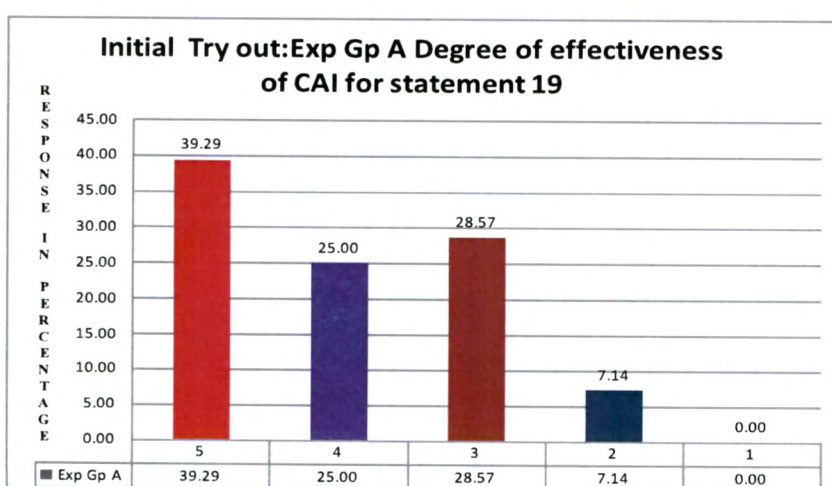
20.83% of the students agree with the statement“Illustrations given in CAI are related to day today life experiences.”

20.83% of the students not decided with the statement“Illustrations given in CAI are related to day today life experiences.”

8.33% of the students disagree with the statement“Illustrations given in CAI are related to day today life experiences.”

0.00% of the students strongly disagree with the statement“Illustrations given in CAI are related to day today life experiences.”

### **Graphical Representation of analysis of statement 19 in Percentage**



**Figure 4.39 Graphical Representation of analysis of statement 19 in Percentage for Exp Gp A for Initial Try-out**

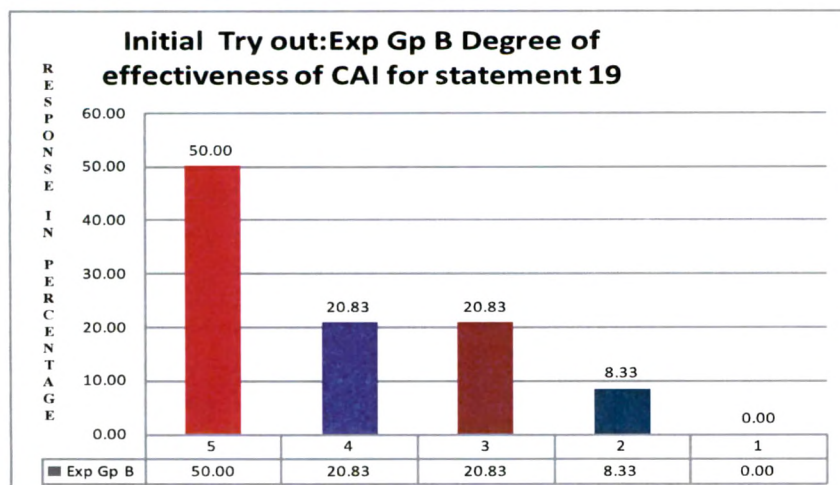


Figure 4.40 Graphical Representation of analysis of statement 19 in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.87 Chi Square Table for ExpGp A for Statement 19 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	11	5.6
4	7	5.6
3	8	5.6
2	2	5.6
1	0	5.6

chi-square = 14.5

degrees of freedom = 4

probability = 0.006

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "Illustrations given in CAI are related to day today life experiences."

### Experimental Group B

**Table 4.88 Chi Square Table for Exp Gp B for Statement 19 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	12	4.8
4	5	4.8
3	5	4.8
2	2	4.8
1	0	4.8

chi-square = 17.2

degrees of freedom = 4

probability = 0.002

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "Illustrations given in CAI are related to day today life experiences".

**Statement 20:** Classroom teaching is more enjoyable.

Polarity: Negative

### Experimental Group A : Responses of the students in percentage

**Table 4.89 Responses of Exp Gp A students in percentage for statement 20 for Initial Try-out**

Points	Exp Gp A
5	39.29
4	17.86
3	32.14
2	7.14
1	3.57

39.29% of the students strongly disagree with the statement "Classroom teaching is more enjoyable."

17.86% of the students disagree with the statement "Classroom teaching is more enjoyable."

32.14% of the students not decided with the statement "Classroom teaching is more enjoyable."

7.14% of the students agree with the statement "Classroom teaching is more enjoyable."

3.57% of the students strongly agree with the statement "Classroom teaching is more enjoyable."



### **Experimental Group B: Responses of the students in percentage**

**Table 4.90 Responses of Exp Gp B students in percentage for statement 20 for Initial Try-out**

Points	Exp Gp B
5	20.83
4	33.33
3	16.67
2	20.83
1	12.50

20.83% of the students strongly disagree with the statement “Classroom teaching is more enjoyable.”

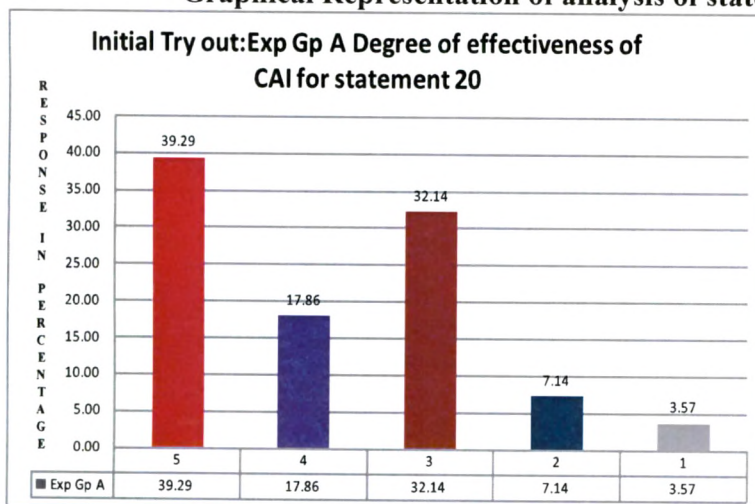
33.33% of the students disagree with the statement “Classroom teaching is more enjoyable.”

16.67% of the students not decided with the statement “Classroom teaching is more enjoyable.”

20.83% of the students agree with the statement “Classroom teaching is more enjoyable.”

12.50% of the students strongly agree with the statement “Classroom teaching is more enjoyable.”

### **Graphical Representation of analysis of statement 20 in Percentage**



**Figure 4.41 Graphical Representation of analysis of statement 20 in Percentage for Exp Gp A for Initial Try-out**

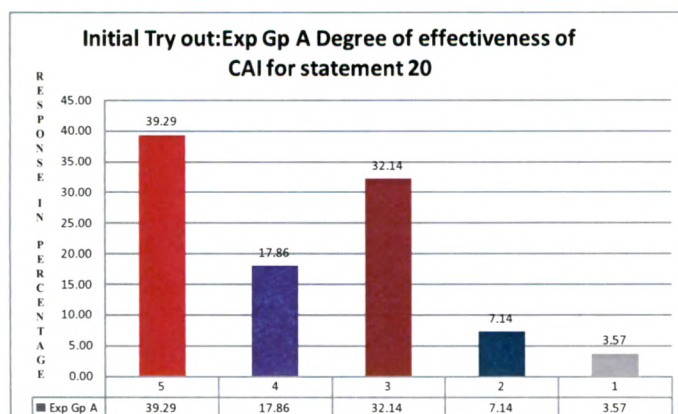


Figure 4.42 Graphical Representation of analysis of statement 20 in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.91 Chi Square Table for ExpGp A for Statement 20 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	11	5.6
4	5	5.6
3	9	5.6
2	2	5.6
1	1	5.6

chi-square = 13.4

degrees of freedom = 4

probability = 0.009

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on strongly disagree therefore most of the students strongly disagree with the statement “Classroom teaching is more enjoyable.”

### Experimental Group B

Table 4.92 Chi Square Table for Exp Gp B for Statement 20 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	5	5
4	8	5
3	4	5
2	5	5
1	3	5

chi-square = 2.80

degrees of freedom = 4

probability = 0.592

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 21:** The language used in CAI is easy and simple to understand.

Polarity: Positive

**Experimental Group A : Responses of the students in percentage**

**Table 4.93 Responses of Exp Gp A students in percentage for statement 21 for Initial Try-out**

Points	Exp Gp A
5	24.14
4	58.62
3	17.24
2	0.00
1	0.00

24.14% of the students strongly agree with the statement “The language used in CAI is easy and simple to understand.”

58.62% of the students agree with the statement “The language used in CAI is easy and simple to understand.”

17.24% of the students not decided with the statement “The language used in CAI is easy and simple to understand.”

0.00% of the students disagree with the statement “The language used in CAI is easy and simple to understand.”

0.00% of the students strongly disagree with the statement “The language used in CAI is easy and simple to understand.”



### Experimental Group B: Responses of the students in percentage

Table 4.94 Responses of Exp Gp B students in percentage for statement 21 for Initial Try-out

Points	Exp Gp B
5	44.00
4	12.00
3	20.00
2	24.00
1	0.00

44.00% of the students strongly agree with the statement “The language used in CAI is easy and simple to understand.”

12.00% of the students agree with the statement “The language used in CAI is easy and simple to understand.”

20.00% of the students not decided with the statement “The language used in CAI is easy and simple to understand.”

24.00% of the students disagree with the statement “The language used in CAI is easy and simple to understand.”

0.00% of the students strongly disagree with the statement “The language used in CAI is easy and simple to understand.”

### **Graphical Representation of analysis of statement 21 in Percentage**

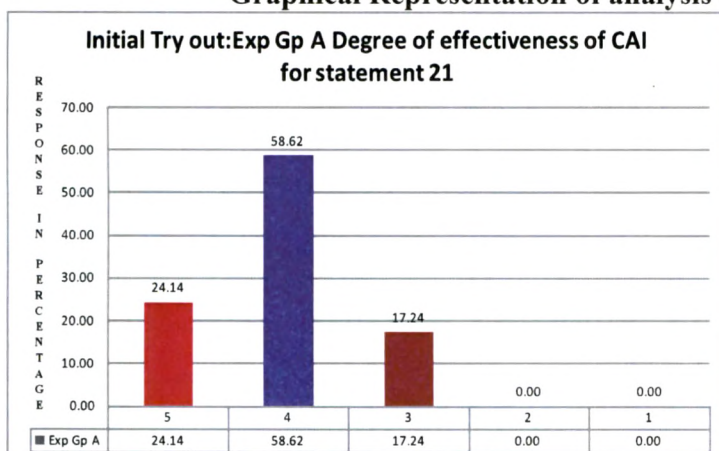


Figure 4.43 Graphical Representation of analysis of statement 21 in Percentage for Exp Gp A for Initial Try-out

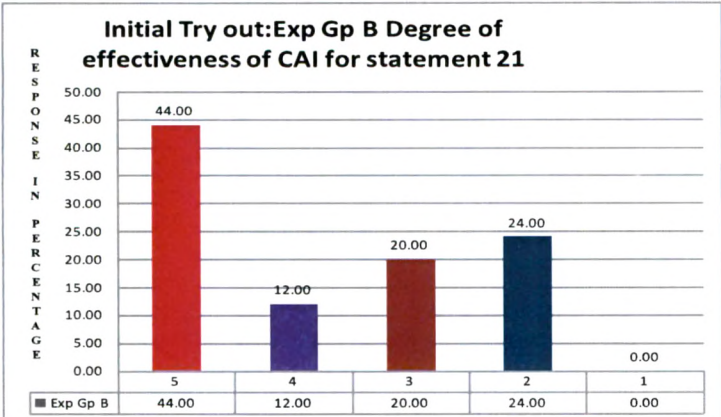


Figure 4.44 Graphical Representation of analysis of statement 21in Percentage for Exp Gp A for Initial Try-out

Data Analysis using Chi Square

- H<sub>0</sub>: Response is uniformly distributed in the 5 point scale
- H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.95 Chi Square Table for Exp Gp A for Statement 21 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	7	5.8
4	17	5.8
3	5	5.8
2	0	5.8
1	0	5.8

chi-square = 33.6

degrees of freedom = 4

probability = 0.000

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement “The language used in CAI is easy and simple to understand.”

### Experimental Group B

**Table 4.96 Chi Square Table for Exp Gp B for Statement 21 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	11	5
4	3	5
3	5	5
2	6	5
1	0	5

chi-square = 13.2

degrees of freedom = 4

probability = 0.010

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "The language used in CAI is easy and simple to understand".

**Statement 22:** The exercises given in each chapter is adequate.

Polarity: Positive

### Experimental Group A : Responses of the students in percentage

**Table 4.97 Responses of Exp Gp A students in percentage for statement 22 for Initial Try-out**

Points	Exp Gp A
5	21.43
4	28.57
3	14.29
2	25.00
1	10.71

21.43% of the students strongly agree with the statement "The exercises given in each chapter is adequate."

28.57% of the students agree with the statement "The exercises given in each chapter is adequate."

14.29% of the students not decided with the statement "The exercises given in each chapter is adequate."

25.00% of the students disagree with the statement "The exercises given in each chapter is adequate."

10.71% of the students strongly disagree with the statement “The exercises given in each chapter is adequate.”

### **Experimental Group B: Responses of the students in percentage**

**Table 4.98 Responses of Exp Gp B students in percentage for statement 22 for Initial Try-out**

Points	Exp Gp B
5	29.17
4	41.67
3	8.33
2	8.33
1	12.50

29.17% of the students strongly agree with the statement “The exercises given in each chapter is adequate.”

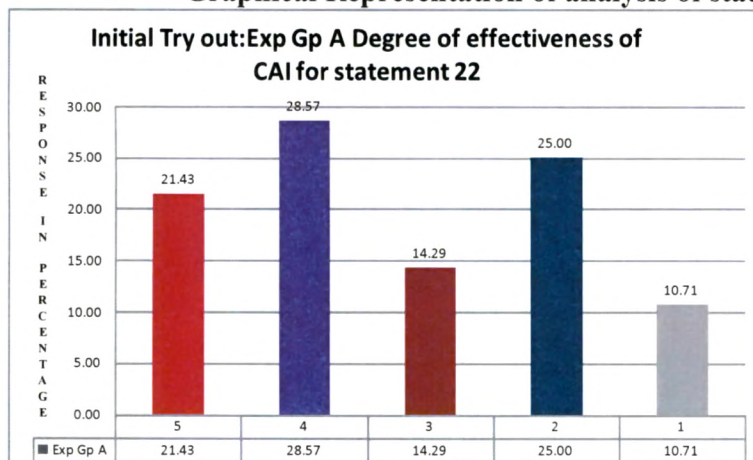
41.67% of the students agree with the statement “The exercises given in each chapter is adequate.”

8.33% of the students not decided with the statement “The exercises given in each chapter is adequate.”

8.33% of the students disagree with the statement “The exercises given in each chapter is adequate.”

12.50% of the students strongly disagree with the statement “The exercises given in each chapter is adequate.”

### **Graphical Representation of analysis of statement 22 in Percentage**



**Figure 4.45 Graphical Representation of analysis of statement 22 in Percentage for Exp Gp A for Initial Try-out**

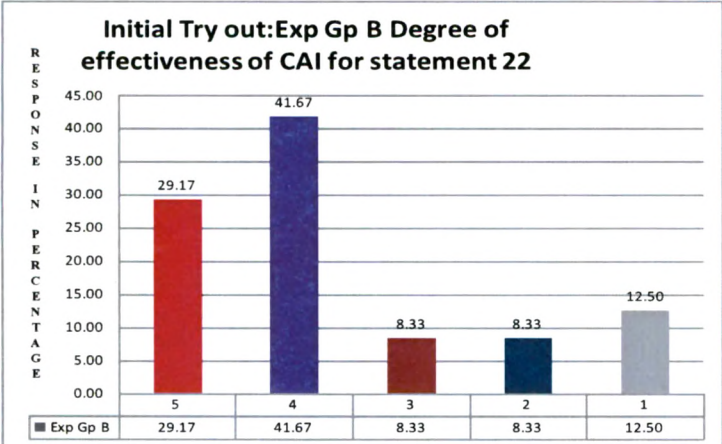


Figure 4.46 Graphical Representation of analysis of statement 22in Percentage for Exp Gp B for Initial Try-out

Data Analysis Using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.99 Chi Square Table for Exp Gp A for Statement 22 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	6	5.6
4	8	5.6
3	4	5.6
2	7	5.6
1	3	5.6

chi-square = 3.07

degrees of freedom = 4

probability = 0.546

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

**Experimental Group B**

**Table 4.100 Chi Square Table for Exp Gp B for Statement 22for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	7	4.8
4	10	4.8
3	2	4.8
2	2	4.8
1	3	4.8

chi-square = 10.583

degrees of freedom = 4

probability = 0.0317

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement “The exercises given in each chapter is adequate”.

**Statement 23:** CAI takes care of previous knowledge in the subject.

Polarity: Positive

**Experimental Group A : Responses of the students in percentage**

**Table 4.101 Responses of Exp Gp A students in percentage for statement 23 for Initial Try-out**

Points	Exp Gp A
5	21.43
4	57.14
3	21.43
2	0.00
1	0.00

21.43% of the students strongly agree with the statement “CAI takes care of previous knowledge in the subject.”

57.14% of the students agree with the statement “CAI takes care of previous knowledge in the subject.”

21.43% of the students not decided with the statement “CAI takes care of previous knowledge in the subject.”

0.00% of the students disagree with the statement “CAI takes care of previous knowledge in the subject.”



0.00% of the students strongly disagree with the statement “CAI takes care of previous knowledge in the subject.”

**Experimental Group B: Responses of the students in percentage**

**Table 4.102 Responses of Exp Gp B students in percentage for statement 23 for Initial Try-out**

Points	Exp Gp B
5	17.39
4	30.43
3	43.48
2	4.35
1	4.35

17.39% of the students strongly agree with the statement “CAI takes care of previous knowledge in the subject.”

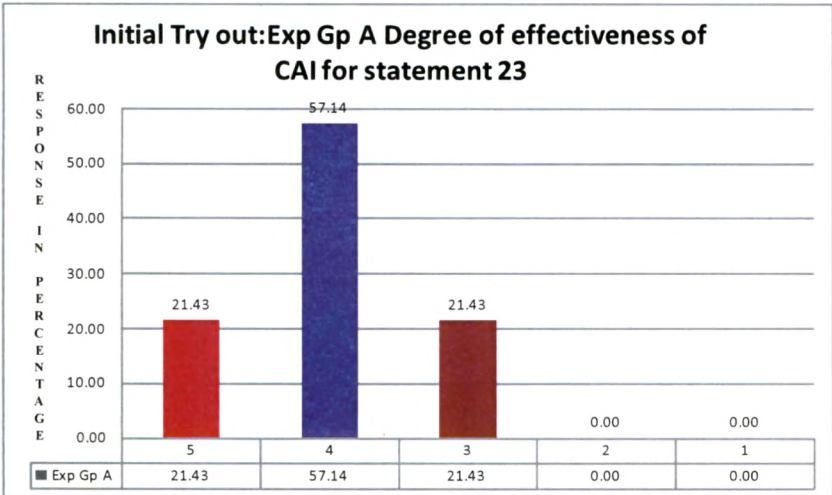
30.43% of the students agree with the statement “CAI takes care of previous knowledge in the subject.”

43.48% of the students not decided with the statement “CAI takes care of previous knowledge in the subject.”

4.35% of the students disagree with the statement “CAI takes care of previous knowledge in the subject.”

4.35% of the students strongly disagree with the statement “CAI takes care of previous knowledge in the subject.”

**Graphical Representation of analysis of statement 23 in Percentage**



**Figure 4.47 Graphical Representation of analysis of statement 23in Percentage for Exp Gp A for Initial Try-out**

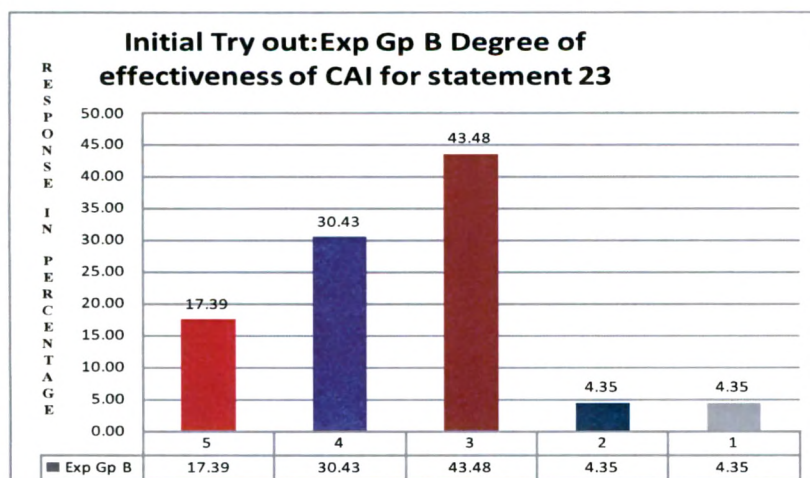


Figure 4.48 Graphical Representation of analysis of statement 23in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$  Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.103 Chi Square Table for Exp Gp A for Statement 23 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	6	5.6
4	16	5.6
3	6	5.6
2	0	5.6
1	0	5.6

chi-square = 30.6

degrees of freedom = 4

probability = 0.000

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement “CAI takes care of previous knowledge in the subject.”



### Experimental Group B

**Table 4.104 Chi Square Table for Exp Gp B for Statement 23 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	4	4.6
4	7	4.6
3	10	4.6
2	1	4.6
1	1	4.6

Chi-square = 13.3

degrees of freedom = 4

probability = 0.010

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on not decided therefore most of the students not decided with the statement "CAI takes care of previous knowledge in the subject".

**Statement 24** The solution to the problem is not easy to understand.

Polarity: Negative

### Experimental Group A : Responses of the students in percentage

**Table 4.105 Responses of Exp Gp A students in percentage for statement 24 for Initial Try-out**

Points	Exp Gp A
5	10.71
4	32.14
3	14.29
2	21.43
1	21.43

10.71% of the students strongly disagree with the statement "The solution to the problem is not easy to understand."

32.14% of the students disagree with the statement "The solution to the problem is not easy to understand."

14.29% of the students not decided with the statement "The solution to the problem is not easy to understand."

21.43% of the students agree with the statement "The solution to the problem is not easy to understand."

21.43% of the students strongly agree with the statement “The solution to the problem is not easy to understand.”

**Experimental Group B: Responses of the students in percentage**

**Table 4.106 Responses of Exp Gp B students in percentage for statement 24for Initial Try-out**

Points	Exp Gp B
5	25.00
4	29.17
3	16.67
2	16.67
1	12.50

25.00% of the students strongly disagree with the statement “The solution to the problem is not easy to understand.”

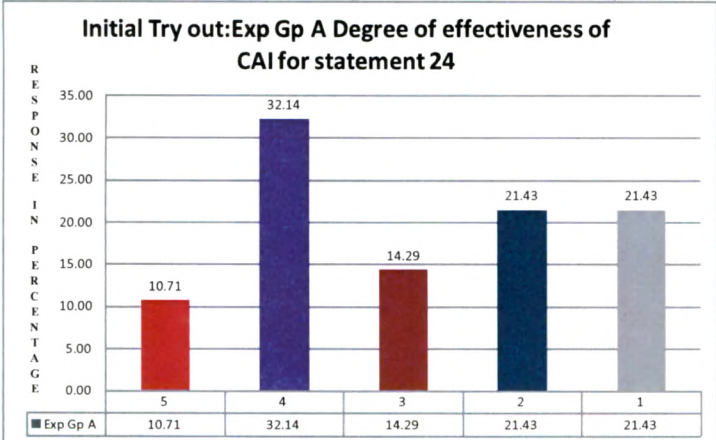
29.17% of the students disagree with the statement “The solution to the problem is not easy to understand.”

16.67% of the students not decided with the statement “The solution to the problem is not easy to understand.”

16.67% of the students agree with the statement “The solution to the problem is not easy to understand.”

12.50% of the students strongly agree with the statement “The solution to the problem is not easy to understand.”

**Graphical Representation of analysis of statement 24 in Percentage**



**Figure 4.49 Graphical Representation of analysis of statement 24 in Percentage for Exp Gp A for Initial Try-out**

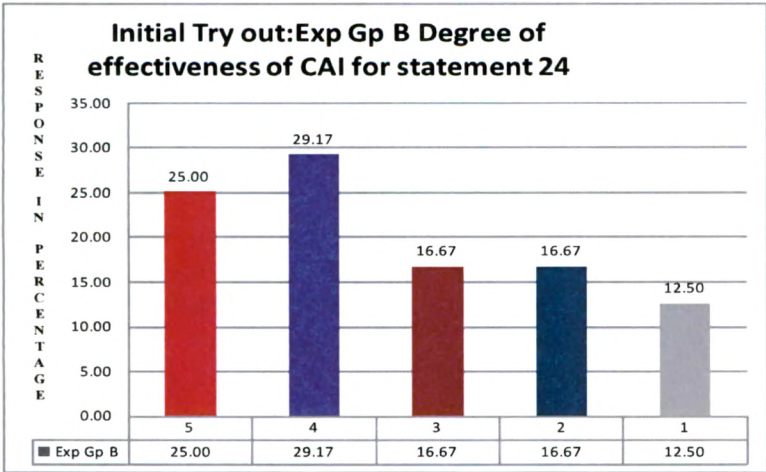


Figure 4.50 Graphical Representation of analysis of statement 24 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.107 Chi Square Table for Exp Gp A for Statement 24 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	3	5.6
4	9	5.6
3	4	5.6
2	6	5.6
1	6	5.6

chi-square = 3.79

degrees of freedom = 4

probability = 0.436

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

**Table 4.108 Chi Square Table for Exp Gp B for Statement 24 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	6	4.8
4	7	4.8
3	4	4.8
2	4	4.8
1	3	4.8

chi-square = 2.25

degrees of freedom = 4

probability = 0.690

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 25:** The exercises helped in understanding the chapter in depth.

Polarity: Positive

### Experimental Group A : Responses of the students in percentage

**Table 4.109 Responses of Exp Gp A students in percentage for statement 25 for Initial Try-out**

Points	Exp Gp A
5	10.71
4	21.43
3	53.57
2	10.71
1	3.57

10.71% of the students strongly agree with the statement “The exercises helped in understanding the chapter in depth.”

21.43% of the students agree with the statement “The exercises helped in understanding the chapter in depth.”

53.57% of the students not decided with the statement “The exercises helped in understanding the chapter in depth.”

10.71% of the students disagree with the statement “The exercises helped in understanding the chapter in depth.”

3.57% of the students strongly disagree with the statement “The exercises helped in understanding the chapter in depth.”

**Experimental Group B: Responses of the students in percentage**

**Table 4.110 Responses of Exp Gp B students in percentage for statement 25 for Initial Try-out**

Points	Exp Gp B
5	33.33
4	20.83
3	12.50
2	29.17
1	4.17

33.33% of the students strongly agree with the statement “The exercises helped in understanding the chapter in depth.”

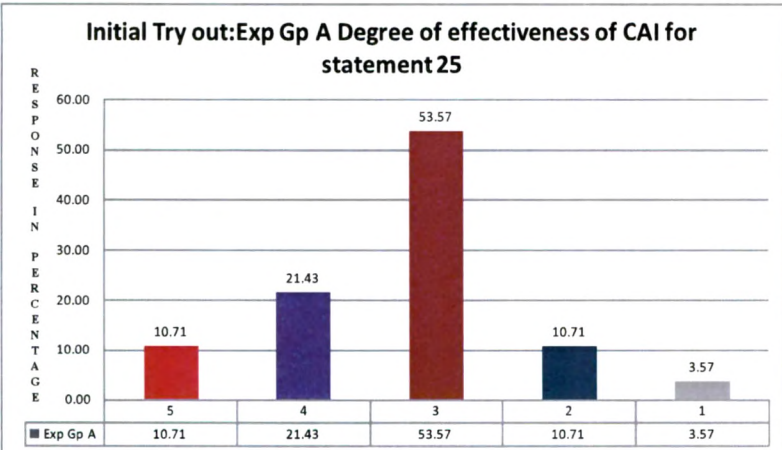
20.83% of the students agree with the statement “The exercises helped in understanding the chapter in depth.”

12.50% of the students not decided with the statement “The exercises helped in understanding the chapter in depth.”

29.17% of the students disagree with the statement “The exercises helped in understanding the chapter in depth.”

4.17% of the students strongly disagree with the statement “The exercises helped in understanding the chapter in depth.”

**Graphical Representation of analysis of statement 25 in Percentage**



**Figure 4.51 Graphical Representation of analysis of statement 25 in Percentage for Exp Gp A for Initial Try-out**

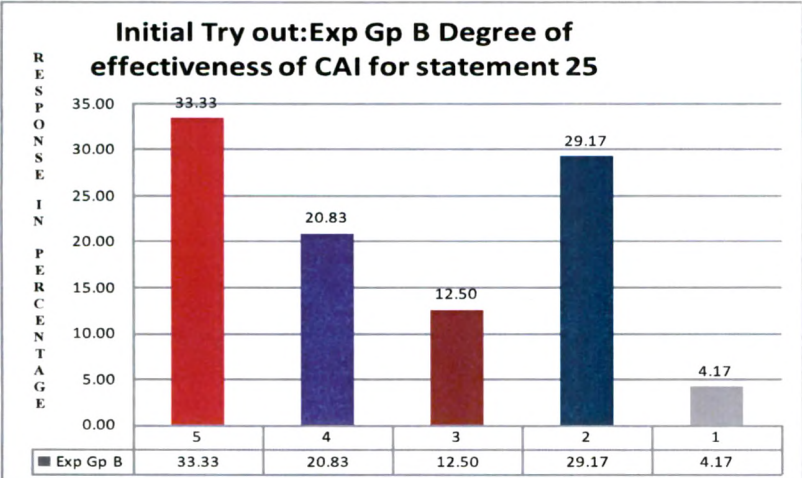


Figure 4.52 Graphical Representation of analysis of statement 25 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.111 Chi Square Table for Exp Gp A for Statement 25 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	3	5.6
4	6	5.6
3	15	5.6
2	3	5.6
1	1	5.6

chi-square = 22.0

degrees of freedom = 4

probability = 0.000

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on not decided therefore most of the students not decided with the statement “The exercises helped in understanding the chapter in depth.”



**Experimental Group B**

**Table 4.112 Chi Square Table for Exp Gp B for Statement 25 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	8	4.8
4	5	4.8
3	3	4.8
2	7	4.8
1	1	4.8

chi-square = 6.83

degrees of freedom = 4

probability = 0.145

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 26** Solutions didn't help me whenever I was not able to solve the problem.

Polarity: Negative.

**Experimental Group A : Responses of the students in percentage**

**Table 4.113 Responses of Exp Gp A students in percentage for statement 26 for Initial Try-out**

Points	Exp Gp A
5	10.71
4	42.86
3	14.29
2	17.86
1	14.29

10.71% of the students strongly disagree with the statement “Solutions didn't help me whenever I was not able to solve the problem.”

42.86% of the students disagree with the statement “Solutions didn't help me whenever I was not able to solve the problem.”

14.29% of the students not decided with the statement “Solutions didn't help me whenever I was not able to solve the problem.”

17.86% of the students agree with the statement “Solutions didn't help me whenever I was not able to solve the problem.”



14.29% of the students strongly agree with the statement “Solutions didn’t help me whenever I was not able to solve the problem.”

### **Experimental Group B: Responses of the students in percentage**

**Table 4.114 Responses of Exp Gp B students in percentage for statement 26 for Initial Try-out**

Points	Exp Gp B
5	39.13
4	17.39
3	8.70
2	21.74
1	13.04

39.13% of the students strongly disagree with the statement “Solutions didn’t help me whenever I was not able to solve the problem.”

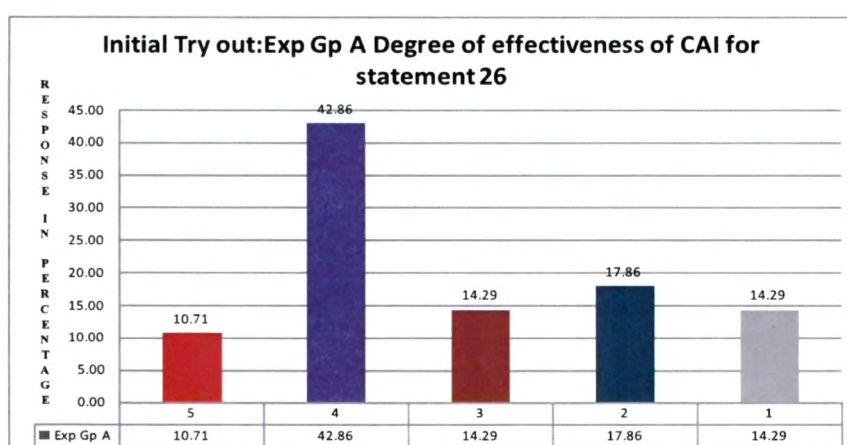
17.39% of the students disagree with the statement “Solutions didn’t help me whenever I was not able to solve the problem.”

8.70% of the students not decided with the statement “Solutions didn’t help me whenever I was not able to solve the problem.”

21.74% of the students agree with the statement “Solutions didn’t help me whenever I was not able to solve the problem.”

13.04% of the students strongly agree with the statement “Solutions didn’t help me whenever I was not able to solve the problem.”

### **Graphical Representation of analysis of statement 26 in Percentage**



**Figure 4.53 Graphical Representation of analysis of statement 26 in Percentage for Exp Gp A for Initial Try-out**

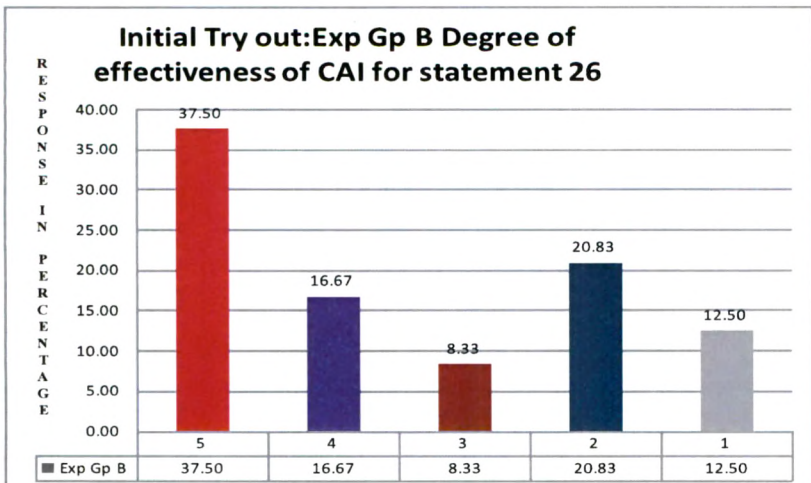


Figure 4.54 Graphical Representation of analysis of statement 26 in Percentage for Exp Gp B for Initial Try-out

**Data Analysis using Chi Square**

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

**Experimental Group A**

Table 4.115 Chi Square Table for ExpGp A for Statement 26 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	3	5.6
4	12	5.6
3	4	5.6
2	5	5.6
1	4	5.6

chi-square = 9.5

degrees of freedom = 4

probability = 0.0497

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement “Solutions didn’t help me whenever I was not able to solve the problem.”

### Experimental Group B

Table 4.116 Chi Square Table for Exp Gp B for Statement 26 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	9	4.6
4	4	4.6
3	2	4.6
2	5	4.6
1	3	4.6

chi-square = 6.35

degrees of freedom = 4

probability = 0.175

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 27:** Break given in CAI helped me to refresh my mind.

Polarity: Positive

### Experimental Group A : Responses of the students in percentage

Table 4.117 Responses of Exp Gp A students in percentage for statement 27 for Initial Try-out

Points	Exp Gp A
5	18.52
4	44.44
3	25.93
2	11.11
1	0.00

18.52% of the students strongly agree with the statement "Break given in CAI helped me to refresh my mind."

44.44% of the students agree with the statement "Break given in CAI helped me to refresh my mind."

25.93% of the students not decided with the statement "Break given in CAI helped me to refresh my mind."

11.11% of the students disagree with the statement "Break given in CAI helped me to refresh my mind."

0.00% of the students strongly disagree with the statement “Break given in CAI helped me to refresh my mind.”

### Experimental Group B: Responses of the students in percentage

Table 4.118 Responses of Exp Gp B students in percentage for statement 27 for Initial Try-out

Points	Exp Gp B
5	37.50
4	25.00
3	29.17
2	0.00
1	8.33

37.50% of the students strongly agree with the statement “Break given in CAI helped me to refresh my mind.”

25.00% of the students agree with the statement “Break given in CAI helped me to refresh my mind.”

29.17% of the students not decided with the statement “Break given in CAI helped me to refresh my mind.”

0.00% of the students disagree with the statement “Break given in CAI helped me to refresh my mind.”

8.33% of the students strongly disagree with the statement “Break given in CAI helped me to refresh my mind.”

### Graphical Representation of analysis of statement 27 in Percentage

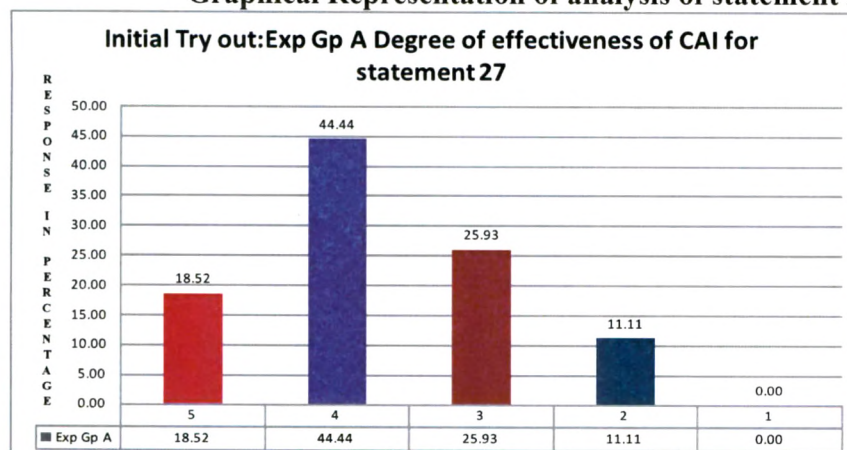


Figure 4.55 Graphical Representation of analysis of statement 27 in Percentage for Exp Gp A for Initial Try-out

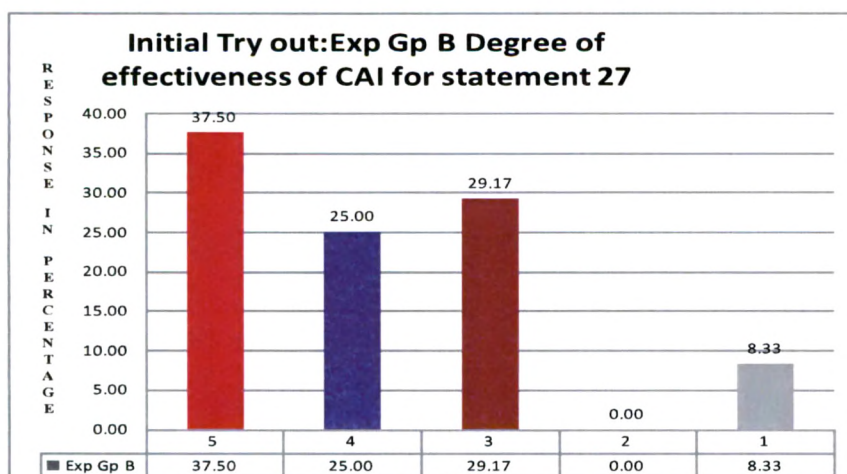


Figure 4.56 Graphical Representation of analysis of statement 27 in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.119 Chi Square Table for Exp Gp A for Statement 27 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	5	5.4
4	12	5.4
3	7	5.4
2	3	5.4
1	0	5.4

chi-square = 15.0

degrees of freedom = 4

probability = 0.005

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement “Break given in CAI helped me to refresh my mind”



### Experimental Group B

**Table 4.120 Chi Square Table for Exp Gp B for Statement 27 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	9	4.8
4	6	4.8
3	7	4.8
2	0	4.8
1	2	4.8

chi-square = 11.4

degrees of freedom = 4

probability = 0.022

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "Break given in CAI helped me to refresh my mind".

**Statement 28:** I am feeling tired while going through the slide.

Polarity: Negative

### Experimental Group A : Responses of the students in percentage

**Table 4.121 Responses of Exp Gp A students in percentage for statement 28 for Initial Try-out**

Points	Exp Gp A
5	14.81
4	25.93
3	29.63
2	18.52
1	11.11

14.81% of the students strongly disagree with the statement "I am feeling tired while going through the slide."

25.93% of the students disagree with the statement "I am feeling tired while going through the slide."

29.63% of the students not decided with the statement "I am feeling tired while going through the slide."

18.52% of the students agree with the statement "I am feeling tired while going through the slide."

11.11% of the students strongly agree with the statement “I am feeling tired while going through the slide.”

### Experimental Group B: Responses of the students in percentage

**Table 4.122 Responses of Exp Gp B students in percentage for statement 28 for Initial Try-out**

Points	Exp Gp B
5	24.00
4	40.00
3	24.00
2	8.00
1	4.00

24.00% of the students strongly disagree with the statement “I am feeling tired while going through the slide.”

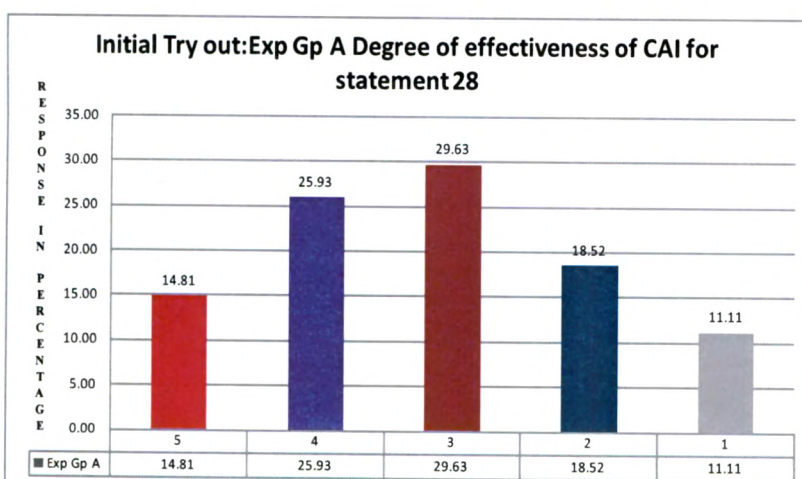
40.00% of the students disagree with the statement “I am feeling tired while going through the slide.”

24.00% of the students not decided with the statement “I am feeling tired while going through the slide.”

8.00% of the students agree with the statement “I am feeling tired while going through the slide.”

4.00% of the students strongly agree with the statement “I am feeling tired while going through the slide.”

### Graphical Representation of analysis of statement 28 in Percentage



**Figure 4.57 Graphical Representation of analysis of statement 28 in Percentage for Exp Gp A for Initial Try-out**



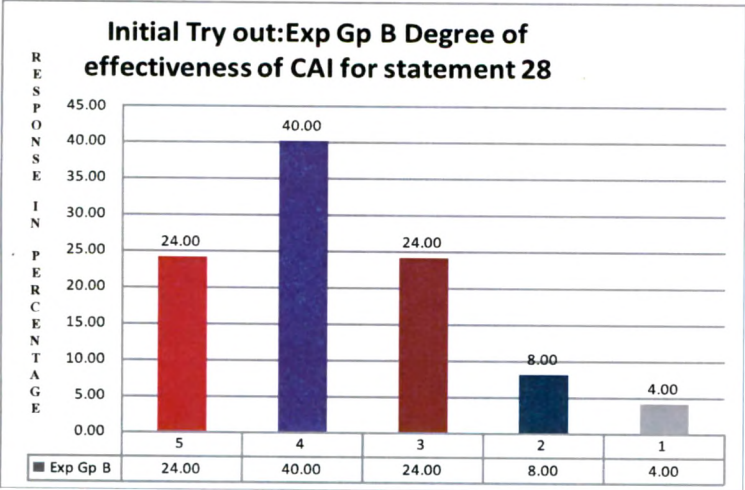


Figure 4.58 Graphical Representation of analysis of statement 28 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.123 Chi Square Table for Exp Gp A for Statement 28 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	4	5.4
4	7	5.4
3	8	5.4
2	5	5.4
1	3	5.4

chi-square = 3.19

degrees of freedom = 4

probability = 0.527

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

**Table 4.124 Chi Square Table for Exp Gp B for Statement 28 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	6	5
4	10	5
3	6	5
2	2	5
1	1	5

chi-square = 10.4

degrees of freedom = 4

probability = 0.0342

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "I am feeling tired while going through the slide".

**Statement 29:** Animation shown in CAI is appropriate to help me in understanding the concept.

Polarity: Positive

### Experimental Group A : Responses of the students in percentage

**Table 4.125 Responses of Exp Gp A students in percentage for statement 29 for Initial Try-out**

Points	Exp Gp A
5	44.44
4	33.33
3	18.52
2	3.70
1	0.00

44.44% of the students strongly agree with the statement "Animation shown in CAI is appropriate to help me in understanding the concept."

33.33% of the students agree with the statement "Animation shown in CAI is appropriate to help me in understanding the concept."

18.52% of the students not decided with the statement "Animation shown in CAI is appropriate to help me in understanding the concept."

3.70% of the students disagree with the statement "Animation shown in CAI is appropriate to

help me in understanding the concept.”

0.00% of the students strongly disagree with the statement “Animation shown in CAI is appropriate to help me in understanding the concept.”

**Experimental Group B: Responses of the students in percentage**

**Table 4.126 Responses of Exp Gp B students in percentage for statement 29 for Initial Try-out**

Points	Exp Gp B
5	45.83
4	20.83
3	16.67
2	12.50
1	4.17

45.83% of the students strongly agree with the statement “Animation shown in CAI is appropriate to help me in understanding the concept.”

20.83% of the students agree with the statement “Animation shown in CAI is appropriate to help me in understanding the concept.”

16.67% of the students not decided with the statement “Animation shown in CAI is appropriate to help me in understanding the concept.”

12.50% of the students disagree with the statement “Animation shown in CAI is appropriate to help me in understanding the concept.”

4.17% of the students strongly disagree with the statement “Animation shown in CAI is appropriate to help me in understanding the concept.”

**Graphical Representation of analysis of statement 29 in Percentage**

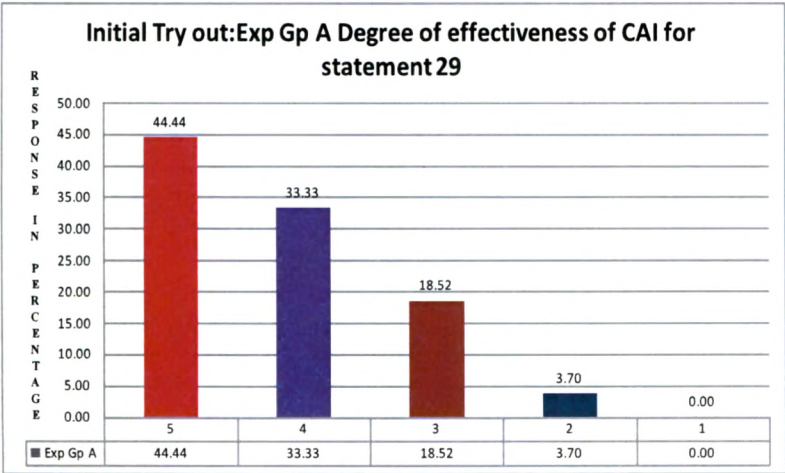


Figure 4.59 Graphical Representation of analysis of statement 29 in Percentage for Exp Gp A for Initial Try-out

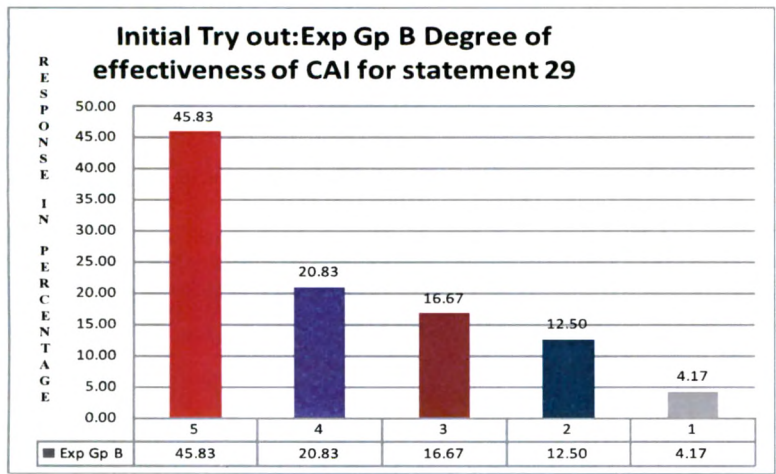


Figure 4.60 Graphical Representation of analysis of statement 29 in Percentage for Exp Gp B for Initial Try-out

**Data Analysis using Chi Square**

Ho: Response is uniformly distributed in the 5 point scale

H1: Response is not uniformly distributed in the 5 point scale

**Experimental Group A**

Table 4.127 Chi Square Table for Exp Gp A for Statement 29 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	12	5.4
4	9	5.4
3	5	5.4
2	1	5.4
1	0	5.4

chi-square = 19.5

degrees of freedom = 4

probability = 0.001

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement “Animation shown in CAI is appropriate to help me in understanding the concept”

**Experimental Group B**

**Table 4.128 Chi Square Table for Exp Gp B for Statement 29 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	11	4.8
4	5	4.8
3	4	4.8
2	3	4.8
1	1	4.8

chi-square = 11.8

degrees of freedom = 4

probability = 0.019

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement “Animation shown in CAI is appropriate to help me in understanding the concept”.

**Statement 30:** Topic is not introduced properly.

Polarity: Negative

**Experimental Group A : Responses of the students in percentage**

**Table 4.129 Responses of Exp Gp A students in percentage for statement 30 for Initial Try-out**

Points	Exp Gp A
5	14.81
4	40.74
3	25.93
2	18.52
1	0.00

14.81% of the students strongly disagree with the statement “Topic is not introduced properly.”

40.74% of the students disagree with the statement “Topic is not introduced properly.”

25.93% of the students not decided with the statement “Topic is not introduced properly.”

18.52% of the students agree with the statement “Topic is not introduced properly.”

0.00% of the students strongly agree with the statement “Topic is not introduced properly.”



### Experimental Group B: Responses of the students in percentage

Table 4.130 Responses of Exp Gp B students in percentage for statement 30 for Initial Try-out

Points	Exp Gp B
5	44.00
4	16.00
3	24.00
2	8.00
1	8.00

44.00% of the students strongly disagree with the statement “Topic is not introduced properly.”

16.00% of the students disagree with the statement “Topic is not introduced properly.”

24.00% of the students not decided with the statement “Topic is not introduced properly.”

8.00% of the students agree with the statement “Topic is not introduced properly.”

8.00% of the students strongly agree with the statement “Topic is not introduced properly.”

#### Graphical Representation of analysis of statement 30 in Percentage

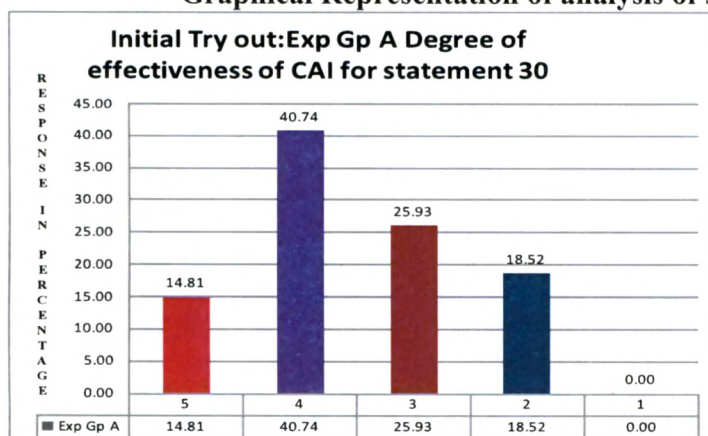


Figure 4.61 Graphical Representation of analysis of statement 30 in Percentage for Exp Gp A for Initial Try-out

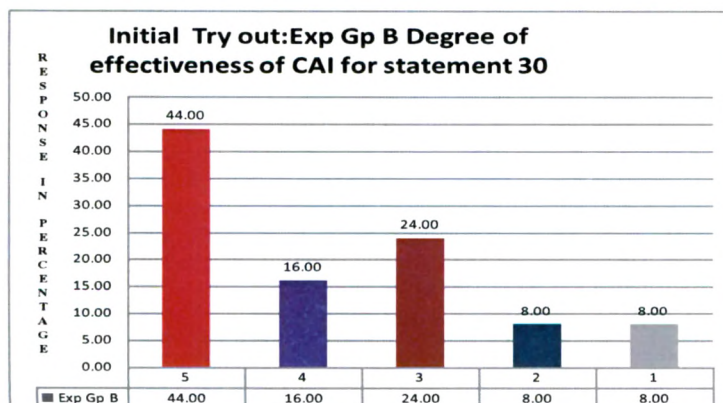


Figure 4.62 Graphical Representation of analysis of statement 30 in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.131 Chi Square Table for Exp Gp A for Statement 30 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	4	5.4
4	11	5.4
3	7	5.4
2	5	5.4
1	0	5.4

chi-square = 12.1

degrees of freedom = 4

probability = 0.017

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on disagree therefore most of the students disagree with the statement "Topic is not introduced properly."

### Experimental Group B

**Table 4.132 Chi Square Table for Exp Gp B for Statement 30 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	11	5
4	4	5
3	6	5
2	2	5
1	2	5

chi-square = 11.2

degrees of freedom = 4

probability = 0.024

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "Topic is not introduced properly".



**Statement 31:** CAI does not take care of previous knowledge (percentage) needed to understand the present concept.

Polarity: Negative

**Experimental Group A : Responses of the students in percentage**

**Table 4.133 Responses of Exp Gp A students in percentage for statement 31 for Initial Try-out**

Points	Exp Gp A
5	14.81
4	29.63
3	18.52
2	18.52
1	18.52

14.81% of the students strongly disagree with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

29.63% of the students disagree with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

18.52% of the students not decided with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

18.52% of the students agree with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

18.52% of the students strongly agree with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

**Experimental Group B: Responses of the students in percentage**

**Table 4.134 Responses of Exp Gp B students in percentage for statement 31 for Initial Try-out**

Points	Exp Gp B
5	26.09
4	8.70
3	21.74
2	26.09
1	17.39

26.09% of the students strongly disagree with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

8.70% of the students disagree with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

21.74% of the students not decided with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

26.09% of the students agree with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

17.39% of the students strongly agree with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

**Graphical Representation of analysis of statement 31 in Percentage**

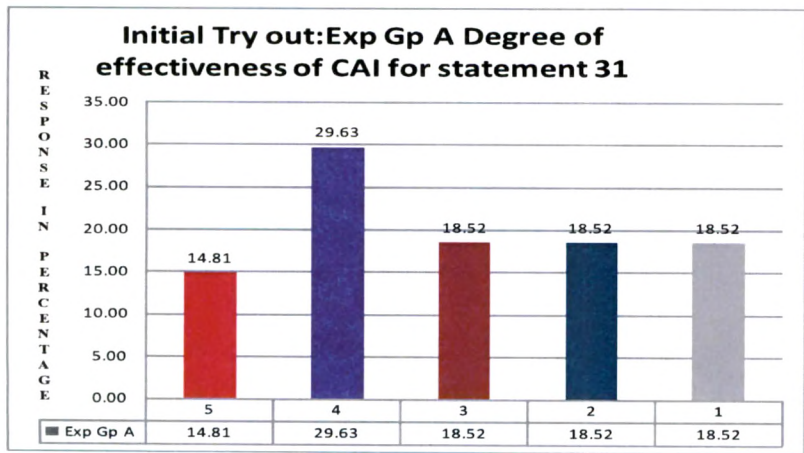


Figure 4.63 Graphical Representation of analysis of statement 31 in Percentage for Exp Gp A for Initial Try-out

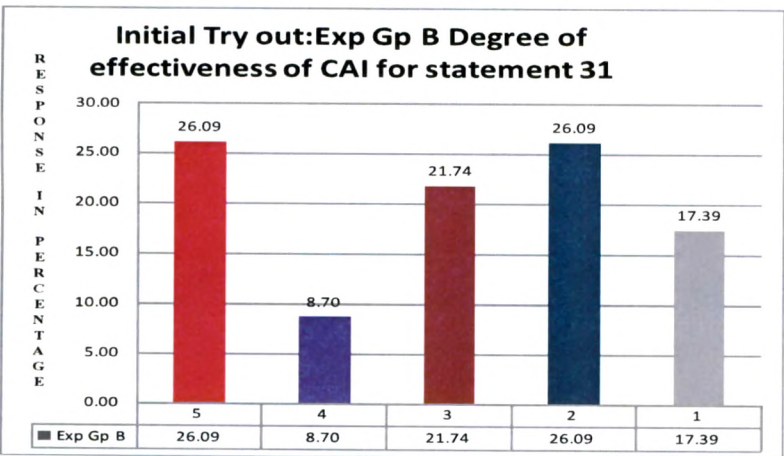


Figure 4.64 Graphical Representation of analysis of statement 31 in Percentage for Exp Gp B for Initial Try-out

**Data Analysis using Chi Square**

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

**Experimental Group A**

**Table 4.135 Chi Square Table for Exp Gp A for Statement 31 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	4	5.4
4	8	5.4
3	5	5.4
2	5	5.4
1	5	5.4

chi-square = 1.70

degrees of freedom = 4

probability = 0.790

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### **Experimental Group B**

**Table 4.136 Chi Square Table for Exp Gp B for Statement 31 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	6	4.6
4	2	4.6
3	5	4.6
2	6	4.6
1	4	4.6

chi-square = 2.43

degrees of freedom = 4

probability = 0.656

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 32:** Enough revision is not done in CAI after the topic simple interest.

Polarity: Negative

### **Experimental Group A : Responses of the students in percentage**

**Table 4.137 Responses of Exp Gp A students in percentage for statement 32 for Initial Try-out**

Points	Exp Gp A
5	18.52
4	18.52
3	14.81
2	22.22
1	25.93

18.52% of the students strongly disagree with the statement “Enough revision is not done in CAI after the topic simple interest.”

18.52% of the students disagree with the statement “Enough revision is not done in CAI after the topic simple interest.”

14.81% of the students not decided with the statement “Enough revision is not done in CAI after the topic simple interest.”

22.22% of the students agree with the statement “Enough revision is not done in CAI after the topic simple interest.”

25.93% of the students strongly agree with the statement “Enough revision is not done in CAI after the topic simple interest.”

### **Experimental Group B: Responses of the students in percentage**

**Table 4.138 Responses of Exp Gp B students in percentage for statement 32 for Initial Try-out**

Points	Exp Gp B
5	20.00
4	16.00
3	24.00
2	12.00
1	28.00

20.00% of the students strongly disagree with the statement “Enough revision is not done in CAI after the topic simple interest.”

16.00% of the students disagree with the statement “Enough revision is not done in CAI after the topic simple interest.”

24.00% of the students not decided with the statement “Enough revision is not done in CAI after the topic simple interest.”

12.00% of the students agree with the statement “Enough revision is not done in CAI after the topic

simple interest.”

28.00% of the students strongly agree with the statement “Enough revision is not done in CAI after the topic simple interest.”

Graphical Representation of analysis of statement 32 in Percentage

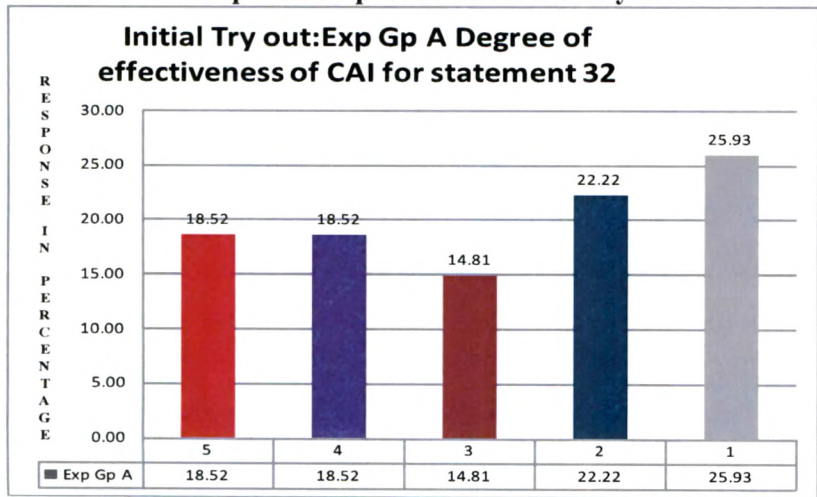


Figure 4.65 Graphical Representation of analysis of statement 32 in Percentage for Exp Gp A for Initial Try-out

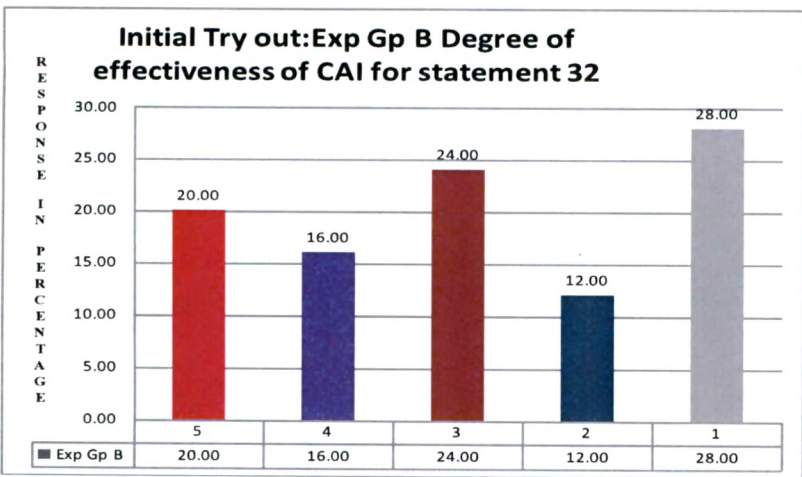


Figure 4.66 Graphical Representation of analysis of statement 32 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

**Table 4.139 Chi Square Table for ExpGp A for Statement 32 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	5	5.4
4	5	5.4
3	4	5.4
2	6	5.4
1	7	5.4

chi-square = 0.963

degrees of freedom = 4

probability = 0.915

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### **Experimental Group B**

**Table 4.140 Chi Square Table for Exp Gp B for Statement 32 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	5	5
4	4	5
3	6	5
2	3	5
1	7	5

chi-square = 2.00

degrees of freedom = 4

probability = 0.736

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 33:** Enough revision is not done in CAI after the topic compound interest.

Polarity: Negative

### **Experimental Group A : Responses of the students in percentage**

**Table 4.141 Responses of Exp Gp A students in percentage for statement 33 for Initial Try-out**

Points	Exp Gp A
5	7.41
4	18.52
3	22.22
2	22.22
1	29.63

7.41% of the students strongly disagree with the statement “Enough revision is not done in CAI after the topic compound interest.”

18.52% of the students disagree with the statement “Enough revision is not done in CAI after the topic compound interest.”

22.22% of the students not decided with the statement “Enough revision is not done in CAI after the topic compound interest.”

22.22% of the students agree with the statement “Enough revision is not done in CAI after the topic compound interest.”

29.63% of the students strongly agree with the statement “Enough revision is not done in CAI after the topic compound interest.”

### **Experimental Group B: Responses of the students in percentage**

**Table 4.142 Responses of Exp Gp B students in percentage for statement 33 for Initial Try-out**

Points	Exp Gp B
5	16.00
4	20.00
3	24.00
2	8.00
1	32.00

16.00% of the students strongly disagree with the statement “Enough revision is not done in CAI after the topic compound interest.”

20.00% of the students disagree with the statement “Enough revision is not done in CAI after the topic compound interest.”

24.00% of the students not decided with the statement “Enough revision is not done in CAI after the topic compound interest.”

8.00% of the students agree with the statement “Enough revision is not done in CAI after the topic



compound interest.”

32.00% of the students strongly agree with the statement “Enough revision is not done in CAI after the topic compound interest.”

#### Graphical Representation of analysis of statement 33 in Percentage

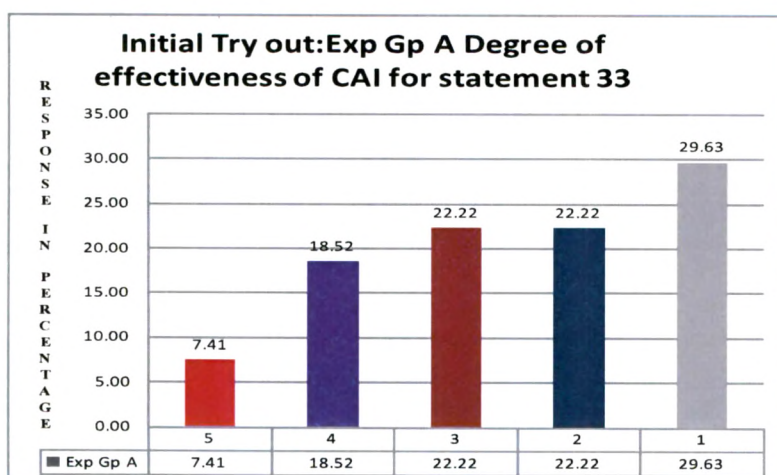


Figure 4.67 Graphical Representation of analysis of statement 33 in Percentage for Exp Gp A for Initial Try-out

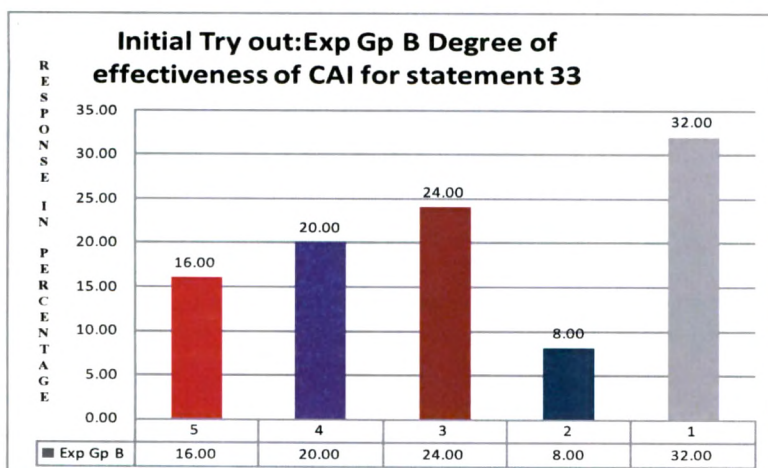


Figure 4.68 Graphical Representation of analysis of statement 33 in Percentage for Exp Gp B for Initial Try-out

#### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

#### Experimental Group A

**Table 4.143 Chi Square Table for ExpGp A for Statement 33 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	2	5.4
4	5	5.4
3	6	5.4
2	6	5.4
1	8	5.4

chi-square = 3.56

degrees of freedom = 4

probability = 0.469

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

#### **Experimental Group B**

**Table 4.144 Chi Square Table for Exp Gp B for Statement 33 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	4	5
4	5	5
3	6	5
2	2	5
1	8	5

chi-square = 4.00

degrees of freedom = 4

probability = 0.406

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 34:** Enough revision is not done in CAI after the topic profit and loss.

Polarity: Negative

### **Experimental Group A : Responses of the students in percentage**

**Table 4.145 Responses of Exp Gp A students in percentage for statement 34 for Initial Try-out**

Points	Exp Gp A
5	14.81
4	14.81
3	22.22
2	37.04
1	11.11

14.81% of the students strongly disagree with the statement “Enough revision is not done in CAI after the topic profit and loss.”

14.81% of the students disagree with the statement “Enough revision is not done in CAI after the topic profit and loss.”

22.22% of the students not decided with the statement “Enough revision is not done in CAI after the topic profit and loss.”

37.04% of the students agree with the statement “Enough revision is not done in CAI after the topic profit and loss.”

11.11% of the students strongly agree with the statement “Enough revision is not done in CAI after the topic profit and loss.”

### **Experimental Group B : Responses of the students in percentage**

**Table 4.146 Responses of Exp Gp B students in percentage for statement 34 for Initial Try-out**

Points	Exp Gp B
5	21.74
4	13.04
3	26.09
2	21.74
1	17.39

21.74% of the students strongly disagree with the statement “Enough revision is not done in CAI after the topic profit and loss.”

13.04% of the students disagree with the statement “Enough revision is not done in CAI after the topic profit and loss.”

26.09% of the students not decided with the statement “Enough revision is not done in CAI after the topic profit and loss.”

21.74% of the students agree with the statement “Enough revision is not done in CAI after the topic

profit and loss.”

17.39% of the students strongly agree with the statement “Enough revision is not done in CAI after the topic profit and loss.”

**Graphical Representation of analysis of statement 34 in Percentage**

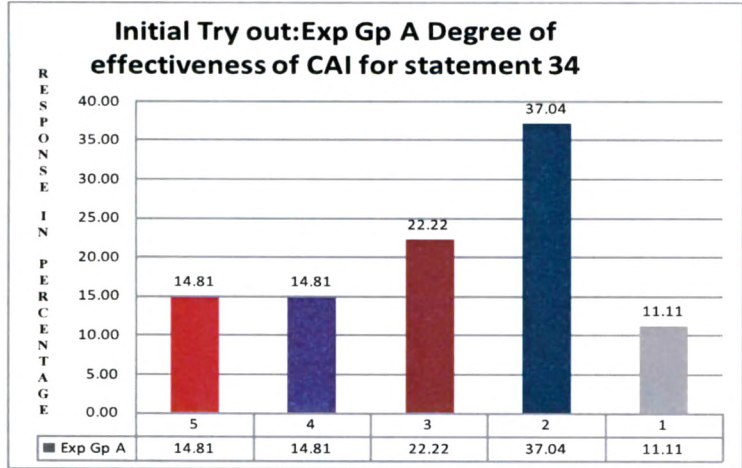


Figure 4.69 Graphical Representation of analysis of statement 34 in Percentage for Exp Gp A for Initial Try-out

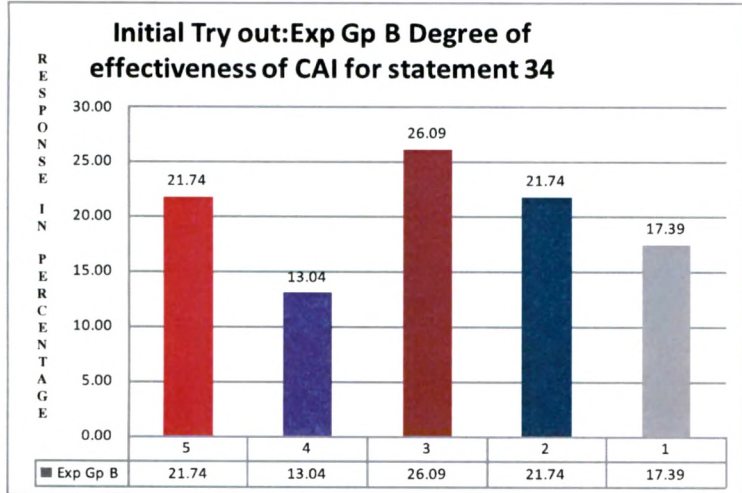


Figure 4.70 Graphical Representation of analysis of statement 34 in Percentage for Exp Gp B for Initial Try-out

**Data Analysis using Chi Square**

$H_0$  Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

**Experimental Group A**

**Table 4.147 Chi Square Table for Exp Gp A for Statement 34 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	4	5.4
4	4	5.4
3	6	5.4
2	10	5.4
1	3	5.4

chi-square = 5.78

degrees of freedom = 4

probability = 0.216

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### **Experimental Group B**

**Table 4.148 Chi Square Table for Exp Gp A for Statement 34 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	5	4.6
4	3	4.6
3	6	4.6
2	5	4.6
1	4	4.6

chi-square = 1.13

degrees of freedom = 4

probability = 0.889

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 35:** Remedial (re teaching the difficult concept which is not understood by you)teaching is not done.

Polarity: Negative

### **Experimental Group A : Responses of the students in percentage**

**Table 4.149 Responses of Exp Gp A students in percentage for statement 35 for Initial Try-out**

Points	Exp Gp A
5	11.11
4	22.22
3	29.63
2	29.63
1	7.41

11.11% of the students strongly disagree with the statement“Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.”

22.22% of the students disagree with the statement“Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.”

29.63%of the students not decided with the statement“Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.”

29.63%of the students agree with the statement“Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.”

7.41%of the students strongly agree with the statement“Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.”

#### **Experimental Group B : Responses of the students in percentage**

**Table 4.150 Responses of Exp Gp B students in percentage for statement 35 for Initial Try-out**

Points	Exp Gp B
5	21.74
4	8.70
3	13.04
2	30.43
1	26.09

21.74% of the students strongly disagree with the statement“Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.”

8.70% of the students disagree with the statement“Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.”

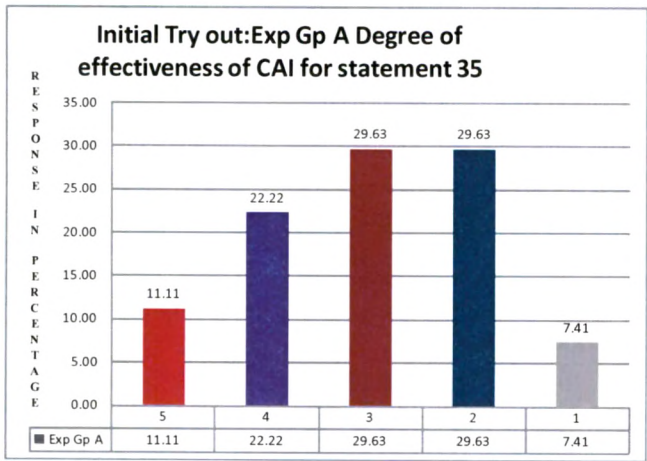
13.04%of the students not decided with the statement“Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.”

30.43%of the students agree with the statement“Remedial (re teaching the difficult concept which is

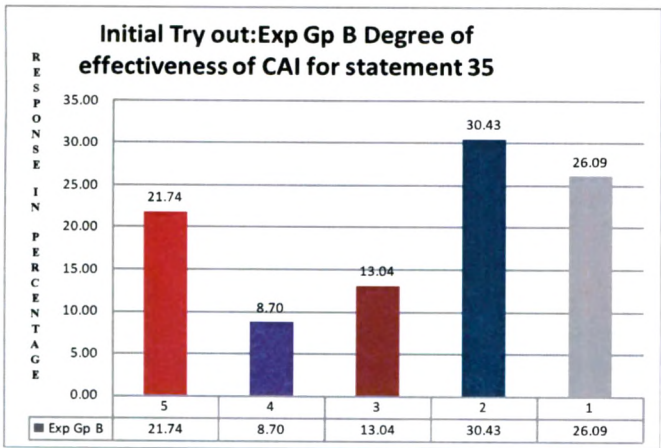
not understood by you) teaching is not done.”

26.09%of the students strongly agree with the statement“Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.”

**Graphical Representation of analysis of statement 35**



**Figure 4.71 Graphical Representation of analysis of statement 35 in Percentage for Exp Gp A for Initial Tryout**



**Figure 4.72 Graphical Representation of analysis of statement 35 in Percentage for Exp Gp B for Initial Tryout**

**Data Analysis using Chi Square**

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

**Experimental Group A**



**Table 4.151 Chi Square Table for Exp Gp A for Statement 35 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	3	5.4
4	6	5.4
3	8	5.4
2	8	5.4
1	2	5.4

chi-square = 5.78

degrees of freedom = 4

probability = 0.216

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### **Experimental Group B**

**Table 4.152 Chi Square Table for Exp Gp B for Statement 35 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	5	4.6
4	2	4.6
3	3	4.6
2	7	4.6
1	6	4.6

chi-square = 3.74

degrees of freedom = 4

probability = 0.442

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 36:** I have to read the slide many times to understand what is being said as there was no clarity.

Polarity: Negative

### **Experimental Group A : Responses of the students in percentage**

**Table 4.153 Responses of Exp Gp A students in percentage for statement 36 for Initial Try-out**

Points	Exp Gp A
5	7.41
4	14.81
3	29.63
2	33.33
1	14.81

7.41% of the students strongly disagree with the statement "I have to read the slide many times to understand what is being said as there was no clarity."

14.81% of the students disagree with the statement "I have to read the slide many times to understand what is being said as there was no clarity."

29.63% of the students not decided with the statement "I have to read the slide many times to understand what is being said as there was no clarity."

33.33% of the students agree with the statement "I have to read the slide many times to understand what is being said as there was no clarity."

14.81% of the students strongly agree with the statement "I have to read the slide many times to understand what is being said as there was no clarity."

#### **Experimental Group B : Responses of the students in percentage**

**Table 4.154 Responses of Exp Gp B students in percentage for statement 36 for Initial Try-out**

Points	Exp Gp B
5	12.50
4	12.50
3	29.17
2	33.33
1	12.50

12.50% of the students strongly disagree with the statement "I have to read the slide many times to understand what is being said as there was no clarity."

12.50% of the students disagree with the statement "I have to read the slide many times to understand what is being said as there was no clarity."

29.17% of the students not decided with the statement "I have to read the slide many times to understand what is being said as there was no clarity."

33.33% of the students agree with the statement "I have to read the slide many times to understand what is being said as there was no clarity."

12.50% of the students strongly agree with the statement “I have to read the slide many times to understand what is being said as there was no clarity.”

Graphical Representation of analysis of statement 36

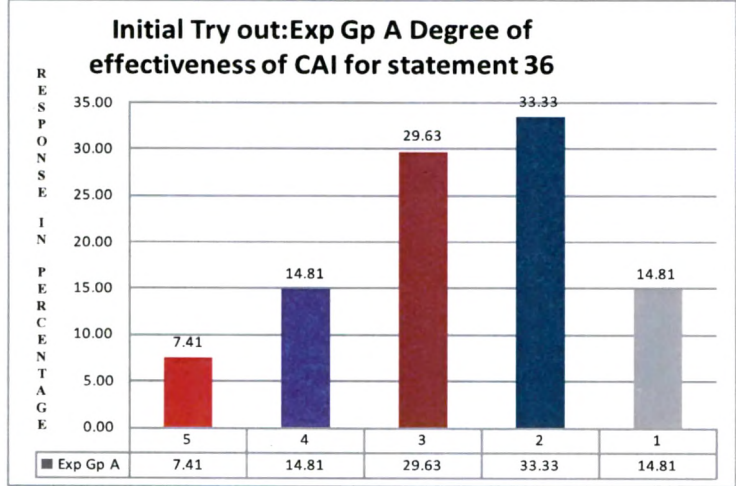


Figure 4.73 Graphical Representation of analysis of statement 36 in Percentage for Exp Gp A for Initial Try-out

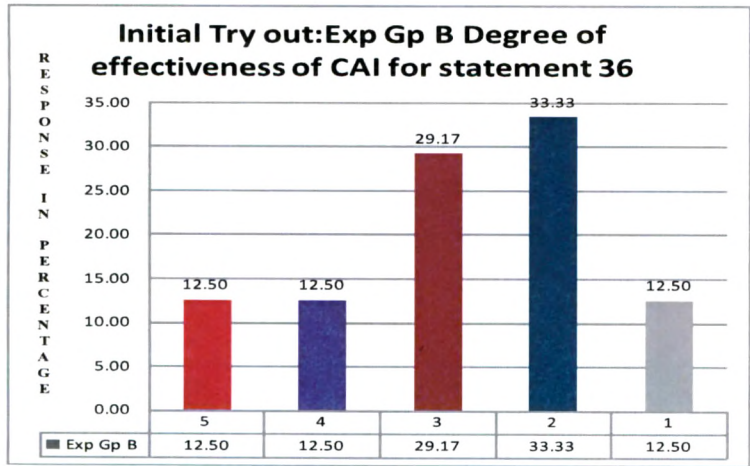


Figure 4.74 Graphical Representation of analysis of statement 36 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

**Table 4.155 Chi Square Table for ExpGp A for Statement 36 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	2	5.4
4	4	5.4
3	8	5.4
2	9	5.4
1	4	5.4

chi-square = 6.52

degrees of freedom = 4

probability = 0.164

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### **Experimental Group B**

**Table 4.156 Chi Square Table for Exp Gp B for Statement 36 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	3	4.8
4	3	4.8
3	7	4.8
2	8	4.8
1	3	4.8

chi-square = 5.17

degrees of freedom = 4

probability = 0.271

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 37:** Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.

Polarity: Positive

### **Experimental Group A : Responses of the students in percentage**

**Table 4.157 Responses of Exp Gp A students in percentage for statement 37 for Initial Try-out**

Points	Exp Gp A
5	40.74
4	29.63
3	14.81
2	11.11
1	3.70

40.74% of the students strongly agree with the statement “Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

29.63% of the students agree with the statement “Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

14.81% of the students not decided with the statement “Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

11.11% of the students disagree with the statement “Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

3.70% of the students strongly disagree with the statement “Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

#### **Experimental Group B : Responses of the students in percentage**

**Table 4.158 Responses of Exp Gp B students in percentage for statement 37 for Initial Try-out**

Points	Exp Gp B
5	43.48
4	21.74
3	21.74
2	0.00
1	13.04

43.48% of the students strongly agree with the statement “Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

21.74% of the students agree with the statement “Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

21.74% of the students not decided with the statement “Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

0.00% of the students disagree with the statement “Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

13.04% of the students strongly disagree with the statement“Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

Graphical Representation of analysis of statement 37

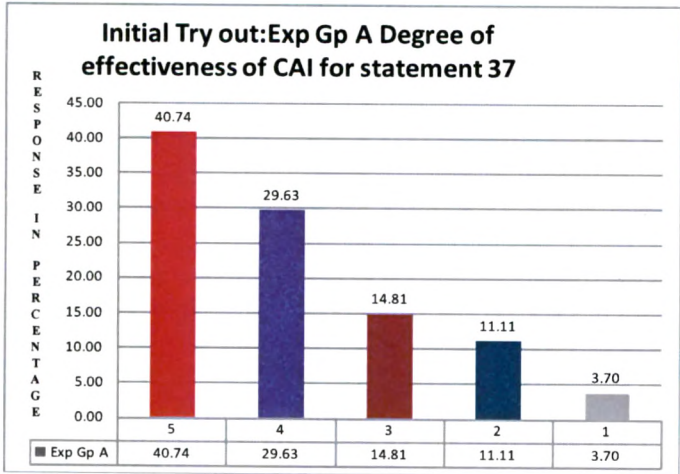


Figure 4.75 Graphical Representation of analysis of statement 37 in Percentage for Exp Gp A for Initial Try-out

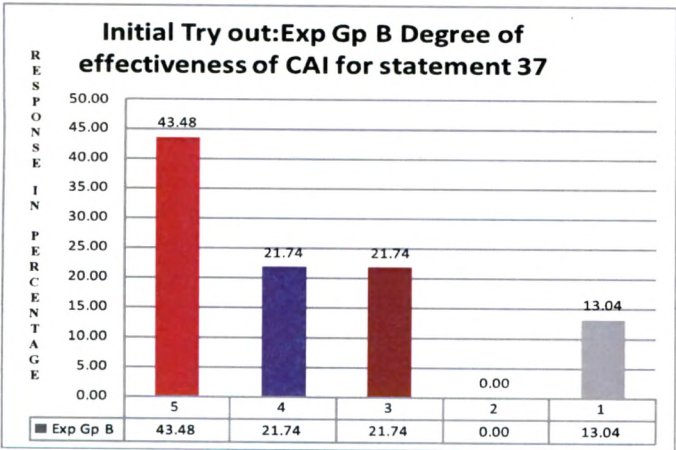


Figure 4.76 Graphical Representation of analysis of statement 37 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

**Table 4.159 Chi Square Table for Exp Gp A for Statement 37 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	11	5.4
4	8	5.4
3	4	5.4
2	3	5.4
1	1	5.4

chi-square = 12.074

degrees of freedom = 4

probability = 0.050

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice."

### **Experimental Group B**

**Table 4.160 Chi Square Table for Exp Gp B for Statement 37 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	10	4.6
4	5	4.6
3	5	4.6
2	0	4.6
1	3	4.6

chi-square = 11.565

degrees of freedom = 4

probability = 0.021

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice."

**Statement 38:** Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.



Polarity: Positive

**Experimental Group A : Responses of the students in percentage**

**Table 4.161 Responses of Exp Gp A students in percentage for statement 38 for Initial Try-out**

Points	Exp Gp A
5	14.81
4	48.15
3	22.22
2	11.11
1	3.70

14.81% of the students strongly agree with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

48.15% of the students agree with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

22.22% of the students not decided with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

11.11% of the students disagree with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

3.70% of the students strongly disagree with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.162 Responses of Exp Gp B students in percentage for statement 38 for Initial Try-out**

Points	Exp Gp B
5	33.33
4	33.33
3	20.83
2	12.50
1	0.00

33.33% of the students strongly agree with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

33.33% of the students agree with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

20.83% of the students not decided with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

12.50%of the students disagree with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

0.00% of the students strongly disagree with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

Graphical Representation of analysis of statement 38 in Percentage

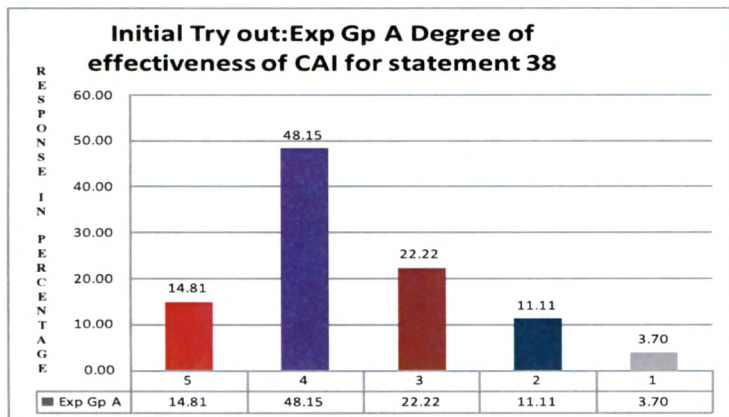


Figure 4.77 Graphical Representation of analysis of statement 38 in Percentage for Exp Gp A for Initial Try-out

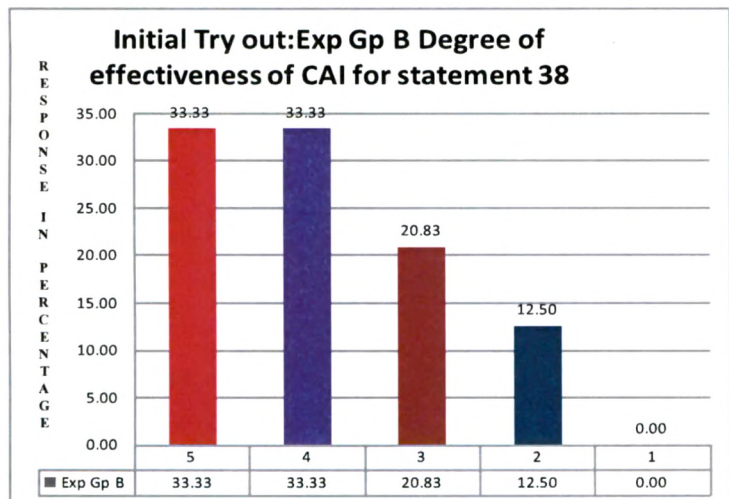


Figure 4.78 Graphical Representation of analysis of statement 38 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub> Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

**Table 4.163 Chi Square Table for Exp Gp A for Statement 38 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	4	5.4
4	13	5.4
3	6	5.4
2	3	5.4
1	1	5.4

chi-square = 15.8

degrees of freedom = 4

probability = 0.003

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Number of questions at the end of the slides for the topic simple interest is adequate for providing practice."

### **Experimental Group B**

**Table 4.164 Chi Square Table for Exp Gp B for Statement 38 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	8	4.8
4	8	4.8
3	5	4.8
2	3	4.8
1	0	4.8

chi-square = 9.75

degrees of freedom = 4

probability = 0.045

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. Equal load is on strongly agree and agree therefore there are equal number of students who strongly agree as well as who agree with the statement "Number of questions at the end of the slides for the topic simple interest is adequate for providing practice."

**Statement 39:** Number of questions at the end of the slides for the topic compound interest is

adequate for providing practice.

Polarity: Positive

**Experimental Group A : Responses of the students in percentage**

**Table 4.165 Responses of Exp Gp A students in percentage for statement 39 for Initial Try-out**

Points	Exp Gp A
5	22.22
4	29.63
3	14.81
2	14.81
1	18.52

22.22% of the students strongly agree with the statement "Number of questions at the end of the slides for the topic compound interest is adequate for providing practice."

29.63% of the students agree with the statement "Number of questions at the end of the slides for the topic compound interest is adequate for providing practice."

14.81% of the students not decided with the statement "Number of questions at the end of the slides for the topic compound interest is adequate for providing practice."

14.81% of the students disagree with the statement "Number of questions at the end of the slides for the topic compound interest is adequate for providing practice."

18.52% of the students strongly disagree with the statement "Number of questions at the end of the slides for the topic compound interest is adequate for providing practice."

**Experimental Group B : Responses of the students in percentage**

**Table 4.166 Responses of Exp Gp B students in percentage for statement 39 for Initial Try-out**

Points	Exp Gp B
5	44.00
4	20.00
3	28.00
2	4.00
1	4.00

44.00% of the students strongly agree with the statement "Number of questions at the end of the slides for the topic compound interest is adequate for providing practice."

20.00% of the students agree with the statement "Number of questions at the end of the slides for the topic compound interest is adequate for providing practice."

28.00% of the students not decided with the statement "Number of questions at the end of the slides

for the topic compound interest is adequate for providing practice.”

4.00%of the students disagree with the statement “Number of questions at the end of the slides for the topic compound interest is adequate for providing practice.”

4.00% of the students strongly disagree with the statement “Number of questions at the end of the slides for the topic compound interest is adequate for providing practice.”

Graphical Representation of analysis of statement 39 in Percentage

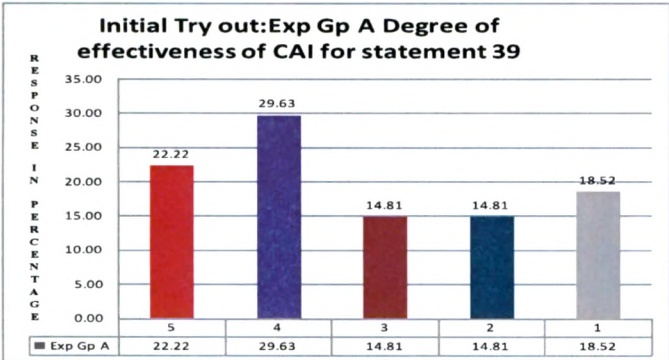


Figure 4.79 Graphical Representation of analysis of statement 39 in Percentage for Exp Gp A for Initial Try-out

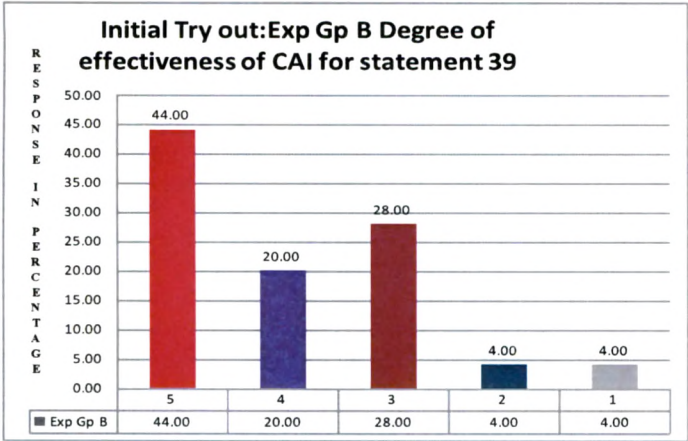


Figure 4.80 Graphical Representation of analysis of statement 39 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

- H<sub>0</sub>: Response is uniformly distributed in the 5 point scale
- H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

**Table 4.167 Chi Square Table for Exp Gp A for Statement 39 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	6	5.4
4	8	5.4
3	4	5.4
2	4	5.4
1	5	5.4

chi-square = 2.07

degrees of freedom = 4

probability = 0.722

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### **Experimental Group B**

**Table 4.168 Chi Square Table for Exp Gp B for Statement 39 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	11	5
4	5	5
3	7	5
2	1	5
1	1	5

chi-square = 14.4

degrees of freedom = 4

probability = 0.006

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "Number of questions at the end of the slides for the topic compound interest is adequate for providing practice".

**Statement 40:** CAI is not enough in understanding the concept very clearly.

Polarity: Negative

### **Experimental Group A : Responses of the students in percentage**

**Table 4.169 Responses of Exp Gp A students in percentage for statement 40 for Initial Try-out**

Points	Exp Gp A
5	11.11
4	22.22
3	22.22
2	29.63
1	14.81

11.11% of the students strongly disagree with the statement “CAI is not enough in understanding the concept very clearly.”

22.22% of the students disagree with the statement “CAI is not enough in understanding the concept very clearly.”

22.22% of the students not decided with the statement “CAI is not enough in understanding the concept very clearly.”

29.63% of the students agree with the statement “CAI is not enough in understanding the concept very clearly.”

14.81% of the students strongly agree with the statement “CAI is not enough in understanding the concept very clearly.”

#### **Experimental Group B : Responses of the students in percentage**

**Table 4.170 Responses of Exp Gp B students in percentage for statement 40 for Initial Try-out**

Points	Exp Gp B
5	29.17
4	12.50
3	25.00
2	12.50
1	20.83

29.17% of the students strongly disagree with the statement “CAI is not enough in understanding the concept very clearly.”

12.50% of the students disagree with the statement “CAI is not enough in understanding the concept very clearly.”

25.00% of the students not decided with the statement “CAI is not enough in understanding the concept very clearly.”

12.50% of the students agree with the statement “CAI is not enough in understanding the concept very clearly.”



20.83% of the students strongly agree with the statement “CAI is not enough in understanding the concept very clearly.”

Graphical Representation of analysis of statement 40 in Percentage

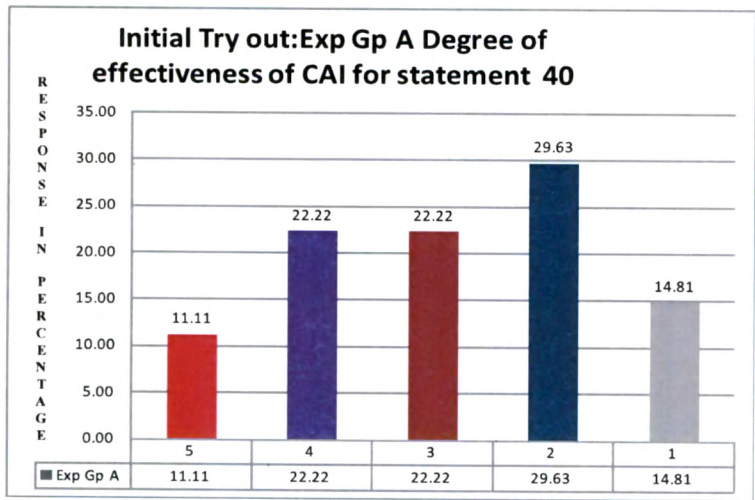


Figure 4.81 Graphical Representation of analysis of statement 40 in Percentage for Exp Gp A for Initial Try-out

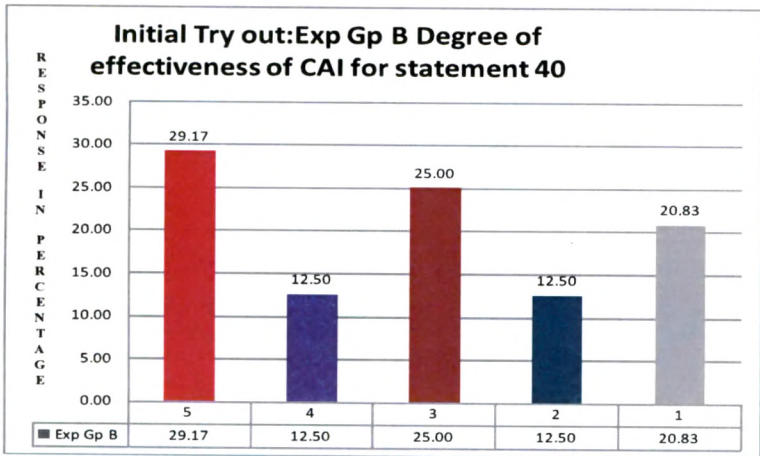


Figure 4.82 Graphical Representation of analysis of statement 40 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

**Table 4.171 Chi Square Table for Exp Gp A for Statement 40 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	3	5.4
4	6	5.4
3	6	5.4
2	8	5.4
1	4	5.4

chi-square = 2.81

degrees of freedom = 4

probability = 0.589

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### **Experimental Group B**

**Table 4.172 Chi Square Table for Exp Gp B for Statement 40 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	7	4.8
4	3	4.8
3	6	4.8
2	3	4.8
1	5	4.8

chi-square = 2.67

degrees of freedom = 4

probability = 0.615

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 41:** Independent learning is not possible through CAI.

Polarity: Negative

### **Experimental Group A : Responses of the students in percentage**

**Table 4.173 Responses of Exp Gp A students in percentage for statement 41 for Initial Try-out**

Points	Exp Gp A
5	3.70
4	40.74
3	14.81
2	18.52
1	22.22

3.70% of the students strongly disagree with the statement “Independent learning is not possible through CAI.”

40.74% of the students disagree with the statement “Independent learning is not possible through CAI.”

14.81% of the students not decided with the statement “Independent learning is not possible through CAI.”

18.52% of the students agree with the statement “Independent learning is not possible through CAI.”

22.22% of the students strongly agree with the statement “Independent learning is not possible through CAI.”

#### **Experimental Group B : Responses of the students in percentage**

**Table 4.174 Responses of Exp Gp B students in percentage for statement 41 for Initial Try-out**

Points	Exp Gp B
5	25.00
4	12.50
3	29.17
2	20.83
1	12.50

25.00% of the students strongly disagree with the statement “Independent learning is not possible through CAI.”

12.50% of the students disagree with the statement “Independent learning is not possible through CAI.”

29.17% of the students not decided with the statement “Independent learning is not possible through CAI.”

20.83% of the students agree with the statement “Independent learning is not possible through CAI.”

12.50% of the students strongly agree with the statement “Independent learning is not possible through CAI.”

Graphical Representation of analysis of statement 41 in Percentage

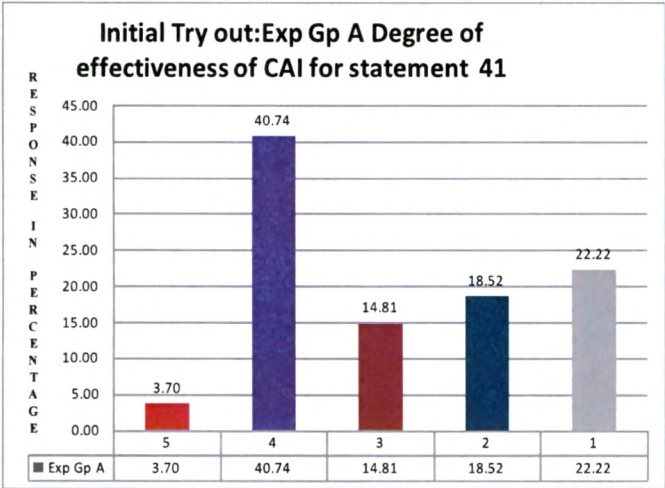


Figure 4.83 Graphical Representation of analysis of statement 41 in Percentage for Exp Gp A for Initial Try-out

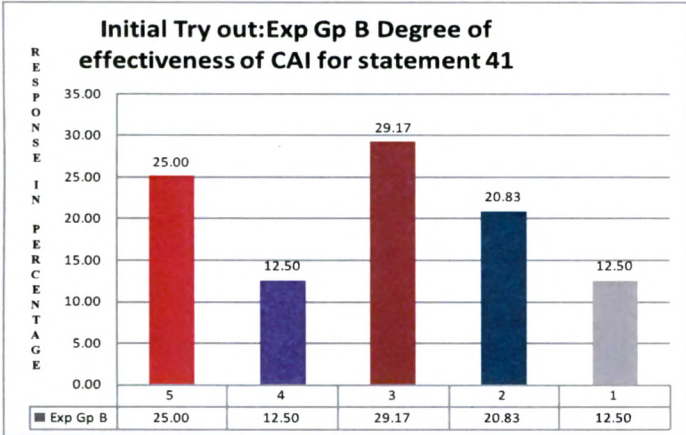


Figure 4.84 Graphical Representation of analysis of statement 41 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.175 Chi Square Table for Exp Gp A for Statement 41 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	1	5.4
4	11	5.4
3	4	5.4
2	5	5.4
1	6	5.4

chi-square = 9.85

degrees of freedom = 4

probability = 0.043

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on disagree therefore most of the students disagree with the statement "Independent learning is not possible through CAI."

### **Experimental Group B**

**Table 4.176 Chi Square Table for Exp Gp B for Statement 41 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	6	4.8
4	3	4.8
3	7	4.8
2	5	4.8
1	3	4.8

chi-square = 2.67

degrees of freedom = 4

probability = 0.615

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 42:** Evaluation is done objectively (objective questions) so no partiality is involved in scoring.

Polarity: Positive

### **Experimental Group A : Responses of the students in percentage**

**Table 4.177 Responses of Exp Gp A students in percentage for statement 42 for Initial Try-out**

Points	Exp Gp A
5	14.81
4	44.44
3	33.33
2	7.41
1	0.00

14.81% of the students strongly agree with the statement “Evaluation is done objectively (objective questions) so no partiality is involved in scoring.”

44.44% of the students agree with the statement “Evaluation is done objectively (objective questions) so no partiality is involved in scoring.”

33.33% of the students not decided with the statement “Evaluation is done objectively (objective questions) so no partiality is involved in scoring.”

7.41% of the students disagree with the statement “Evaluation is done objectively (objective questions) so no partiality is involved in scoring.”

0.00% of the students strongly disagree with the statement “Evaluation is done objectively (objective questions) so no partiality is involved in scoring.”

#### **Experimental Group B : Responses of the students in percentage**

**Table 4.178 Responses of Exp Gp B students in percentage for statement 42 for Initial Try-out**

Points	Exp Gp B
5	50.00
4	8.33
3	25.00
2	4.17
1	12.50

50.00% of the students strongly agree with the statement “Evaluation is done objectively (objective questions) so no partiality is involved in scoring.”

8.33% of the students agree with the statement “Evaluation is done objectively (objective questions) so no partiality is involved in scoring.”

25.00% of the students not decided with the statement “Evaluation is done objectively (objective questions) so no partiality is involved in scoring.”

4.17% of the students disagree with the statement “Evaluation is done objectively (objective questions) so no partiality is involved in scoring.”

12.50% of the students strongly disagree with the statement “Evaluation is done objectively (objective questions) so no partiality is involved in scoring.”

Graphical Representation of analysis of statement 42 in Percentage

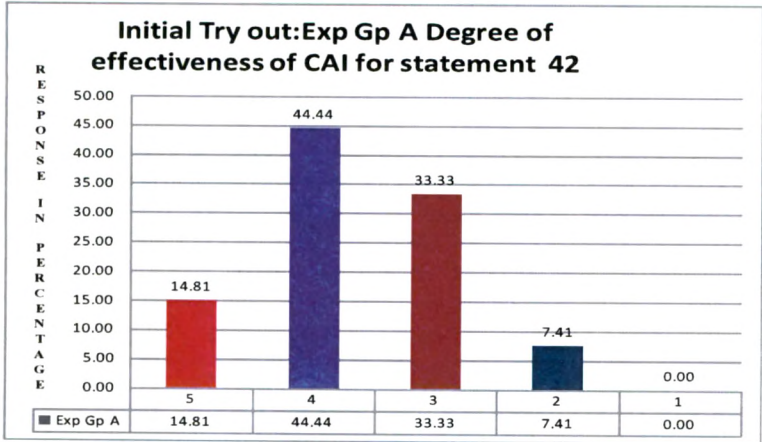


Figure 4.85 Graphical Representation of analysis of statement 42 in Percentage for Exp Gp A for Initial Try-out

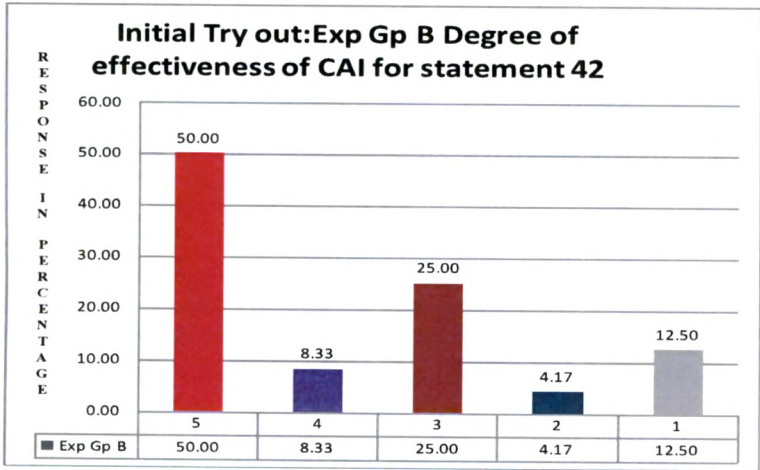


Figure 4.86 Graphical Representation of analysis of statement 42 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

- $H_0$ : Response is uniformly distributed in the 5 point scale  
 $H_1$ : Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.179 Chi Square Table for Exp Gp A for Statement 42 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	4	5.4
4	12	5.4
3	9	5.4
2	2	5.4
1	0	5.4

chi-square = 18.4



degrees of freedom = 4

probability = 0.001

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Evaluation is done objectively (objective questions) so no partiality is involved in scoring."

### **Experimental Group B**

**Table 4.180 Chi Square Table for Exp Gp B for Statement 42 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	12	4.8
4	2	4.8
3	6	4.8
2	1	4.8
1	3	4.8

chi-square = 16.4

degrees of freedom = 4

probability = 0.003

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "Evaluation is done objectively (objective questions) so no partiality is involved in scoring."

**Statement 43:** Evaluation done at the end of the topic "simple interest" is not suitable measure to know my understanding about that topic.

Polarity: Negative

### **Experimental Group A : Responses of the students in percentage**

**Table 4.181 Responses of Exp Gp A students in percentage for statement 43 for Initial Try-out**

Points	Exp Gp A
5	14.81
4	18.52
3	25.93
2	29.63
1	11.11

14.81% of the students strongly disagree with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

18.52% of the students disagree with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

25.93% of the students not decided with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

29.63% of the students agree with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

11.11% of the students strongly agree with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

#### **Experimental Group B : Responses of the students in percentage**

**Table 4.182 Responses of Exp Gp B students in percentage for statement 43 for Initial Try-out**

Points	Exp Gp B
5	8.33
4	37.50
3	33.33
2	8.33
1	12.50

8.33% of the students strongly disagree with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

37.50% of the students disagree with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

33.33% of the students not decided with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

8.33% of the students agree with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

12.50%of the students strongly agree with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

Graphical Representation of analysis of statement 43 in Percentage

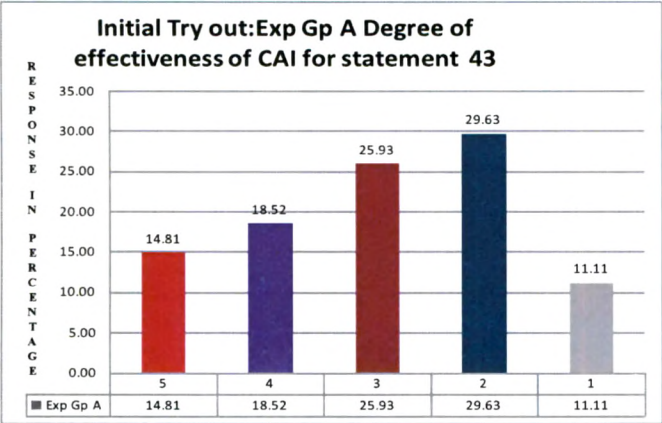


Figure 4.87 Graphical Representation of analysis of statement 43 in Percentage for Exp Gp A for Initial Try-out

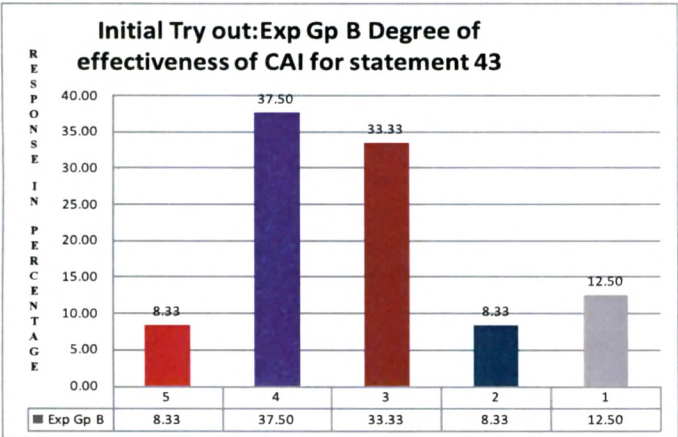


Figure 4.88 Graphical Representation of analysis of statement 43 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.183 Chi Square Table for Exp Gp A for Statement 43 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	4	5.4
4	5	5.4
3	7	5.4
2	8	5.4
1	3	5.4

chi-square = 3.19

degrees of freedom = 4

probability = 0.527

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### **Experimental Group B**

**Table 4.184 Chi Square Table for Exp Gp B for Statement 43 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	2	4.8
4	9	4.8
3	8	4.8
2	2	4.8
1	3	4.8

chi-square = 9.75

degrees of freedom = 4

probability = 0.045

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Evaluation done at the end of the topic "simple interest" is not suitable measure to know my understanding about that topic."

**Statement 44:**Instruction given in each slide of CAI is easy and clear to follow.

Polarity: Positive

### **Experimental Group A : Responses of the students in percentage**

**Table 4.185 Responses of Exp Gp A students in percentage for statement 44 for Initial Try-out**

Points	Exp Gp A
5	18.52
4	40.74
3	29.63
2	11.11
1	0.00

18.52% of the students strongly agree with the statement“Instruction given in each slide of CAI is easy and clear to follow.”

40.74% of the students agree with the statement“Instruction given in each slide of CAI is easy and clear to follow.”

29.63%of the students not decided with the statement “Instruction given in each slide of CAI is easy and clear to follow.”

11.11%of the students disagree with the statement “Instruction given in each slide of CAI is easy and clear to follow.”

0.00% of the students strongly disagree with the statement “Instruction given in each slide of CAI is easy and clear to follow.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.186 Responses of Exp Gp B students in percentage for statement 44 for Initial Try-out**

Points	Exp Gp B
5	58.33
4	12.50
3	12.50
2	12.50
1	4.17

58.33% of the students strongly agree with the statement “Instruction given in each slide of CAI is easy and clear to follow.”

12.50% of the students agree with the statement “Instruction given in each slide of CAI is easy and clear to follow.”

12.50%of the students not decided with the statement “Instruction given in each slide of CAI is easy and clear to follow.”

12.50%of the students disagree with the statement “Instruction given in each slide of CAI is easy and clear to follow.”

4.17% of the students strongly disagree with the statement “Instruction given in each slide of CAI is easy and clear to follow.”

Graphical Representation of analysis of statement 44 in Percentage

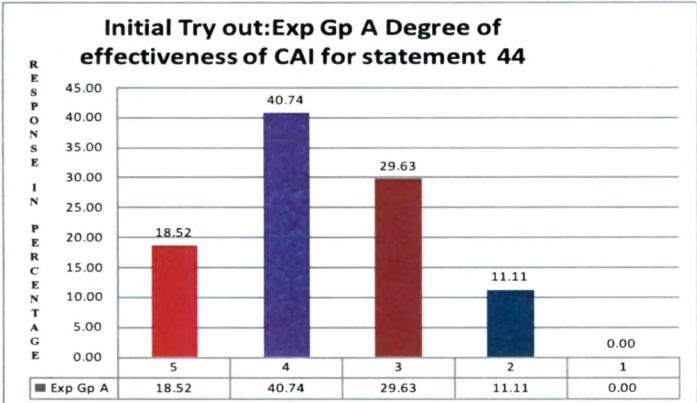


Figure 4.89 Graphical Representation of analysis of statement 44 in Percentage for Exp Gp A for Initial Try-out

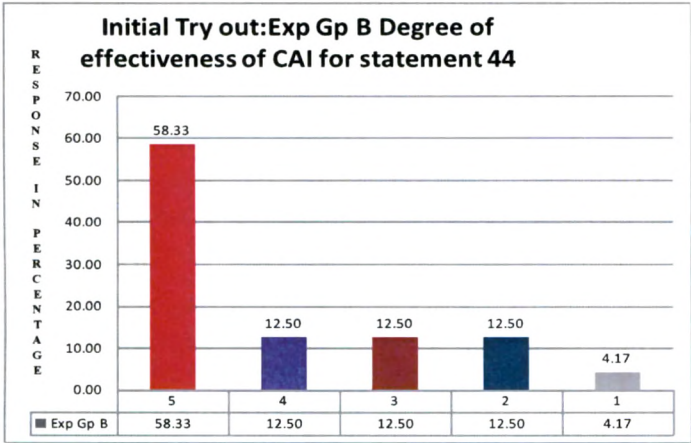


Figure 4.90 Graphical Representation of analysis of statement 44 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.187 Chi Square Table for Exp Gp A for Statement 44 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	5	5.4
4	11	5.4
3	8	5.4
2	3	5.4
1	0	5.4

chi-square = 13.6

degrees of freedom = 4

probability = 0.009

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Instruction given in each slide of CAI is easy and clear to follow."

### Experimental Group B

**Table 4.188 Chi Square Table for Exp Gp B for Statement 44 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	14	4.8
4	3	4.8
3	3	4.8
2	3	4.8
1	1	4.8

chi-square = 22.7

degrees of freedom = 4

probability = 0.000

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "Instruction given in each slide of CAI is easy and clear to follow."

**Statement 45:** Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.

Polarity: Negative

### Experimental Group A : Responses of the students in percentage

**Table 4.189 Responses of Exp Gp A students in percentage for statement 45 for Initial Try-out**

Points	Exp Gp A
5	18.52
4	18.52
3	22.22
2	25.93
1	14.81

18.52% of the students strongly disagree with the statement "Evaluation done at the end of the topic



profit and loss is not suitable measure to know my Understanding about that topic.”

18.52% of the students disagree with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

22.22% of the students not decided with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

25.93% of the students agree with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

14.81% of the students strongly agree with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

#### **Experimental Group B : Responses of the students in percentage**

**Table 4.190 Responses of Exp Gp B students in percentage for statement 45 for Initial Try-out**

Points	Exp Gp B
5	25.00
4	16.67
3	37.50
2	8.33
1	12.50

25.00% of the students strongly disagree with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

16.67% of the students disagree with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

37.50% of the students not decided with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

8.33% of the students agree with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

12.50% of the students strongly agree with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

### Graphical Representation of analysis of statement 45 in Percentage

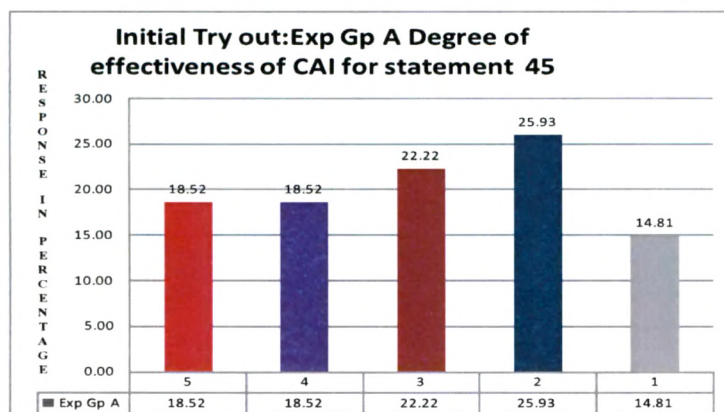


Figure 4.91 Graphical Representation of analysis of statement 45 in Percentage for Exp Gp A for Initial Try-out

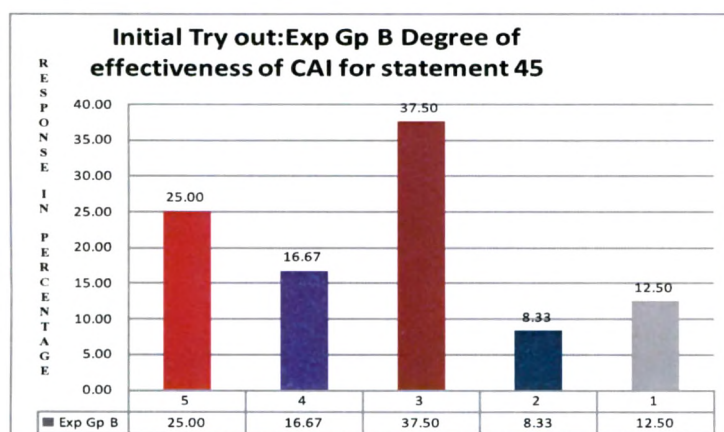


Figure 4.92 Graphical Representation of analysis of statement 45 in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.191 Chi Square Table for Exp Gp A for Statement 45 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	5	5.4
4	5	5.4
3	6	5.4
2	7	5.4
1	4	5.4

chi-square = 0.963

degrees of freedom = 4

probability = 0.915

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

**Experimental Group B**

**Table 4.192 Chi Square Table for Exp Gp B for Statement 45 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	6	4.8
4	4	4.8
3	9	4.8
2	2	4.8
1	3	4.8

chi-square = 6.42

degrees of freedom = 4

probability = 0.170

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 46:** Interaction with mathematics teacher is not possible while using this CAI (no face to face interaction).

Polarity: Negative

**Experimental Group A : Responses of the students in percentage**

**Table 4.193 Responses of Exp Gp A students in percentage for statement 46 for Initial Try-out**

Points	Exp Gp A
5	18.52
4	25.93
3	22.22
2	11.11
1	22.22

18.52% of the students strongly disagree with the statement“Interaction with mathematics teacher is not possible while using this CAI(no face to face interaction).”

25.93% of the students disagree with the statement “Interaction with mathematics teacher is not possible while using this CAI (no face to face interaction).”

22.22%of the students not decided with the statement “Interaction with mathematics teacher is not possible while using this CAI (no face to face interaction).”

11.11%of the students agree with the statement “Interaction with mathematics teacher is not possible while using this CAI(no face to face interaction).”

22.22%of the students strongly agree with the statement “Interaction with mathematics teacher is not possible while using this CAI(no face to face interaction).”

**Experimental Group B : Responses of the students in percentage**

**Table 4.194 Responses of Exp Gp B students in percentage for statement 46 for Initial Try-out**

Points	Exp Gp B
5	25.00
4	12.50
3	25.00
2	25.00
1	12.50

25.00% of the students strongly disagree with the statement “Interaction with mathematics teacher is not possible while using this CAI(no face to face interaction).”

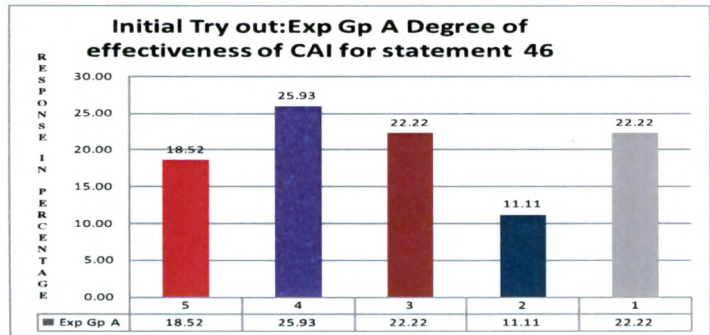
12.50% of the students disagree with the statement “Interaction with mathematics teacher is not possible while using this CAI(no face to face interaction).”

25.00%of the students not decided with the statement “Interaction with mathematics teacher is not possible while using this CAI(no face to face interaction).”

25.00%of the students agree with the statement “Interaction with mathematics teacher is not possible while using this CAI(no face to face interaction).”

12.50%of the students strongly agree with the statement “Interaction with mathematics teacher is not possible while using this CAI(no face to face interaction).”

**Graphical Representation of analysis of statement 46 in Percentage**



**Figure 4.93 Graphical Representation of analysis of statement 46 in Percentage for Exp Gp A for Initial Try-out**

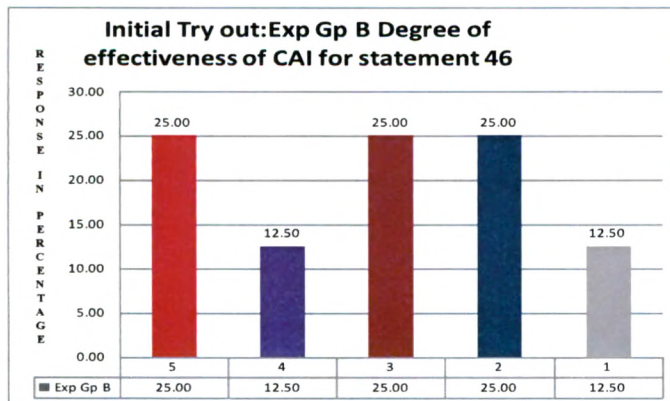


Figure 4.94 Graphical Representation of analysis of statement 46 in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.195 Chi Square Table for Exp Gp A for Statement 46 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	5	5.4
4	7	5.4
3	6	5.4
2	3	5.4
1	6	5.4

chi-square = 1.70

degrees of freedom = 4

probability = 0.790

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

Table 4.196 Chi Square Table for Exp Gp B for Statement 46 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	6	4.8
4	3	4.8
3	6	4.8
2	6	4.8
1	3	4.8

chi-square = 2.25

degrees of freedom = 4

probability = 0.690

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 47:** To get the correct answer I had to go back to the slide/s many times for topic simple interest.

Polarity: Negative

**Experimental Group A : Responses of the students in percentage**

**Table 4.197 Responses of Exp Gp A students in percentage for statement 47 for Initial Try-out**

Points	Exp Gp A
5	7.41
4	37.04
3	11.11
2	22.22
1	22.22

7.41% of the students strongly disagree with the statement "To get the correct answer I had to go back to the slide/s many times for topic simple interest."

37.04% of the students disagree with the statement "To get the correct answer I had to go back to the slide/s many times for topic simple interest."

11.11% of the students not decided with the statement "To get the correct answer I had to go back to the slide/s many times for topic simple interest."

22.22% of the students agree with the statement "To get the correct answer I had to go back to the slide/s many times for topic simple interest."

22.22% of the students strongly agree with the statement "To get the correct answer I had to go back to the slide/s many times for topic simple interest."



**Experimental Group B : Responses of the students in percentage**

**Table 4.198 Responses of Exp Gp B students in percentage for statement 47 for Initial Try-out**

Points	Exp Gp B
5	33.33
4	25.00
3	12.50
2	12.50
1	16.67

33.33% of the students strongly disagree with the statement “To get the correct answer I had to go back to the slide/s many times for topic simple interest.”

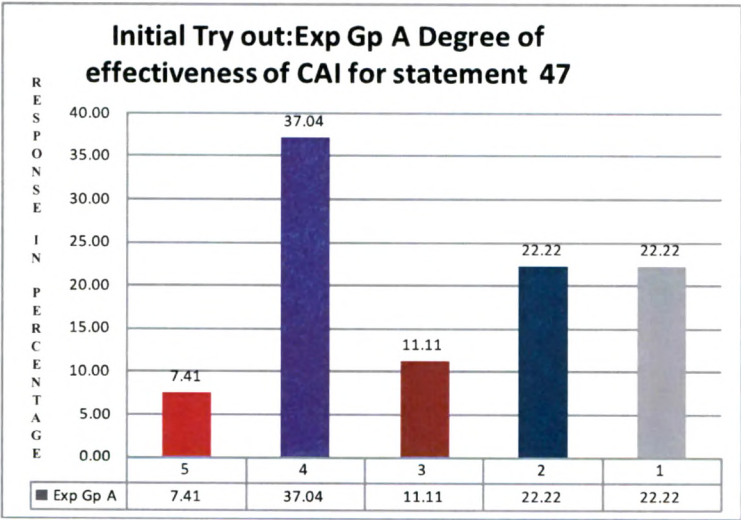
25.00% of the students disagree with the statement “To get the correct answer I had to go back to the slide/s many times for topic simple interest.”

12.50% of the students not decided with the statement “To get the correct answer I had to go back to the slide/s many times for topic simple interest.”

12.50% of the students agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic simple interest.”

16.67% of the students strongly agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic simple interest.”

**Graphical Representation of analysis of statement 47 in Percentage**



**Figure 4.95 Graphical Representation of analysis of statement 47 in Percentage for Exp Gp A for Initial Try-out**



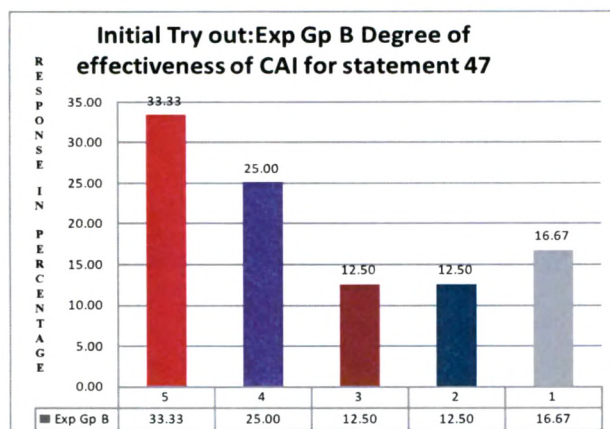


Figure 4.96 Graphical Representation of analysis of statement 47 in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.199 Chi Square Table for Exp Gp A for Statement 47 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	2	5.4
4	10	5.4
3	3	5.4
2	6	5.4
1	6	5.4

chi-square = 7.26

degrees of freedom = 4

probability = 0.123

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

Table 4.200 Chi Square Table for Exp Gp B for Statement 47 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	8	4.8
4	6	4.8
3	3	4.8
2	3	4.8
1	4	4.8

Table 4.202 Responses of Exp Gp B students in percentage for statement 48 for Initial Try-out

Points	Exp Gp B
5	29.17
4	12.50
3	16.67
2	29.17
1	12.50

29.17% of the students strongly disagree with the statement “To get the correct answer I had to go back to the slide/s many times for topic Compound interest.”

12.50% of the students disagree with the statement “To get the correct answer I had to go back to the slide/s many times for topic Compound interest.”

16.67%of the students not decided with the statement “To get the correct answer I had to go back to the slide/s many times for topic Compound interest.”

29.17%of the students agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic Compound interest.”

12.50%of the students strongly agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic Compound interest.”

Graphical Representation of analysis of statement 48 in Percentage

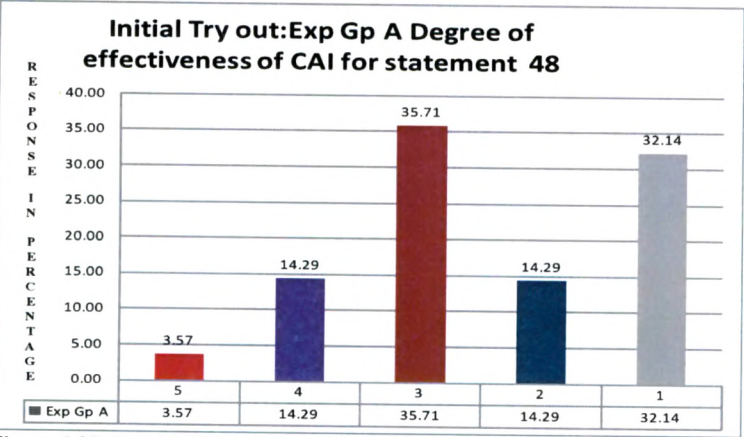


Figure 4.97 Graphical Representation of analysis of statement 48 in Percentage for Exp Gp A for Initial Try-out

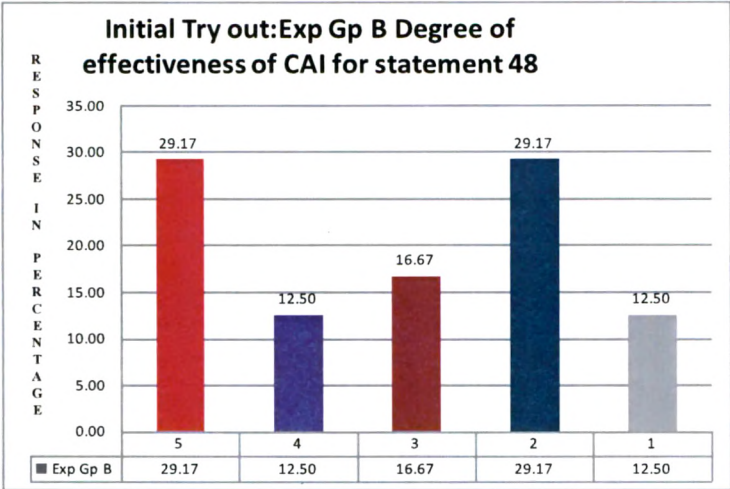


Figure 4.98 Graphical Representation of analysis of statement 48 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.203 Chi Square Table for Exp Gp A for Statement 48 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	1	5.6
4	4	5.6
3	10	5.6
2	4	5.6
1	9	5.6

chi-square = 10.2

degrees of freedom = 4

probability = 0.037

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on not decided therefore most of the students not decided with the statement “To get the correct answer I had to go back to the slide/s many times for topic Compound interest.”

### Experimental Group B

Table 4.204 Chi Square Table for Exp Gp B for Statement 48 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	7	4.8
4	3	4.8
3	4	4.8
2	7	4.8
1	3	4.8

chi-square = 3.50

degrees of freedom = 4

probability = 0.478

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 49:** To get the correct answer I had to go back to the slide/s many times for topic profit and loss.

Polarity: Negative

### Experimental Group A : Responses of the students in percentage

Table 4.205 Responses of Exp Gp A students in percentage for statement 49 for Initial Try-out

Points	Exp Gp A
5	11.11
4	33.33
3	7.41
2	22.22
1	25.93

11.11% of the students strongly disagree with the statement "To get the correct answer I had to go back to the slide/s many times for topic profit and loss."

33.33% of the students disagree with the statement "To get the correct answer I had to go back to the slide/s many times for topic profit and loss."

7.41% of the students not decided with the statement "To get the correct answer I had to go back to the slide/s many times for topic profit and loss."

22.22% of the students agree with the statement "To get the correct answer I had to go back to the slide/s many times for topic profit and loss."



25.93% of the students strongly agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic profit and loss.”

**Experimental Group B: Responses of the students in percentage**

**Table 4.206 Responses of Exp Gp B students in percentage for statement 49 for Initial Try-out**

Points	Exp Gp B
5	16.67
4	12.50
3	33.33
2	16.67
1	20.83

16.67% of the students strongly disagree with the statement “To get the correct answer I had to go back to the slide/s many times for topic profit and loss.”

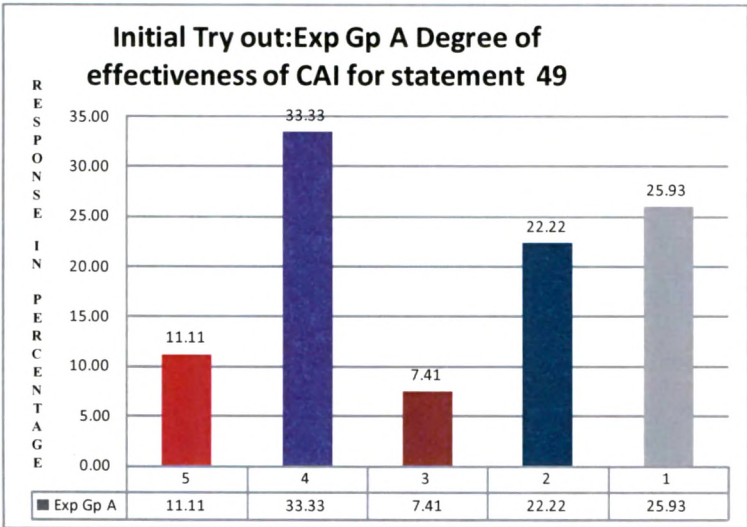
12.50% of the students disagree with the statement “To get the correct answer I had to go back to the slide/s many times for topic profit and loss.”

33.33% of the students not decided with the statement “To get the correct answer I had to go back to the slide/s many times for topic profit and loss.”

16.67% of the students agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic profit and loss.”

20.83% of the students strongly agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic profit and loss.”

**Graphical Representation of analysis of statement 49 in Percentage**



**Figure 4.99 Graphical Representation of analysis of statement 49 in Percentage for Exp Gp A for Initial Try-out**

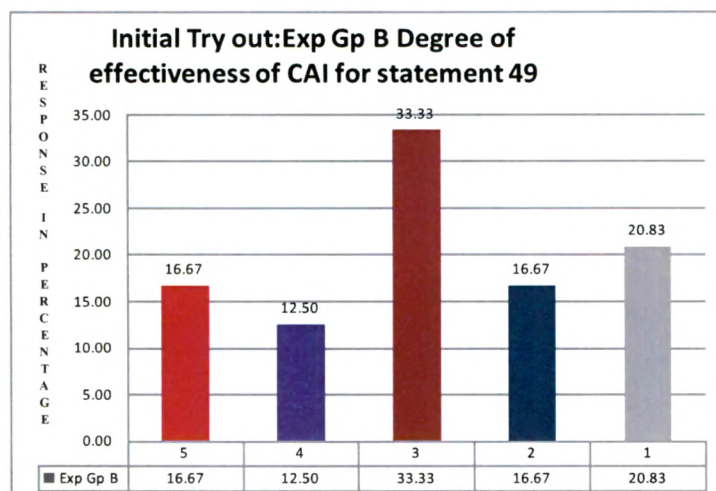


Figure 4.100 Graphical Representation of analysis of statement 49 in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.207 Chi Square Table for Exp Gp A for Statement 49 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	3	5.4
4	9	5.4
3	2	5.4
2	6	5.4
1	7	5.4

chi-square = 6.15

degrees of freedom = 4

probability = 0.188

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

**Table 4.208 Chi Square Table for Exp Gp B for Statement 49 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	4	4.8
4	3	4.8
3	8	4.8
2	4	4.8
1	5	4.8

chi-square = 3.08

degrees of freedom = 4

probability = 0.544

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 50:** Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.

Polarity: Positive

### Experimental Group A : Responses of the students in percentage

**Table 4.209 Responses of Exp Gp A students in percentage for statement 50 for Initial Try-out**

Points	Exp Gp A
5	22.22
4	29.63
3	37.04
2	11.11
1	0.00

22.22% of the students strongly agree with the statement "Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI."

29.63% of the students agree with the statement "Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI."

37.04% of the students not decided with the statement "Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI."

11.11% of the students disagree with the statement "Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI."



0.00% of the students strongly disagree with the statement “Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.”

### Experimental Group B: Responses of the students in percentage

**Table 4.210 Responses of Exp Gp A students in percentage for statement 50 for Initial Try-out**

Points	Exp Gp B
5	41.67
4	20.83
3	25.00
2	4.17
1	8.33

41.67% of the students strongly agree with the statement “Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.”

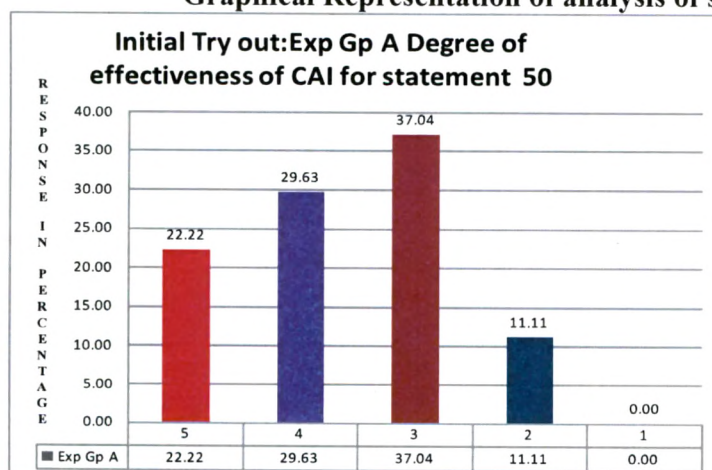
20.83% of the students agree with the statement “Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.”

25.00% of the students not decided with the statement “Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.”

4.17% of the students disagree with the statement “Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.”

8.33% of the students strongly disagree with the statement “Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.”

### Graphical Representation of analysis of statement 50 in Percentage



**Figure 4.101 Graphical Representation of analysis of statement 50 in Percentage for Exp Gp A for Initial Try-out**

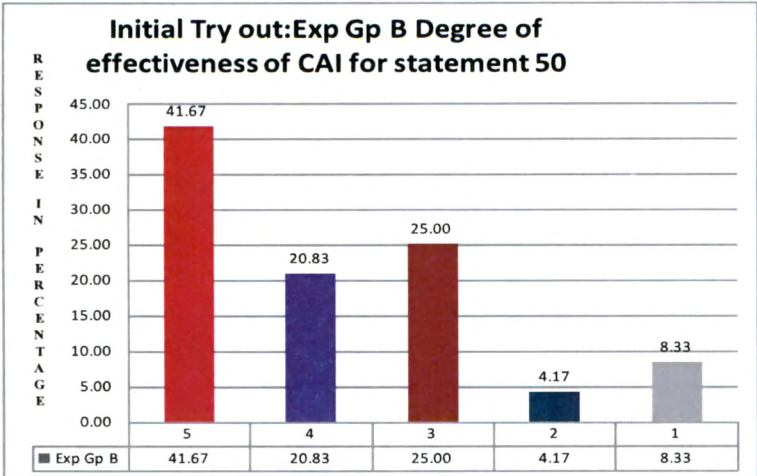


Figure 4.102 Graphical Representation of analysis of statement 50 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.211 Chi Square Table for Exp Gp A for Statement 50 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	6	5.4
4	8	5.4
3	10	5.4
2	3	5.4
1	0	5.4

chi-square = 11.7

degrees of freedom = 4

probability = 0.020

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on not decided therefore most of the students not decided with the statement “Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.”

**Experimental Group B**

**Table 4.212 Chi Square Table for Exp Gp B for Statement 50 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	10	4.8
4	5	4.8
3	6	4.8
2	1	4.8
1	2	4.8

chi-square = 10.6

degrees of freedom = 4

probability = 0.032

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement “Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.”

**Statement 51:** Discussion with mathematics teacher is needed along with CAI.

Polarity: Negative

**Experimental Group A : Responses of the students in percentage**

**Table 4.213 Responses of Exp Gp A students in percentage for statement 51 for Initial Try-out**

Points	Exp Gp A
5	25.93
4	11.11
3	11.11
2	25.93
1	25.93

25.93% of the students strongly disagree with the statement “Discussion with mathematics teacher is needed along with CAI.”

11.11% of the students disagree with the statement “Discussion with mathematics teacher is needed along with CAI.”

11.11% of the students not decided with the statement “Discussion with mathematics teacher is needed along with CAI.”

25.93% of the students agree with the statement “Discussion with mathematics teacher is needed

along with CAI.”

25.93% of the students strongly agree with the statement“Discussion with mathematics teacher is needed along with CAI.”

**Experimental Group B: Responses of the students in percentage**

**Table 4.214 Responses of Exp Gp B students in percentage for statement 51 for Initial Try-out**

Points	Exp Gp B
5	16.67
4	20.83
3	25.00
2	4.17
1	33.33

16.67% of the students strongly disagree with the statement “Discussion with mathematics teacher is needed along with CAI.”

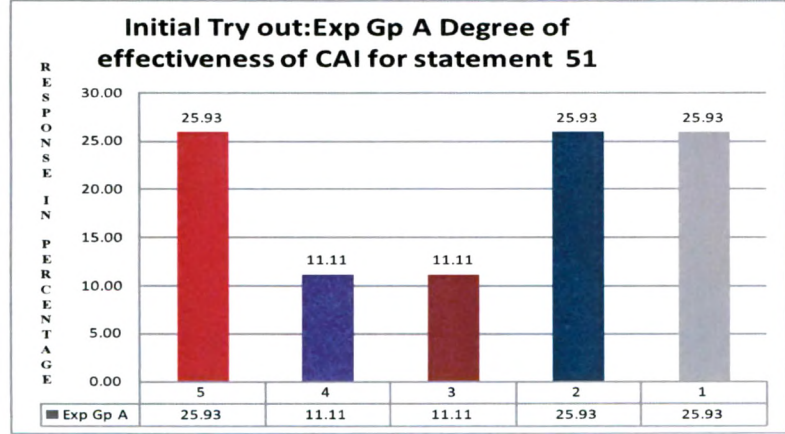
20.83% of the students disagree with the statement “Discussion with mathematics teacher is needed along with CAI.”

25.00% of the students not decided with the statement “Discussion with mathematics teacher is needed along with CAI.”

4.17% of the students agree with the statement “Discussion with mathematics teacher is needed along with CAI.”

33.33% of the students strongly agree with the statement“Discussion with mathematics teacher is needed along with CAI.”

**Graphical Representation of analysis of statement 51 in Percentage**



**Figure 4.103 Graphical Representation of analysis of statement 51 in Percentage for Exp Gp A for Initial Try-out**



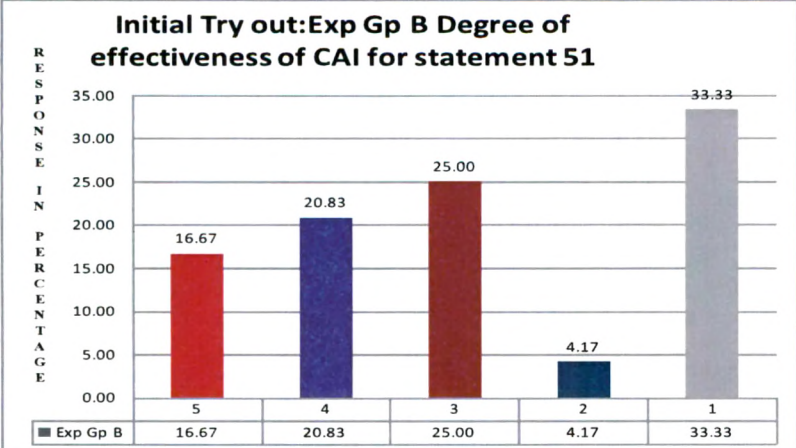


Figure 4.104 Graphical Representation of analysis of statement 51 in Percentage for Exp Gp B for Initial Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.215 Chi Square Table for Exp Gp A for Statement 51 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	7	5.4
4	3	5.4
3	3	5.4
2	7	5.4
1	7	5.4

chi-square = 3.56

degrees of freedom = 4

probability = 0.469

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

Table 4.216 Chi Square Table for Exp Gp B for Statement 51 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	4	4.8
4	5	4.8
3	6	4.8
2	1	4.8
1	8	4.8

chi-square = 5.58

degrees of freedom = 4

probability = 0.233

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 52:** Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.

Polarity: Positive

### Experimental Group A : Responses of the students in percentage

Table 4.217 Responses of Exp Gp A students in percentage for statement 52 for Initial Try-out

Points	Exp Gp A
5	29.63
4	25.93
3	25.93
2	7.41
1	11.11

29.63% of the students strongly agree with the statement "Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic."

25.93% of the students agree with the statement "Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic."

25.93% of the students not decided with the statement "Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic."

7.41% of the students disagree with the statement "Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic."

11.11% of the students strongly disagree with the statement “Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.”

### Experimental Group B: Responses of the students in percentage

**Table 4.218 Responses of Exp Gp B students in percentage for statement 52 for Initial Try-out**

Points	Exp Gp B
5	37.50
4	12.50
3	41.67
2	8.33
1	0.00

37.50% of the students strongly agree with the statement “Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.”

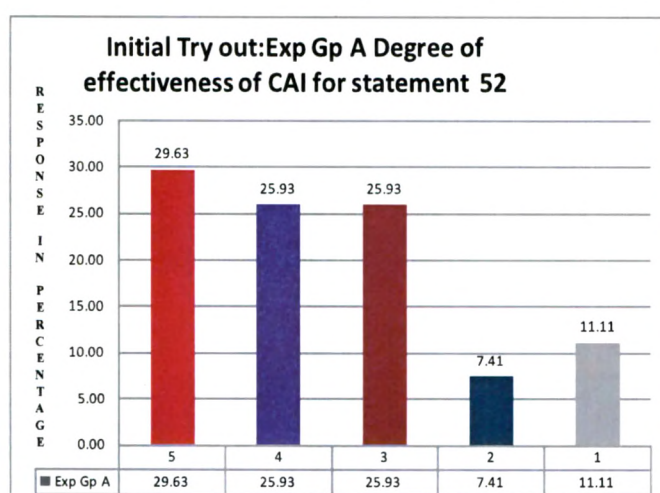
12.50% of the students agree with the statement “Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.”

41.67% of the students not decided with the statement “Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.”

8.33% of the students disagree with the statement “Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.”

0.00% of the students strongly disagree with the statement “Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.”

### Graphical Representation of analysis of statement 52 in Percentage



**Figure 4.105 Graphical Representation of analysis of statement 52 in Percentage for Exp Gp A for Initial Try-out**



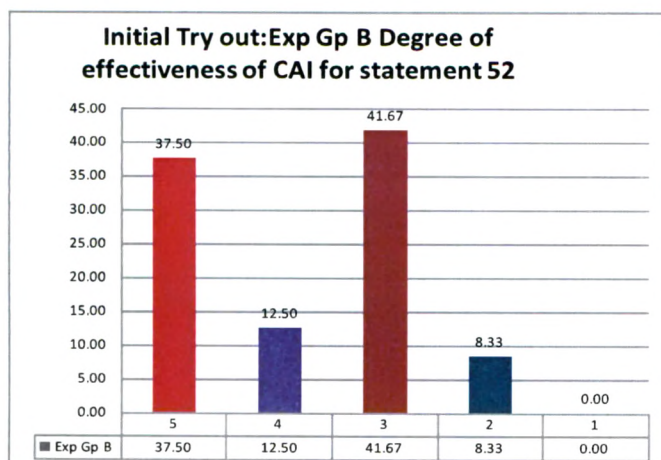


Figure 4.106 Graphical Representation of analysis of statement 52 in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.219 Chi Square Table for Exp Gp A for Statement 52 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	8	5.4
4	7	5.4
3	7	5.4
2	2	5.4
1	3	5.4

chi-square = 5.41

degrees of freedom = 4

probability = 0.248

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

Table 4.220 Chi Square Table for Exp Gp Bfor Statement 52 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	9	4.8
4	3	4.8
3	10	4.8
2	2	4.8
1	0	4.8

chi-square = 16.4

degrees of freedom = 4

probability = 0.003

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on not decided therefore most of the students not decided with the statement "Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic."

**Statement 53** Evaluation done at the end of the topic "simple interest" is suitable measure to know my understanding about that topic.

Polarity: Positive

### Experimental Group A : Responses of the students in percentage

Table 4.221 Responses of Exp Gp A students in percentage for statement 53 for Initial Try-out

Points	Exp Gp A
5	29.63
4	37.04
3	14.81
2	7.41
1	11.11

29.63% of the students strongly agree with the statement "Evaluation done at the end of the topic "simple interest" is suitable measure to know my understanding about that topic."

37.04% of the students agree with the statement "Evaluation done at the end of the topic "simple interest" is suitable measure to know my understanding about that topic."

14.81% of the students not decided with the statement "Evaluation done at the end of the topic

“simple interest” is suitable measure to know my understanding about that topic.”

7.41% of the students disagree with the statement “Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.”

11.11% of the students strongly disagree with the statement “Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.”

### Experimental Group B: Responses of the students in percentage

**Table 4.222 Responses of Exp Gp B students in percentage for statement 53 for Initial Try-out**

Points	Exp Gp B
5	41.67
4	12.50
3	33.33
2	4.17
1	8.33

41.67% of the students strongly agree with the statement “Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.”

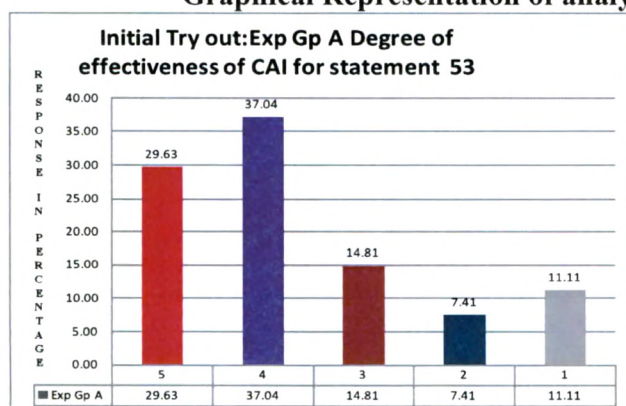
12.50% of the students agree with the statement “Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.”

33.33% of the students not decided with the statement “Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.”

4.17% of the students disagree with the statement “Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.”

8.33% of the students strongly disagree with the statement “Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.”

### Graphical Representation of analysis of statement 53 in Percentage



**Figure 4.107 Graphical Representation of analysis of statement 53 in Percentage for Exp Gp A for Initial Try-out**

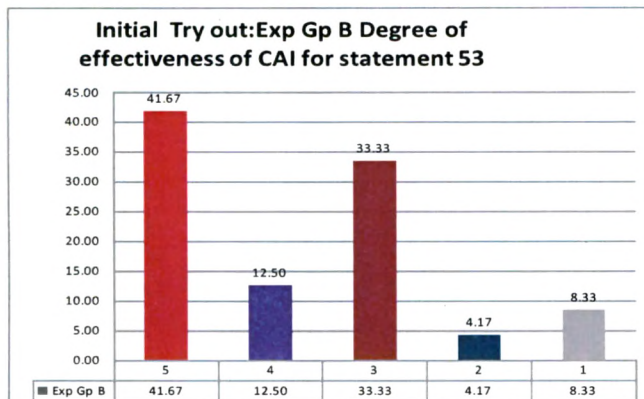


Figure 4.108 Graphical Representation of analysis of statement 53 in Percentage for Exp Gp B for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.223 Chi Square Table for Exp Gp A for Statement 53 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	8	5.4
4	10	5.4
3	4	5.4
2	2	5.4
1	3	5.4

chi-square = 8.74

degrees of freedom = 4

probability = 0.068

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

**Table 4.224 Chi Square Table for Exp Gp B for Statement 53 for Initial Try-out**

Polarity	Observed Frequency	Expected Frequency
5	10	4.8
4	3	4.8
3	8	4.8
2	1	4.8
1	2	4.8

chi-square = 13.1

degrees of freedom = 4

probability = 0.011

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "Evaluation done at the end of the topic "simple interest" is suitable measure to know my understanding about that topic."

**Statement 54:** Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.

Polarity: Positive

### Experimental Group A : Responses of the students in percentage

**Table 4.225 Responses of Exp Gp A students in percentage for statement 54 for Initial Try-out**

Points	Exp Gp A
5	25.93
4	22.22
3	22.22
2	3.70
1	25.93

25.93% of the students strongly agree with the statement "Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic."

22.22% of the students agree with the statement "Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic."

22.22% of the students not decided with the statement "Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic."



3.70% of the students disagree with the statement “Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.”

25.93% of the students strongly disagree with the statement “Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.”

**Experimental Group B: Responses of the students in percentage**

**Table 4.226 Responses of Exp Gp B students in percentage for statement 54 for Initial Try-out**

Points	Exp Gp B
5	45.83
4	20.83
3	20.83
2	8.33
1	4.17

45.83% of the students strongly agree with the statement “Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.”

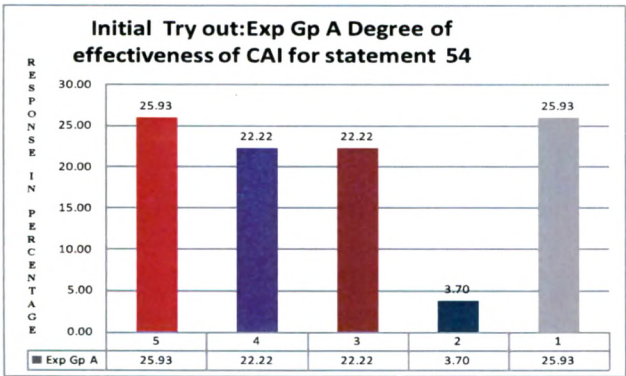
20.83% of the students agree with the statement “Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.”

20.83% of the students not decided with the statement “Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.”

8.33% of the students disagree with the statement“Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.”

4.17% of the students strongly disagree with the statement“Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.”

**Graphical Representation of analysis of statement 54 in Percentage**



**Figure 4.109 Graphical Representation of analysis of statement 54 in Percentage for Exp Gp A for Initial Try-out**

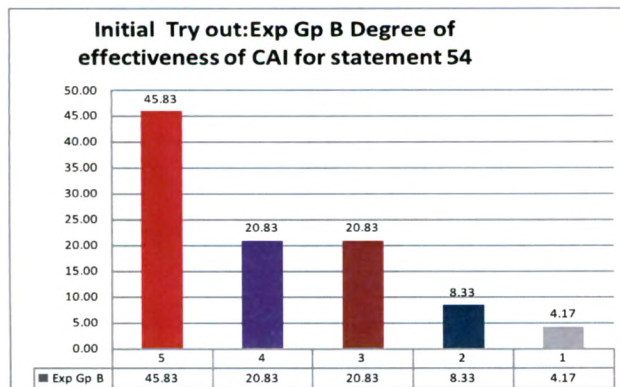


Figure 4.110 Graphical Representation of analysis of statement 54 in Percentage for Exp Gp A for Initial Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.227 Chi Square Table for Exp Gp A for Statement 54 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	7	5.4
4	6	5.4
3	6	5.4
2	1	5.4
1	7	5.4

chi-square = 4.67

degrees of freedom = 4

probability = 0.323

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

Table 4.228 Chi Square Table for Exp Gp B for Statement 54 for Initial Try-out

Polarity	Observed Frequency	Expected Frequency
5	11	4.8
4	5	4.8
3	5	4.8
2	2	4.8
1	1	4.8



chi-square = 12.7

degrees of freedom = 4

probability = 0.013

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic."

#### 4.09 Comprehensive Analysis of Reaction Scale for Initial Try-out

Data were analysed through the statistical technique  $\chi^2$ . Data analysis of responses of Experimental Group A is presented through table 4.229 while that of Experimental Group B is presented through table 4.30.

Tabulated Value of  $\chi^2$  at 4 df at .05 level is 9.49.

**Table 4.229 Analysis of responses on Reaction Scale given by the Experimental Group A for Initial Try-out**

S.No	Statement	Calculated Value of $\chi^2$ at 4 df .05 level	Significant Difference	Maximum Load
1	I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.	12.8	Yes	Positive Side
2	I like illustrations given in the slides, which actually made me learn the lesson.	50.5	Yes	Positive Side
3	Illustrations didn't help me to relate what we learned in mathematics to real life situation.	28.1	Yes	Positive Side
4	CAI is effective way of presentation because there is little stress in learning situation.	12.8	Yes	Neutral
5	I can learn with my own speed.	19.0	Yes	Positive Side
6	I can immediately test myself because there is lot of practice exercise.	16.9	Yes	Positive Side
7	This method is having more freedom to learn.	12.1	Yes	Positive Side
8	CAI didn't focus on more freedom situation.	12.07	Yes	Positive Side
9	Learning mathematics is fun in this CAI method.	10.96	Yes	Positive Side
10	This method is not good in learning mathematics because my doubts are not cleared.	10.2	Yes	Positive Side
11	In CAI I can teach myself (self-study) without the help of others.	13.2	Yes	Positive Side
12	Matter presented in CAI is not very clear.	3.79	No	-
13	CAI is easy to understand.	12.4	Yes	Positive Side
14	Animations are distracting in understanding the concept.	4.14	No	-
15	CAI took more time to understand the concept than usual classroom teaching.	2.00	No	-

S.No	Statement	Calculated Value of $\chi^2$ at 4 df .05 level	Significant Difference	Maximum Load
16	Illustrations given in CAI are enough to understand the concept clearly.	4.14	No	-
17	Matter presented in CAI was logically arranged.	11.6	Yes	Positive Side
18	Learning through CAI was waste of time.	22.2	Yes	Positive Side
19	Illustrations given in CAI are related to day today life experiences.	14.5	Yes	Positive Side
20	Classroom teaching is more enjoyable.	13.4	Yes	Positive Side
21	The language used in CAI is easy and simple to understand.	33.6	Yes	Positive Side
22	The exercises given in each chapter is adequate.	3.07	No	-
23	CAI takes care of previous knowledge in the subject.	30.6	Yes	Positive Side
24	The solution to the problem is not easy to understand.	3.79	No	-
25	The exercises helped in understanding the chapter in depth.	22.0	Yes	Neutral
26	Solutions didn't help me whenever I was not able to solve the problem.	9.5	Yes	Positive Side
27	Break given in CAI helped me to refresh my mind.	15.0	Yes	Positive Side
28	I am feeling tired while going through the slide.	3.19	No	-
29	Animation shown in CAI is appropriate to help me in understanding the concept.	19.5	Yes	Positive Side
30	Topic is not introduced properly.	12.1	Yes	Positive Side
31	CAI does not take care of previous knowledge (percentage) needed to understand the present concept.	1.70	No	-
32	Enough revision is not done in CAI after the topic simple interest.	0.96	No	-
33	Enough revision is not done in CAI after the topic compound interest.	3.56	No	-
34	Enough revision is not done in CAI after the topic profit and loss.	5.78	No	-
35	Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.	5.78	No	-
36	I have to read the slide many times to understand what is being said as there was no clarity.	6.52	No	-
37	Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.	12.07	Yes	Positive Side
38	Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.	15.8	Yes	Positive Side
39	Number of questions at the end of the slides for the topic compound interest is adequate for providing practice.	2.07	No	-
40	CAI is not enough in understanding the concept very clearly.	2.81	No	-
41	Independent learning is not possible through CAI.	9.85	Yes	Positive Side
42	Evaluation is done objectively (objective questions) so no partiality is involved in scoring.	18.4	Yes	Positive side

S.No	Statement	Calculated Value of $\chi^2$ at 4 df .05 level	Significant Difference	Maximum Load
43	Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.	3.19	No	-
44	Instruction given in each slide of CAI is easy and clear to follow.	13.6	Yes	Positive Side
45	Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.	0.96	No	-
46	Interaction with mathematics teacher is not possible while using this CAI (no face to face interaction).	1.70	No	-
47	To get the correct answer I had to go back to the slide/s many times for topic simple interest.	7.26	No	-
48	To get the correct answer I had to go back to the slide/s many times for topic Compound interest.	10.2	Yes	Neutral
49	To get the correct answer I had to go back to the slide/s many times for topic profit and loss.	6.15	No	-
50	Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.	11.7	Yes	Neutral
51	Discussion with mathematics teacher is needed along with CAI.	3.56	No	-
52	Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.	5.41	No	-
53	Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.	8.74	No	-
54	Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.	4.67	No	-

**Table 4.230 Analysis of responses on Reaction Scale given by the Experimental Group B for Initial Try-out**

S.No	Statement	Calculated Value of $\chi^2$ at 4 df .05 level	Significant Difference	Maximum Load
1	I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.	17.2	Yes	Positive Side
2	I like illustrations given in the slides, which actually made me learn the lesson.	19.3	Yes	Positive Side
3	Illustrations didn't help me to relate what we learned in mathematics to real life situation.	13.9	Yes	Neutral

S.No	Statement	Calculated Value of $\chi^2$ at 4 df .05 level	Significant Difference	Maximum Load
4	CAI is effective way of presentation because there is little stress in learning situation.	23.1	Yes	Neutral
5	I can learn with my own speed.	28.1	Yes	Positive Side
6	I can immediately test myself because there is lot of practice exercise.	12.7	Yes	Positive Side
7	This method is having more freedom to learn.	11.00	Yes	Positive Side
8	CAI didn't focus on more freedom situation.	4.75	No	-
9	Learning mathematics is fun in this CAI method.	14.3	Yes	Positive Side
10	This method is not good in learning mathematics because my doubts are not cleared.	1.4	No	-
11	In CAI I can teach myself (self-study) without the help of others.	4.75	No	-
12	Matter presented in CAI is not very clear.	9.75	Yes	Positive Side
13	CAI is easy to understand.	5.17	No	-
14	Animations are distracting in understanding the concept.	12.25	Yes	Positive Side
15	CAI took more time to understand the concept than usual classroom teaching.	3.08	No	-
16	Illustrations given in CAI are enough to understand the concept clearly.	6.0	No	-
17	Matter presented in CAI was logically arranged.	3.5	No	-
18	Learning through CAI was waste of time.	11.8	Yes	Neutral
19	Illustrations given in CAI are related to day today life experiences.	17.2	Yes	Positive Side
20	Classroom teaching is more enjoyable.	2.8	Yes	Positive Side
21	The language used in CAI is easy and simple to understand.	13.2	Yes	Positive Side
22	The exercises given in each chapter is adequate.	10.58	Yes	Positive Side
23	CAI takes care of previous knowledge in the subject.	13.3	Yes	Neutral
24	The solution to the problem is not easy to understand.	2.25	No	-
25	The exercises helped in understanding the chapter in depth.	6.83	No	-
26	Solutions didn't help me whenever I was not able to solve the problem.	6.35	No	-
27	Break given in CAI helped me to refresh my mind.	11.4	Yes	Positive Side

S.No	Statement	Calculated Value of $\chi^2$ at 4 df .05 level	Significant Difference	Maximum Load
28	I am feeling tired while going through the slide.	10.40	Yes	Positive Side
29	Animation shown in CAI is appropriate to help me in understanding the concept.	11.8	Yes	Positive Side
30	Topic is not introduced properly.	11.2	Yes	Positive Side
31	CAI does not take care of previous knowledge (percentage) needed to understand the present concept.	2.43	No	-
32	Enough revision is not done in CAI after the topic simple interest.	2.00	No	-
33	Enough revision is not done in CAI after the topic compound interest.	4.00	No	-
34	Enough revision is not done in CAI after the topic profit and loss.	1.13	No	-
35	Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.	3.74	No	-
36	I have to read the slide many times to understand what is being said as there was no clarity.	5.17	No	-
37	Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.	11.6	Yes	Positive Side
38	Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.	9.75	Yes	Positive Side
39	Number of questions at the end of the slides for the topic compound interest is adequate for providing practice.	14.4	Yes	Positive Side
40	CAI is not enough in understanding the concept very clearly..	2.67	No	-
41	Independent learning is not possible through CAI.	2.67	No	-
42	Evaluation is done objectively (objective questions) so no partiality is involved in scoring.	16.4	Yes	Positive side
43	Evaluation done at the end of the topic "simple interest" is not suitable measure to know my understanding about that topic.	9.75	Yes	Positive Side
44	Instruction given in each slide of CAI is easy and clear to follow.	22.7	Yes	Positive Side
45	Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.	6.42	No	-
46	Interaction with mathematics teacher is not possible while using this CAI (no face to face interaction).	2.25	No	-

S.No	Statement	Calculated Value of $\chi^2$ at 4 df .05 level	Significant Difference	Maximum Load
47	To get the correct answer I had to go back to the slide/s many times for topic simple interest.	3.92	No	-
48	To get the correct answer I had to go back to the slide/s many times for topic Compound interest.	3.50	No	-
49	To get the correct answer I had to go back to the slide/s many times for topic profit and loss.	3.08	No	-
50	Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.	10.6	Yes	Positive Side
51	Discussion with mathematics teacher is needed along with CAI.	5.58	No	-
52	Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.	16.4	Yes	Neutral
53	Evaluation done at the end of the topic "simple interest" is suitable measure to know my understanding about that topic.	13.1	Yes	Positive Side
54	Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.	12.7	Yes	Positive Side

#### 4.10 Findings from the Analysis of Reaction Scale for Initial Try-out

##### I. Experimental Group A

Out of total *fifty four* statements bearing positive as well as negative nature, the computed chi-square values of *twenty six* statements were found to have statistically significant *higher values than the tabulated value of chi-square* at 4 degrees of freedom and at .05 level of significance which shows that there was a significant difference between the observed and expected frequencies and the students *were found to have positive reaction and favorable attitude towards the statements carrying such higher values.*

The computed chi-square values in *twenty four* statements were *not found to be significant* at 4 degrees of freedom and at .05 level of significance which shows that there was no significant difference between the observed frequency and expected frequency therefore null hypothesis is not rejected. This reveals that reaction is *uniformly distributed* in the 5-point scale.

The computed chi-square values of remaining *four statements* were found to have statistically significant higher values than the chi-square table value at 4 degrees of freedom and at



.05 level of significance which shows that there was a significant difference between the observed and expected frequencies and the students *were found to have neutral attitude* towards the statements carrying such higher values.

## **II. Experimental Group B**

Out of total *fifty four* statements bearing positive as well as negative nature, *the computed chi-square values of twenty five statements were found to have statistically significant higher values than the chi-square table values* at 4 degrees of freedom and at .05 level of significance which shows that there was a significant difference between the observed and expected frequencies and the students were found to have positive reaction and favorable attitude towards the statements carrying such higher values.

The computed chi-square values in *twenty four* statements were *not found to be significant at* 4 degrees of freedom and at .05 level of significance which shows that there was no significant difference between the observed frequency and expected frequency therefore null hypothesis is not rejected. This reveals that reaction is uniformly distributed in the 5-point scale.

The computed chi-square values of remaining *five statements* were found to have statistically significant higher values than the chi-square table values 9.49 at 4 degrees of freedom and at .05 level of significance which shows that there was a significant difference between the observed and expected frequencies and the students *were found to have neutral attitude* towards the statements carrying such higher values.

### **4.11 Statement wise Analysis of Reaction Scale for Final Try-out**

Points for positive polarity statements and negative polarity statements Refer Table 39 and 40 respectively.

Level of Significance is .05 for analysis using Chi Square for all statements. Chi Square was calculated using online calculator (Tools for science).

Note: Exp Gp denote Experimental Group

**Statement 1:** I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.

#### **Polarity Positive**

**Experimental Group A : Responses of the students in percentage**

**Table 4.231 Responses of Exp Gp A students in percentage for statement 1 for Final Try-out**

Points	Exp Gp A
5	22.58
4	35.48
3	29.03
2	3.23
1	3.23

22.58% of the students strongly agree with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

35.48% of the students agree with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

29.03% of the students not decided with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

3.23% of the students disagree with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

3.23% of the students strongly disagree with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.232 Responses of Exp Gp B students in percentage for statement 1 for Final Try-out**

Points	Exp Gp B
5	12.50
4	40.63
3	6.25
2	37.50
1	9.38

12.50% of the students strongly agree with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

40.63% of the students agree with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

6.25% of the students not decided with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

37.50% of the students disagree with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

9.38% of the students strongly disagree with the statement “I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.”

**Graphical Representation of analysis of statement 1 in Percentage**

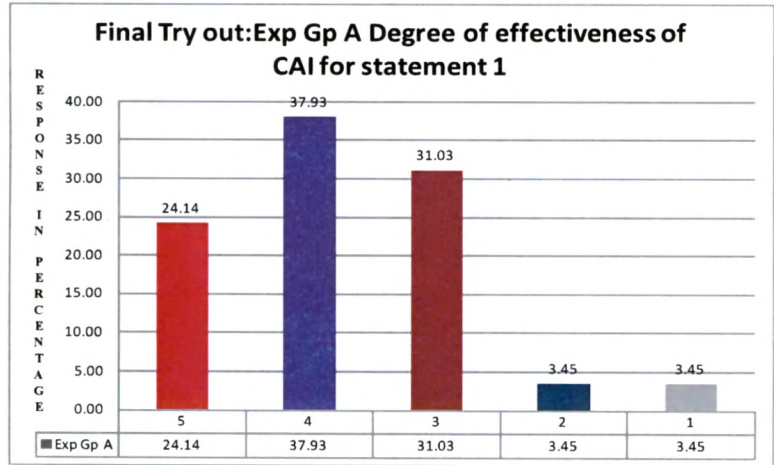


Figure 4.111 Graphical Representation of analysis of statement 1 in Percentage for Exp Gp B for Final Try-out

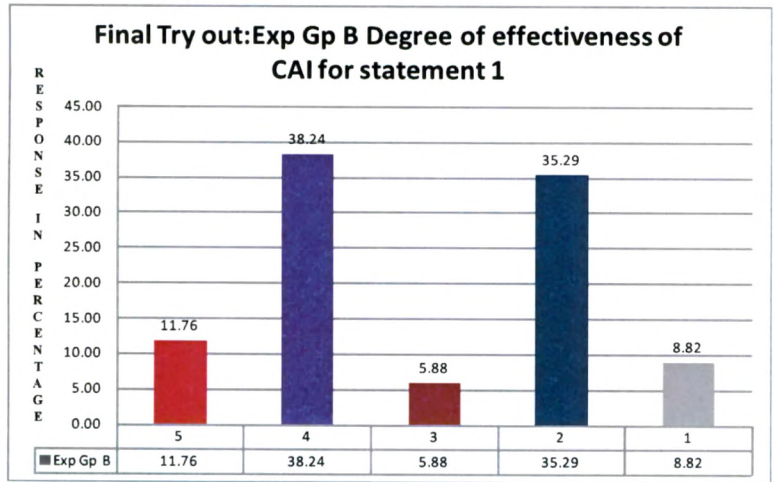


Figure 4.112 Graphical Representation of analysis of statement 1 in Percentage for Exp Gp B for Final Try-out

**Data Analysis using Chi Square**

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

**Experimental Group A**

**Table 4.233 Chi Square Table for Exp Gp A for Statement 1 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	7	5.8
4	11	5.8
3	9	5.8
2	1	5.8
1	1	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 14.6207

degrees of freedom = 4

probability = 0.00556

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures".

### **Experimental Group B**

**Table 4.234 Chi Square Table for Exp Gp B for Statement 1 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	4	6.8
4	13	6.8
3	2	6.8
2	12	6.8
1	3	6.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 16.2941

degrees of freedom = 4

probability = 0.00265

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures".

**Statement 2:** I like illustrations given in the slides, which actually made me learn the lesson.

Polarity: Positive

**Experimental Group A : Responses of the students in percentage**

**Table 4.235 Responses of Exp Gp A students in percentage for statement 2 for Final Try-out**

Points	Exp Gp A
5	9.68
4	67.74
3	12.90
2	3.23
1	0.00

9.86% of the students strongly agree with the statement “I like illustrations given in the slides, which actually made me learn the lesson”.

67.74% of the students agree with the statement “I like illustrations given in the slides, which actually made me learn the lesson”.

12.90% of the students not decided with the statement “I like illustrations given in the slides, which actually made me learn the lesson”.

3.23% of the students disagree with the statement “I like illustrations given in the slides, which actually made me learn the lesson”.

0% of the students strongly disagree with the statement “I like illustrations given in the slides, which actually made me learn the lesson”.

**Experimental Group B : Responses of the students in percentage**

**Table 4.236 Responses of Exp Gp B students in percentage for statement 2 for Final Try-out**

Points	Exp Gp B
5	25.00
4	40.63
3	9.38
2	25.00
1	3.13

25.00% of the students strongly agree with the statement “I like illustrations given in the slides, which actually made me learn the lesson”.

40.63% of the students agree with the statement “I like illustrations given in the slides, which actually made me learn the lesson”.

9.38% of the students not decided with the statement “I like illustrations given in the slides, which actually made me learn the lesson”.

25.00% of the students disagree with the statement “I like illustrations given in the slides, which actually made me learn the lesson”.

3.13% of the students strongly disagree with the statement “I like illustrations given in the slides, which actually made me learn the lesson”.

Graphical Representation of analysis of statement 2 in Percentage

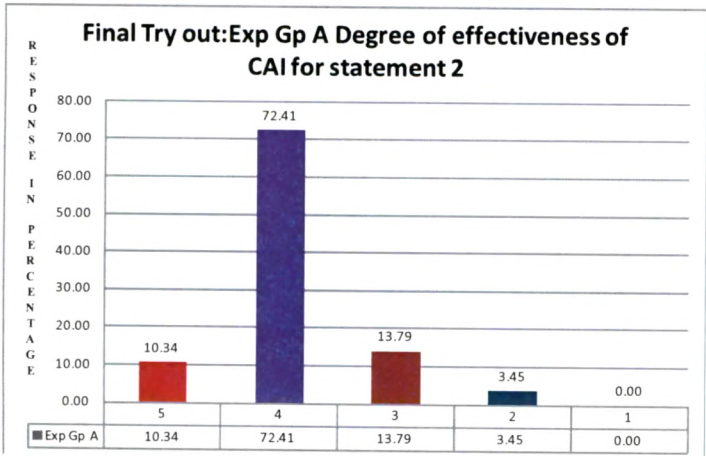


Figure 4.113 Graphical Representation of analysis of statement 2 in Percentage for Exp Gp A for Final Try-out

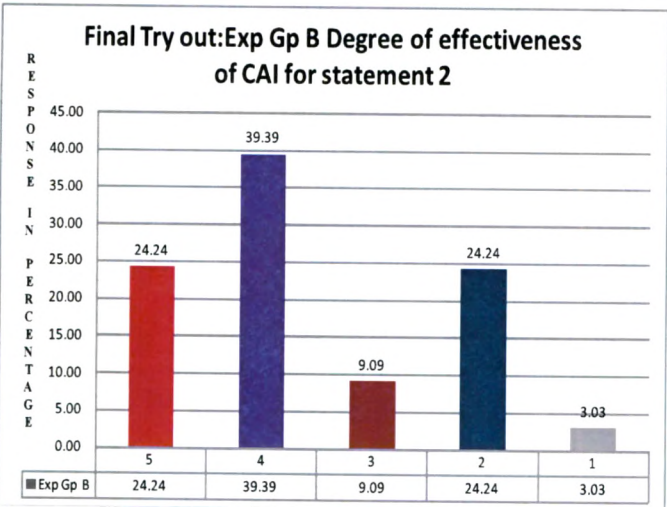


Figure 4.114 Graphical Representation of analysis of statement 2 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A



**Table 4.237 Chi Square Table for Exp Gp A for Statement 2 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	3	5.8
4	21	5.8
3	4	5.8
2	1	5.8
1	0	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 51.517241

degrees of freedom = 4

probability = 0

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "I like illustrations given in the slides, which actually made me learn the lesson."

### **Experimental Group B**

**Table 4.238 Chi Square Table for Exp Gp B for Statement 2 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	8	6.6
4	13	6.6
3	3	6.6
2	8	6.6
1	1	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 13.5152

degrees of freedom = 4

probability = 0.00901

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "I like illustrations given in the slides, which actually made me learn the lesson."

**Statement 3:** Illustrations didn't help me to relate what we learned in mathematics to real life situation.

Polarity: Negative

**Experimental Group A : Responses of the students in percentage**

**Table 4.239 Responses of Exp Gp A students in percentage for statement 3 for Final Try-out**

Points	Exp Gp A
5	16.13
4	35.48
3	12.90
2	19.35
1	6.45

16.13% of the students strongly disagree with the statement "Illustrations didn't help me to relate what we learned in mathematics to real life situation."

35.48% of the students disagree with the statement "Illustrations didn't help me to relate what we learned in mathematics to real life situation."

12.90% of the students not decided with the statement "Illustrations didn't help me to relate what we learned in mathematics to real life situation."

19.35% of the students agree with the statement "Illustrations didn't help me to relate what we learned in mathematics to real life situation."

6.45% of the students strongly agree with the statement "Illustrations didn't help me to relate what we learned in mathematics to real life situation."

**Experimental Group B : Responses of the students in percentage**

**Table 4.240 Responses of Exp Gp B students in percentage for statement 3 for Final Try-out**

Points	Exp Gp B
5	25.00
4	21.88
3	21.88
2	31.25
1	3.13

25.00% of the students strongly disagree with the statement "Illustrations didn't help me to relate what we learned in mathematics to real life situation."

21.88% of the students disagree with the statement “Illustrations didn’t help me to relate what we learned in mathematics to real life situation.”

21.88% of the students not decided with the statement “Illustrations didn’t help me to relate what we learned in mathematics to real life situation.”

31.25% of the students agree with the statement “Illustrations didn’t help me to relate what we learned in mathematics to real life situation.”

3.13% of the students strongly agree with the statement “Illustrations didn’t help me to relate what we learned in mathematics to real life situation.”

**Graphical Representation of analysis of statement 3 in Percentage**

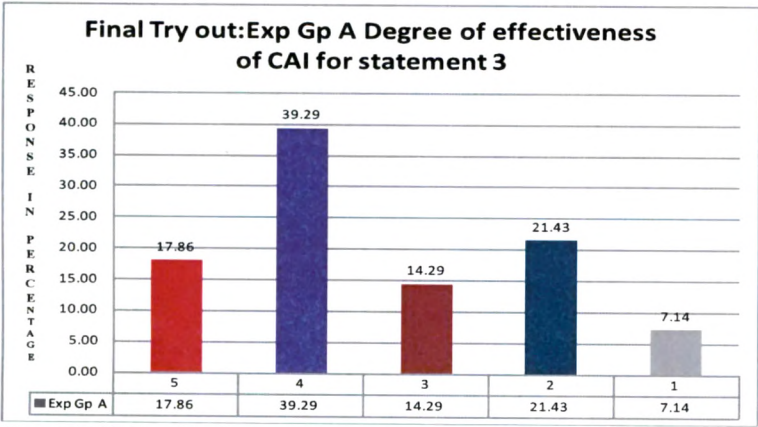


Figure 4.115 Graphical Representation of analysis of statement 3 in Percentage for Exp Gp A for Final Try-out

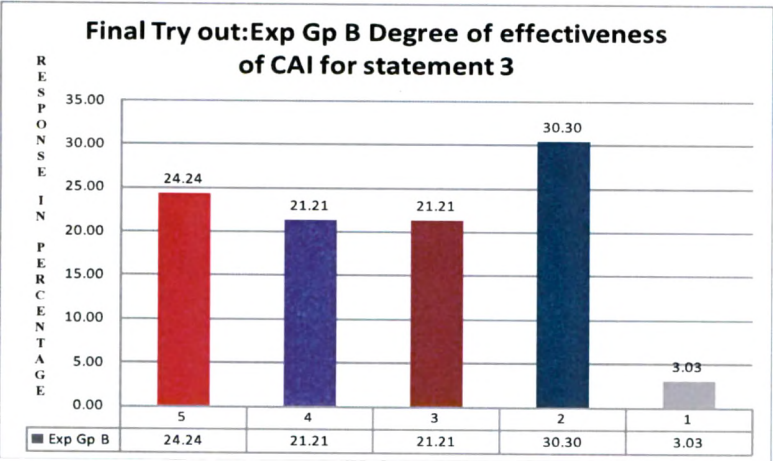


Figure 4.116 Graphical Representation of analysis of statement 3 in Percentage for Exp Gp B for Final Try-out

**Data Analysis using Chi Square**

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.241 Chi Square Table for Exp Gp A for Statement 3 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	5	5.6
4	11	5.6
3	4	5.6
2	6	5.6
1	2	5.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 8.07143

degrees of freedom = 4

probability = 0.089

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

Table 4.242 Chi Square Table for Exp Gp B for Statement 3 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	8	6.6
4	7	6.6
3	7	6.6
2	10	6.6
1	1	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 6.84848

degrees of freedom = 4

probability = 0.14412

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 4:** CAI is effective way of presentation because there is little stress in learning situation.

**Polarity:** Positive

### **Experimental Group A : Responses of the students in percentage**

**Table 4.243 Responses of Exp Gp A students in percentage for statement 4 for Final Try-out**

Points	Exp Gp A
5	6.45
4	29.03
3	38.71
2	12.90
1	6.45

6.45% of the students strongly agree with the statement "CAI is effective way of presentation because there is little stress in learning situation."

29.03% of the students agree with the statement "CAI is effective way of presentation because there is little stress in learning situation."

38.71% of the students not decided with the statement "CAI is effective way of presentation because there is little stress in learning situation."

12.90% of the students disagree with the statement "CAI is effective way of presentation because there is little stress in learning situation."

6.45% of the students strongly disagree with the statement "CAI is effective way of presentation because there is little stress in learning situation."

### **Experimental Group B : Responses of the students in percentage**

**Table 4.244 Responses of Exp Gp B students in percentage for statement 4 for Final Try-out**

Points	Exp Gp B
5	15.63
4	37.50
3	15.63
2	25.00
1	9.38

15.63% of the students strongly agree with the statement "CAI is effective way of presentation because there is little stress in learning situation."

37.50% of the students agree with the statement "CAI is effective way of presentation because there is little stress in learning situation."

15.63% of the students not decided with the statement "CAI is effective way of presentation because there is little stress in learning situation."

25.00% of the students disagree with the statement “CAI is effective way of presentation because there is little stress in learning situation.”

9.38% of the students strongly disagree with the statement “CAI is effective way of presentation because there is little stress in learning situation.”

Graphical Representation of analysis of statement 4 in Percentage

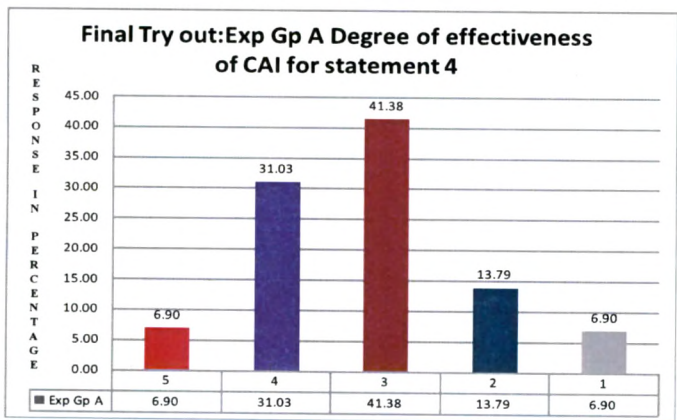


Figure 4.117 Graphical Representation of analysis of statement 4 in Percentage for Exp Gp A for Final Try-out

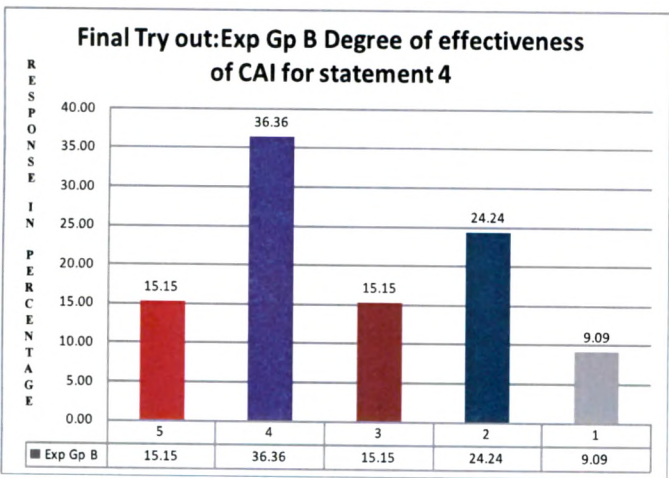


Figure 4.118 Graphical Representation of analysis of statement 4 in Percentage for Exp Gp A for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale



### Experimental Group A

**Table 4.245 Chi Square Table for Exp Gp A for Statement 4 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	2	5.8
4	9	5.8
3	12	5.8
2	4	5.8
1	2	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 13.931

degrees of freedom = 4

probability = 0.00752

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on not decided therefore most of the students not decided with the statement "CAI is effective way of presentation because there is little stress in learning situation."

### Experimental Group B

**Table 4.246 Chi Square Table for Exp Gp B for Statement 4 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	5	6.6
4	12	6.6
3	5	6.6
2	8	6.6
1	3	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 7.45455

degrees of freedom = 4

probability = 0.11373

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 5:** I can learn with my own speed.

**Polarity:** Positive

**Experimental Group A : Responses of the students in percentage**

**Table 4.247 Responses of Exp Gp A students in percentage for statement 5 for Final Try-out**

Points	Exp Gp A
5	25.81
4	48.39
3	12.90
2	9.68
1	0.00

25.81% of the students strongly agree with the statement “I can learn with my own speed.”

48.39% of the students agree with the statement “I can learn with my own speed.”

12.90% of the students not decided with the statement “I can learn with my own speed.”

9.68% of the students disagree with the statement “I can learn with my own speed.”

0.00% of the students strongly disagree with the statement “I can learn with my own speed.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.248 Responses of Exp Gp B students in percentage for statement 5 for Final Try-out**

Points	Exp Gp B
5	40.63
4	21.88
3	15.63
2	21.88
1	3.13

40.63% of the students strongly agree with the statement “I can learn with my own speed.”

21.88% of the students agree with the statement “I can learn with my own speed.”

15.63% of the students not decided with the statement “I can learn with my own speed.”

21.88% of the students disagree with the statement “I can learn with my own speed.”

3.13% of the students strongly disagree with the statement “I can learn with my own speed.”

Graphical Representation of analysis of statement 5 in Percentage

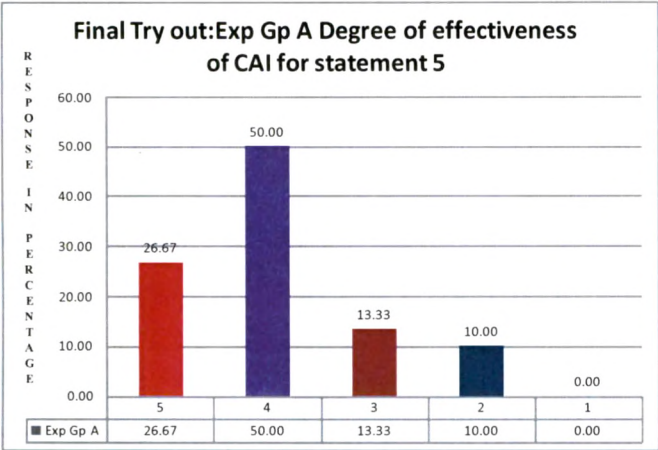


Figure 4.119 Graphical Representation of analysis of statement 5 in Percentage for Exp Gp A for Final Try-out

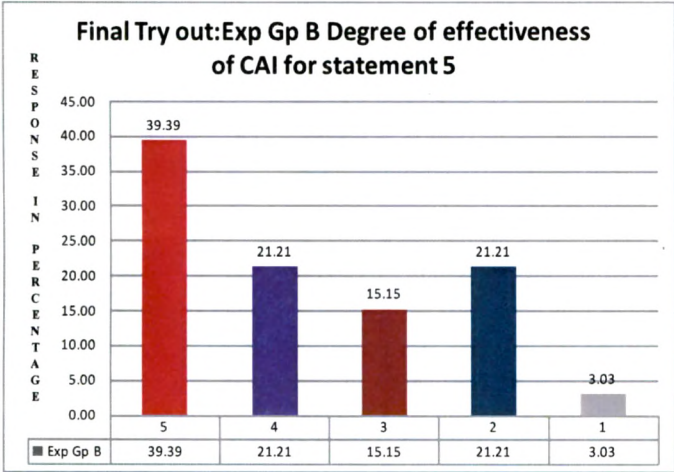


Figure 4.120 Graphical Representation of analysis of statement 5 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.249 Chi Square Table for Exp Gp A for Statement 5 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	8	6
4	15	6
3	4	6
2	3	6
1	0	6

Expected Frequency = Sum of observed frequencies/5

chi-square = 22.3333

degrees of freedom = 4

probability = 0.00017

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "I can learn with my own speed."

### Experimental Group B

**Table 4.250 Chi Square Table for Exp Gp B for Statement 5 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	13	6.6
4	7	6.6
3	5	6.6
2	7	6.6
1	1	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 11.3939

degrees of freedom = 4

probability = 0.02248

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "I can learn with my own speed".

**Statement 6:** I can immediately test myself because there is lot of practice exercise.

**Polarity: Positive**

**Experimental Group A : Responses of the students in percentage**

**Table 4.251 Responses of Exp Gp A students in percentage for statement 6 for Final Try-out**

Points	Exp Gp A
5	22.58
4	48.39
3	16.13
2	0.00
1	6.45

22.58% of the students strongly agree with the statement “I can immediately test myself because there is lot of practice exercise.”

48.39% of the students agree with the statement “I can immediately test myself because there is lot of practice exercise.”

16.13% of the students not decided with the statement “I can immediately test myself because there is lot of practice exercise.”

0.00% of the students disagree with the statement “I can immediately test myself because there is lot of practice exercise.”

6.45% of the students strongly disagree with the statement “I can immediately test myself because there is lot of practice exercise.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.252 Responses of Exp Gp B students in percentage for statement 6 for Final Try-out**

Points	Exp Gp B
5	25.00
4	46.88
3	9.38
2	15.63
1	6.25

25.00% of the students strongly agree with the statement “I can immediately test myself because there is lot of practice exercise.”

46.88% of the students agree with the statement “I can immediately test myself because there is lot of practice exercise.”

9.38% of the students not decided with the statement “I can immediately test myself because there is lot of practice exercise.”

15.63% of the students disagree with the statement “I can immediately test myself because there is lot of practice exercise.”

6.25% of the students strongly disagree with the statement “I can immediately test myself because there is lot of practice exercise.”

Graphical Representation of analysis of statement 6 in Percentage

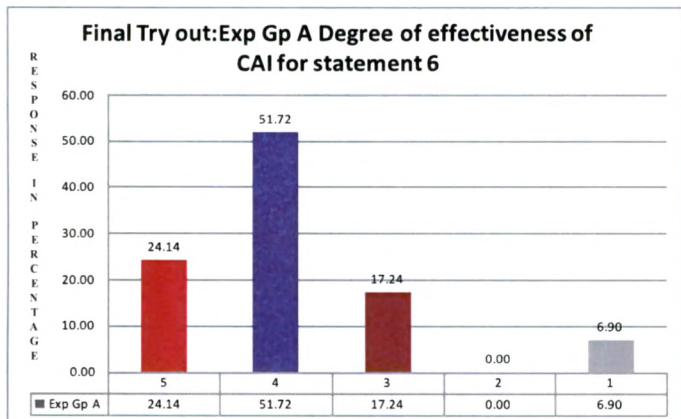


Figure 4.121 Graphical Representation of analysis of statement 6 in Percentage for Exp Gp A for Final Try-out

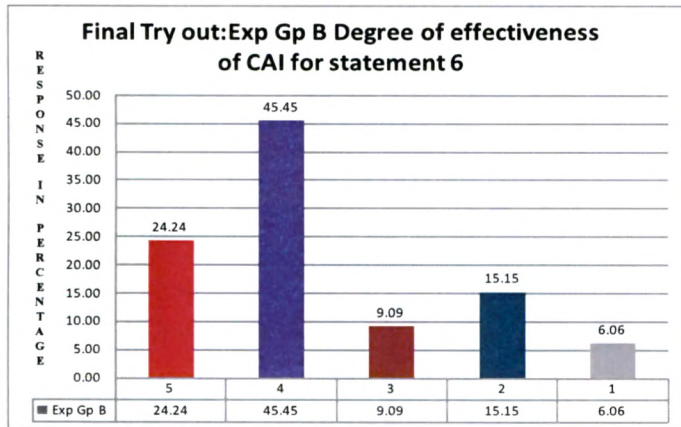


Figure 4.122 Graphical Representation of analysis of statement 6 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.253 Chi Square Table for Exp Gp A for Statement 6 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	7	5.8
4	15	5.8
3	5	5.8
2	0	5.8
1	2	5.8



Expected Frequency = Sum of observed frequencies/5

chi-square = 23.2414

degrees of freedom = 4

probability = 0.00011

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "I can immediately test myself because there is lot of practice exercise."

### Experimental Group B

**Table 4.254 Chi Square Table for Exp Gp B for Statement 6 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	8	6.6
4	15	6.6
3	3	6.6
2	5	6.6
1	2	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 16.5455

degrees of freedom = 4

probability = 0.00237

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on **agree** therefore most of the students agree with the statement "I can immediately test myself because there is lot of practice exercise".

**Statement 7:** This method is having more freedom to learn.

Polarity: Positive

**Experimental Group A : Responses of the students in percentage**

**Table 4.255 Responses of Exp Gp A students in percentage for statement 7 for Final Try-out**

Points	Exp Gp A
5	35.48
4	41.94
3	12.90
2	6.45
1	0.00

35.48% of the students strongly agree with the statement “This method is having more freedom to learn.”

41.94% of the students agree with the statement “This method is having more freedom to learn.”

12.90% of the students not decided with the statement “This method is having more freedom to learn.”

6.45% of the students disagree with the statement “This method is having more freedom to learn.”

0.00% of the students strongly disagree with the statement “This method is having more freedom to learn.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.256 Responses of Exp Gp B students in percentage for statement 7 for Final Try-out**

Points	Exp Gp B
5	31.25
4	34.38
3	12.50
2	21.88
1	6.25

31.25% of the students strongly agree with the statement “This method is having more freedom to learn.”

34.38% of the students agree with the statement “This method is having more freedom to learn.”

12.50% of the students not decided with the statement “This method is having more freedom to learn.”

21.88% of the students disagree with the statement “This method is having more freedom to learn.”

6.25% of the students strongly disagree with the statement “This method is having more freedom to learn.”

Graphical Representation of analysis of statement 7 in Percentage

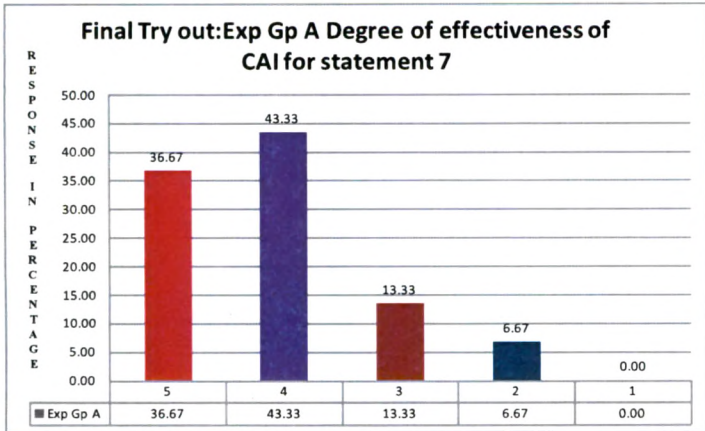


Figure 4.123 Graphical Representation of analysis of statement 7 in Percentage for Exp Gp A for Final Try-out

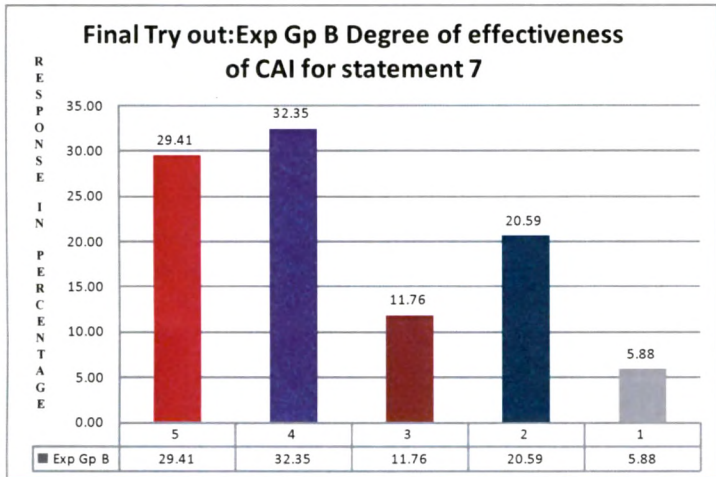


Figure 4.124 Graphical Representation of analysis of statement 7 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.257 Chi Square Table for Exp Gp A for Statement 7 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	11	6
4	13	6
3	4	6
2	2	6
1	0	6

chi-square = 21.6667

degrees of freedom = 4

probability = 0.000237

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "This method is having more freedom to learn."

### **Experimental Group B**

**Table 4.258 Chi Square Table for Exp Gp B for Statement 7 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	10	6.8
4	11	6.8
3	4	6.8
2	7	6.8
1	2	6.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 8.64706

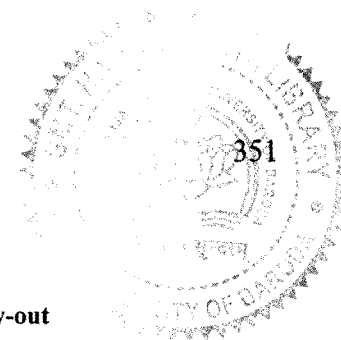
degrees of freedom = 4

probability = 0.07055

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "I can immediately test myself because there is lot of practice exercise".

**Statement 8:** CAI didn't focus on more freedom situation.

**Polarity:** Negative



**Experimental Group A : Responses of the students in percentage**

**Table 4.259 Responses of Exp Gp A students in percentage for statement 8 for Final Try-out**

Points	Exp Gp A
5	22.58
4	22.58
3	29.03
2	12.90
1	6.45

22.58% of the students strongly disagree with the statement “CAI didn’t focus on more freedom situation.”

22.58% of the students disagree with the statement “CAI didn’t focus on more freedom situation.”

29.03% of the students not decided with the statement “CAI didn’t focus on more freedom situation.”

12.90% of the students agree with the statement “CAI didn’t focus on more freedom situation.”

6.45% of the students strongly agree with the statement “CAI didn’t focus on more freedom situation.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.260 Responses of Exp Gp B students in percentage for statement 8 for Final Try-out**

Points	Exp Gp B
5	6.25
4	40.63
3	34.38
2	9.38
1	12.50

6.25% of the students strongly disagree with the statement “CAI didn’t focus on more freedom situation.”

40.63% of the students disagree with the statement “CAI didn’t focus on more freedom situation.”

34.38% of the students not decided with the statement “CAI didn’t focus on more freedom situation.”

9.38% of the students agree with the statement “CAI didn’t focus on more freedom situation.”

12.50% of the students strongly agree with the statement “CAI didn’t focus on more freedom situation.”

### Graphical Representation of analysis of statement 8 in Percentage

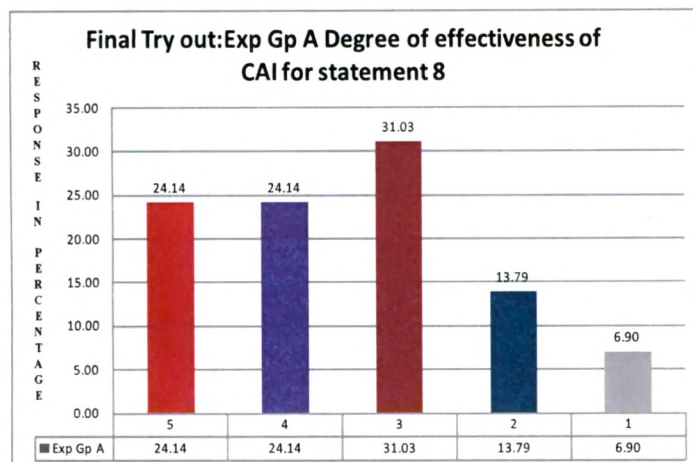


Figure 4.125 Graphical Representation of analysis of statement 8 in Percentage for Exp Gp A for Final Try-out

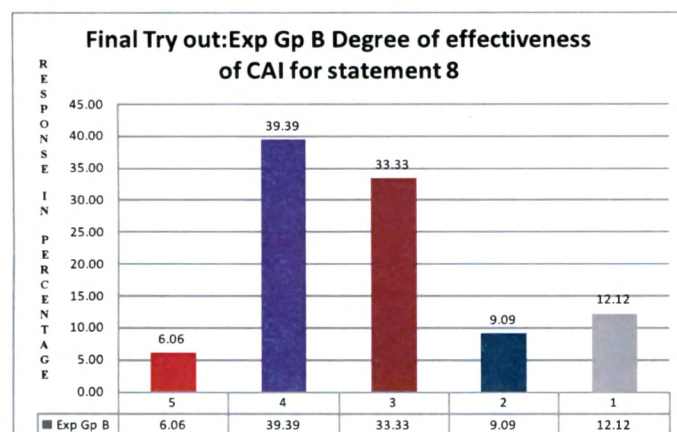


Figure 4.126 Graphical Representation of analysis of statement 8 in Percentage for Exp Gp B for Final Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.261 Chi Square Table for Exp Gp A for Statement 8 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	7	5.8
4	7	5.8
3	9	5.8
2	4	5.8
1	2	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 5.31034

degrees of freedom = 4

probability = 0.25691

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

**Experimental Group B**

**Table 4.262 Chi Square Table for Exp Gp B for Statement 8 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	2	6.6
4	13	6.6
3	11	6.6
2	3	6.6
1	4	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 15.3333

degrees of freedom = 4

probability = 0.00406

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement “CAI didn’t focus on more freedom situation”.

**Statement 9:** Learning mathematics is fun in this CAI method.

**Polarity: Positive**



### **Experimental Group A : Responses of the students in percentage**

**Table 4.263 Responses of Exp Gp A students in percentage for statement 9 for Final Try-out**

Points	Exp Gp A
5	22.58
4	45.16
3	22.58
2	0.00
1	3.23

22.58% of the students strongly agree with the statement "Learning mathematics is fun in this CAI method."

45.16% of the students agree with the statement "Learning mathematics is fun in this CAI method."

22.58% of the students not decided with the statement "Learning mathematics is fun in this CAI method."

0.00% of the students disagree with the statement "Learning mathematics is fun in this CAI method."

3.23% of the students strongly disagree with the statement "Learning mathematics is fun in this CAI method."

### **Experimental Group B : Responses of the students in percentage**

**Table 4.264 Responses of Exp Gp A students in percentage for statement 9 for Final Try-out**

Points	Exp Gp B
5	25.81
4	41.94
3	9.68
2	22.58
1	6.45

22.81% of the students strongly agree with the statement "Learning mathematics is fun in this CAI method."

41.94% of the students agree with the statement "Learning mathematics is fun in this CAI method."

9.68% of the students not decided with the statement "Learning mathematics is fun in this CAI method."

22.58% of the students disagree with the statement "Learning mathematics is fun in this CAI method."

6.45% of the students strongly disagree with the statement “Learning mathematics is fun in this CAI method.”

### Graphical Representation of analysis of statement 9 in Percentage

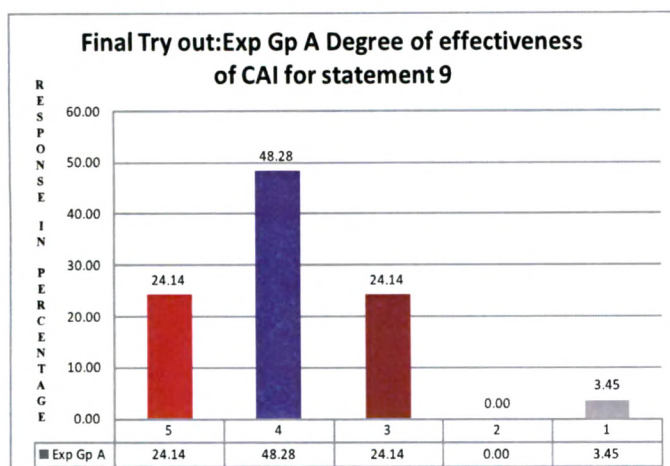


Figure 4.127 Graphical Representation of analysis of statement 9 in Percentage for Exp Gp A for Final Try-out

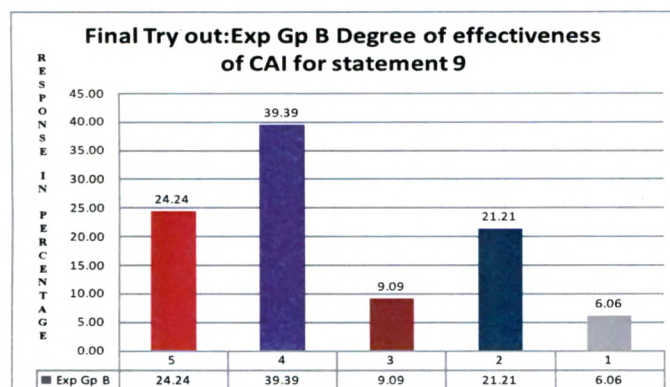


Figure 4.128 Graphical Representation of analysis of statement 9 in Percentage for Exp Gp B for Final Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.265 Chi Square Table for Exp Gp A for Statement 9 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	7	5.8
4	14	5.8
3	7	5.8
2	0	5.8
1	1	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 21.8621

degrees of freedom = 4

probability = 0.00021

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement “Learning mathematics is fun in this CAI method.”

**Experimental Group B**

**Table 4.266 Chi Square Table for Exp Gp B for Statement 9 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	8	6.6
4	13	6.6
3	3	6.6
2	7	6.6
1	2	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 11.697

degrees of freedom = 4

probability =0.01975

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students strongly agree with the statement “Learning mathematics is fun in this CAI method”.

**Statement 10:** This method is not good in learning mathematics because my doubts are not cleared.

**Polarity: Negative**

**Experimental Group A : Responses of the students in percentage****Table 4.267 Responses of Exp Gp A students in percentage for statement 10 for Final Try-out**

Points	Exp Gp A
5	22.58
4	19.35
3	22.58
2	25.81
1	6.45

22.58% of the students strongly disagree with the statement "This method is not good in learning mathematics because my doubts are not cleared."

19.35% of the students disagree with the statement "This method is not good in learning mathematics because my doubts are not cleared."

22.58% of the students not decided with the statement "This method is not good in learning mathematics because my doubts are not cleared."

25.81% of the students agree with the statement "This method is not good in learning mathematics because my doubts are not cleared."

6.45% of the students strongly agree with the statement "This method is not good in learning mathematics because my doubts are not cleared."

**Experimental Group B : Responses of the students in percentage****Table 4.268 Responses of Exp Gp B students in percentage for statement 10 for Final Try-out**

Points	Exp Gp B
5	6.25
4	28.13
3	12.50
2	34.38
1	21.88

6.25% of the students strongly disagree with the statement "This method is not good in learning mathematics because my doubts are not cleared."

28.13% of the students disagree with the statement "This method is not good in learning mathematics because my doubts are not cleared."

12.50% of the students not decided with the statement "This method is not good in learning mathematics because my doubts are not cleared."

34.38% of the students agree with the statement “This method is not good in learning mathematics because my doubts are not cleared.”

21.88% of the students strongly agree with the statement “This method is not good in learning mathematics because my doubts are not cleared.”

#### Graphical Representation of analysis of statement 10 in Percentage

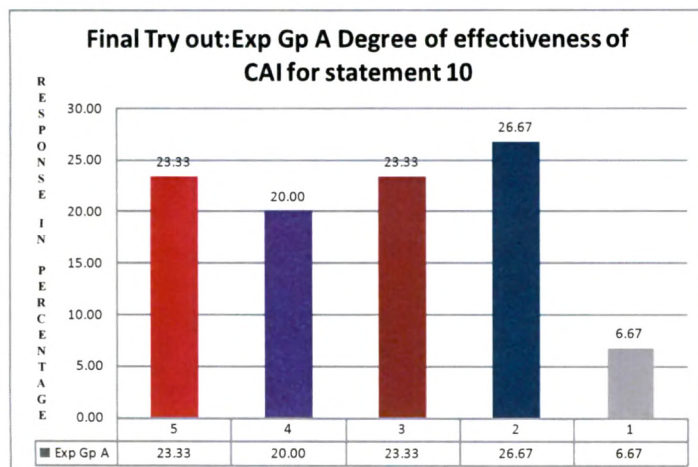


Figure 4.129 Graphical Representation of analysis of statement 10 in Percentage for Exp Gp A for Final Try-out

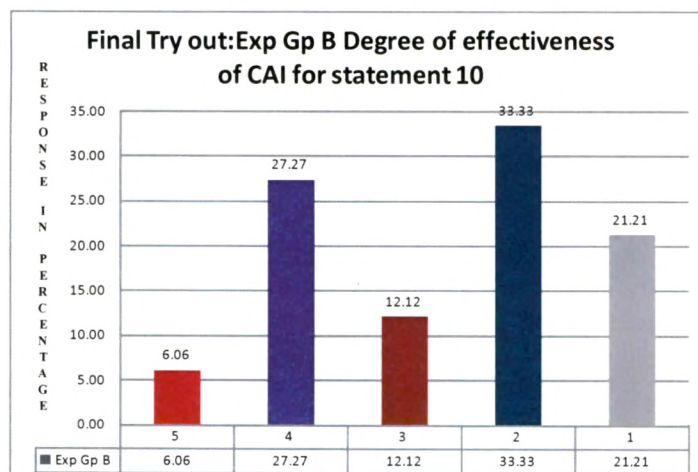


Figure 4.130 Graphical Representation of analysis of statement 10 in Percentage for Exp Gp B for Final Try-out

#### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.269 Chi Square Table for Exp Gp A for Statement 10 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	7	6
4	6	6
3	7	6
2	8	6
1	2	6

Expected Frequency = Sum of observed frequencies/5

chi-square = 3.66667

degrees of freedom = 4

probability = 0.45299

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

**Table 4.270 Chi Square Table for Exp Gp B for Statement 10 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	2	6.6
4	9	6.6
3	4	6.6
2	11	6.6
1	7	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 8.06061

degrees of freedom = 4

probability = 0.08938

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 11:** In CAI I can teach myself (self-study) without the help of others.

Polarity: Positive

### **Experimental Group A : Responses of the students in percentage**

**Table 4.271 Responses of Exp Gp A students in percentage for statement 11 for Final Try-out**

Points	Exp Gp A
5	16.13
4	32.26
3	22.58
2	12.90
1	9.68

16.13% of the students strongly agree with the statement “In CAI I can teach myself (self-study) without the help of others.”

32.26% of the students agree with the statement “In CAI I can teach myself (self-study) without the help of others.”

22.58% of the students not decided with the statement “In CAI I can teach myself (self-study) without the help of others.”

12.90% of the students disagree with the statement “In CAI I can teach myself (self-study) without the help of others.”

9.68% of the students strongly disagree with the statement “In CAI I can teach myself (self-study) without the help of others.”

### **Experimental Group B : Responses of the students in percentage**

**Table 4.272 Responses of Exp Gp B students in percentage for statement 11 for Final Try-out**

Points	Exp Gp B
5	28.13
4	43.75
3	15.63
2	6.25
1	9.38

28.13% of the students strongly agree with the statement “In CAI I can teach myself (self-study) without the help of others.”

43.75% of the students agree with the statement “In CAI I can teach myself (self-study) without the help of others.”

15.63% of the students not decided with the statement “In CAI I can teach myself (self-study) without the help of others.”



6.25% of the students disagree with the statement “In CAI I can teach myself (self-study) without the help of others.”

9.38% of the students strongly disagree with the statement “In CAI I can teach myself (self-study) without the help of others.”

Graphical Representation of analysis of statement 11 in Percentage

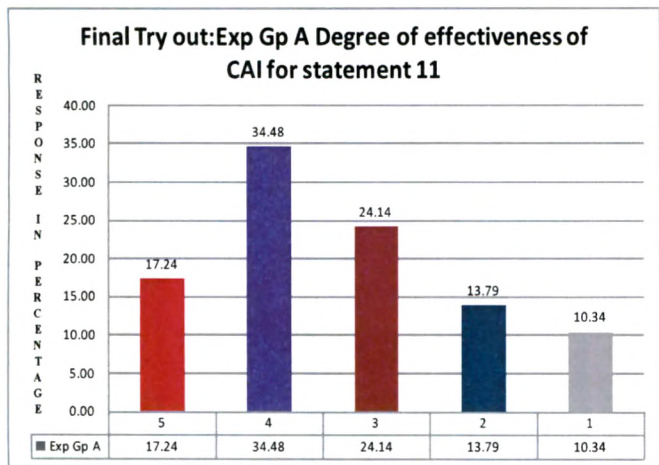


Figure 4.131 Graphical Representation of analysis of statement 11 in Percentage for Exp Gp A for Final Try-out

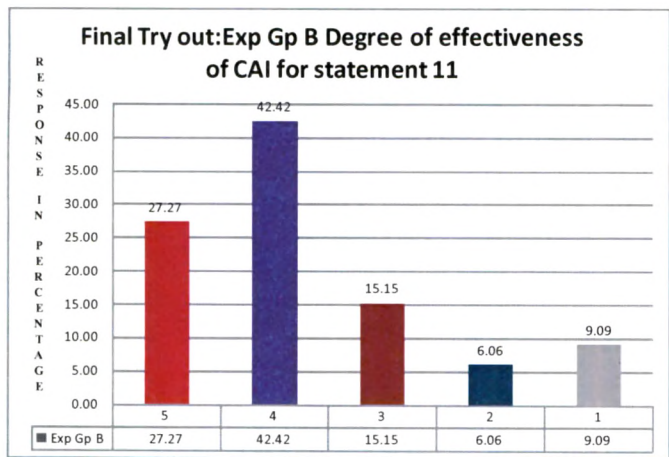


Figure 4.132 Graphical Representation of analysis of statement 11 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.273 Chi Square Table for Exp Gp A for Statement 11 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	5	5.8
4	10	5.8
3	7	5.8
2	4	5.8
1	3	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 5.31034

degrees of freedom =4

probability = 0.25691

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "In CAI I can teach myself (self-study) without the help of others."

### Experimental Group B

Table 4.274 Chi Square Table for Exp Gp B for Statement 11 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	9	6.6
4	14	6.6
3	5	6.6
2	2	6.6
1	3	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 14.7273

degrees of freedom =4

probability = 0.0053

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "In CAI I can teach myself (self-study) without the help of others".

**Statement 12:** Matter presented in CAI is not very clear.

**Polarity:** Negative

**Experimental Group A : Responses of the students in percentage**

**Table 4.275 Responses of Exp Gp A students in percentage for statement 12 for Final Try-out**

Points	Exp Gp A
5	9.68
4	35.48
3	29.03
2	19.35
1	3.23

9.68% of the students strongly disagree with the statement “Matter presented in CAI is not very clear.”

35.48% of the students disagree with the statement “Matter presented in CAI is not very clear.”

29.03% of the students not decided with the statement “Matter presented in CAI is not very clear.”

19.35% of the students agree with the statement “Matter presented in CAI is not very clear.”

3.23% of the students strongly agree with the statement “Matter presented in CAI is not very clear.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.276: Responses of Exp Gp B students in percentage for statement 12 for Final Try-out**

Points	Exp Gp B
5	18.75
4	34.38
3	21.88
2	21.88
1	6.25

18.75% of the students strongly disagree with the statement.

34.38% of the students disagree with the statement.

21.88% of the students not decided with the statement.

21.88% of the students agree with the statement.

6.25% of the students strongly agree with the statement.

Graphical Representation of analysis of statement 12 in Percentage

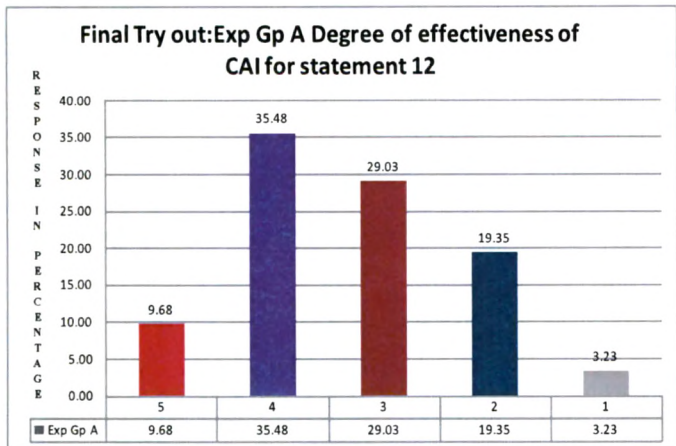


Figure 4.133 Graphical Representation of analysis of statement 12 in Percentage for Exp Gp A for Final Try-out

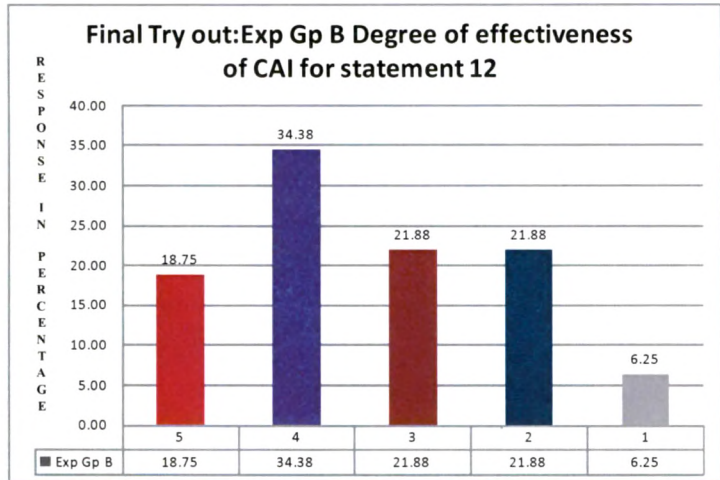


Figure 4.134 Graphical Representation of analysis of statement 12 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.277 Chi Square Table for Exp Gp A for Statement 12 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	3	6
4	11	6
3	9	6
2	6	6
1	1	6

Expected Frequency = Sum of observed frequencies/5

chi-square = 11.3333

degrees of freedom = 4

probability = 0.02306

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Matter presented in CAI is not very clear."

### **Experimental Group B**

**Table 4.278 Chi Square Table for Exp Gp B for Statement 12 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	6	6.6
4	11	6.6
3	7	6.6
2	7	6.6
1	2	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 6.24242

degrees of freedom = 4

probability = 0.18176

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 13:** CAI is easy to understand.

**Polarity: Positive**

### **Experimental Group A : Responses of the students in percentage**

**Table 4.279 Responses of Exp Gp A students in percentage for statement 13 for Final Try-out**

Points	Exp Gp A
5	12.90
4	35.48
3	32.26
2	12.90
1	0.00

12.90% of the students strongly agree with the statement "CAI is easy to understand."

35.48% of the students agree with the statement "CAI is easy to understand."

32.26% of the students not decided with the statement "CAI is easy to understand."

12.90% of the students disagree with the statement "CAI is easy to understand."

0.00% of the students strongly disagree with the statement "CAI is easy to understand."

### **Experimental Group B : Responses of the students in percentage**

**Table 4.280 Responses of Exp Gp B students in percentage for statement 13 for Final Try-out**

Points	Exp Gp B
5	25.00
4	43.75
3	9.38
2	18.75
1	6.25

25.00% of the students strongly agree with the statement "CAI is easy to understand."

43.75% of the students agree with the statement "CAI is easy to understand."

9.38% of the students not decided with the statement "CAI is easy to understand."

18.75% of the students disagree with the statement "CAI is easy to understand."

6.25% of the students strongly disagree with the statement "CAI is easy to understand."

Graphical Representation of analysis of statement 13 in Percentage

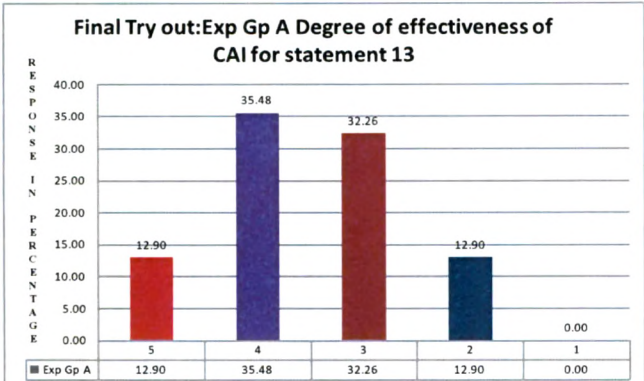


Figure 4.135 Graphical Representation of analysis of statement 13 in Percentage for Exp Gp A for Final Try-out

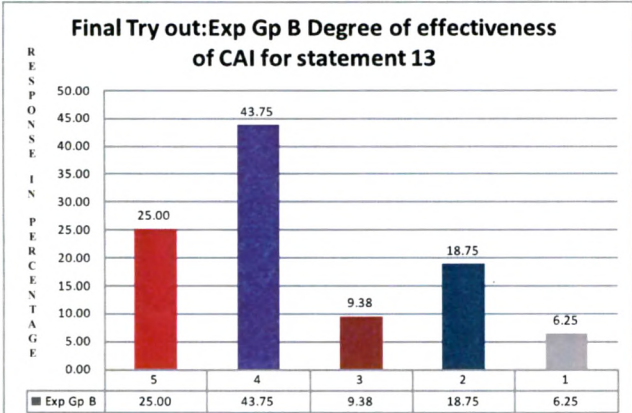


Figure 4.136 Graphical Representation of analysis of statement 13 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.281 Chi Square Table for Exp Gp A for Statement 13 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	4	5.8
4	11	5.8
3	10	5.8
2	4	5.8
1	0	5.8

Expected Frequency = Sum of observed frequencies/5



chi-square = 14.6207

degrees of freedom = 4

probability = 0.00556

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "CAI is easy to understand."

### **Experimental Group B**

**Table 4.282 Chi Square Table for Exp Gp B for Statement 13 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	8	6.6
4	14	6.6
3	3	6.6
2	6	6.6
1	2	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 13.8182

degrees of freedom = 4

probability = 0.0079

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "CAI is easy to understand".

**Statement 14:** Animations are distracting in understanding the concept.

Polarity: Negative

### **Experimental Group A : Responses of the students in percentage**

**Table 4.283 Responses of Exp Gp A students in percentage for statement 14 for Final Try-out**

Points	Exp Gp A
5	19.35
4	25.81
3	12.90
2	22.58
1	3.23

19.35% of the students strongly disagree with the statement “Animations are distracting in understanding the concept.”

25.81% of the students disagree with the statement “Animations are distracting in understanding the concept.”

12.90% of the students not decided with the statement “Animations are distracting in understanding the concept.”

22.58% of the students agree with the statement “Animations are distracting in understanding the concept.”

3.23% of the students strongly agree with the statement “Animations are distracting in understanding the concept.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.284 Responses of Exp Gp B students in percentage for statement 14 for Final Try-out**

Points	Exp Gp B
5	37.50
4	50.00
3	3.13
2	15.63
1	3.13

37.50% of the students strongly disagree with the statement “Animations are distracting in understanding the concept.”

50.00% of the students disagree with the statement “Animations are distracting in understanding the concept.”

3.13% of the students not decided with the statement “Animations are distracting in understanding the concept.”

15.63% of the students agree with the statement “Animations are distracting in understanding the concept.”

3.13% of the students strongly agree with the statement “Animations are distracting in understanding the concept.”

### Graphical Representation of analysis of statement 14 in Percentage

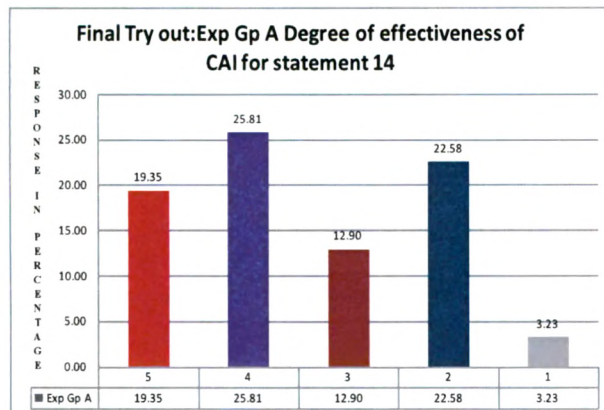


Figure 4.137 Graphical Representation of analysis of statement 14 in Percentage for Exp Gp A for Final Try-out

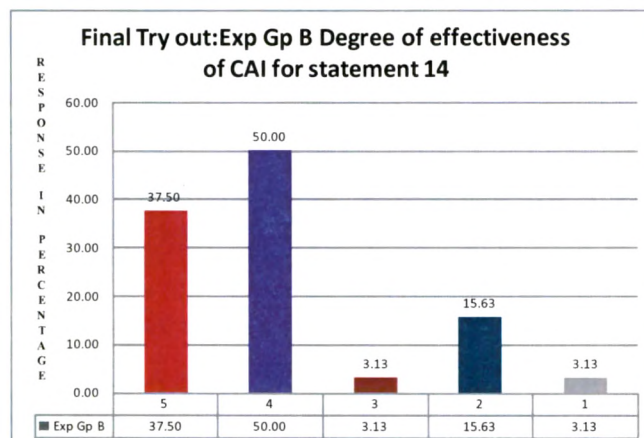


Figure 4.138 Graphical Representation of analysis of statement 14 in Percentage for Exp Gp B for Final Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

Experimental Group A

**Table 4.285 Chi Square Table for Exp Gp A for Statement 14 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	6	5.2
4	8	5.2
3	4	5.2
2	7	5.2
1	1	5.2

Expected Frequency = Sum of observed frequencies/5

chi-square = 5.92308

degrees of freedom = 4

probability = 0.20497

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### **Experimental Group B**

**Table 4.286 Chi Square Table for Exp Gp B for Statement 14 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	12	7
4	16	7
3	1	7
2	5	7
1	1	7

Expected Frequency = Sum of observed frequencies/5

chi-square = 26

degrees of freedom = 4

probability = 0.00

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Animations are distracting in understanding the concept".

**Statement 15:** CAI took more time to understand the concept than usual classroom teaching.

**Polarity: Negative**

### **Experimental Group A : Responses of the students in percentage**

**Table 4.287 Responses of Exp Gp A students in percentage for statement 15 for Final Try-out**

Points	Exp Gp
5	19.35
4	29.03
3	16.13
2	29.03
1	3.23

19.35% of the students strongly disagree with the statement “CAI took more time to understand the concept than usual classroom teaching.”

29.03% of the students disagree with the statement “CAI took more time to understand the concept than usual classroom teaching.”

16.13% of the students not decided with the statement “CAI took more time to understand the concept than usual classroom teaching.”

29.03% of the students agree with the statement “CAI took more time to understand the concept than usual classroom teaching.”

3.23% of the students strongly agree with the statement “CAI took more time to understand the concept than usual classroom teaching.”

#### **Experimental Group B : Responses of the students in percentage**

**Table 4.288 Responses of Exp Gp B students in percentage for statement 15 for Final Try-out**

Points	Exp Gp B
5	21.88
4	15.63
3	3.13
2	40.63
1	21.88

21.88% of the students strongly disagree with the statement “CAI took more time to understand the concept than usual classroom teaching.”

15.63% of the students disagree with the statement “CAI took more time to understand the concept than usual classroom teaching.”

3.13% of the students not decided with the statement “CAI took more time to understand the concept than usual classroom teaching.”

40.63% of the students agree with the statement “CAI took more time to understand the concept than usual classroom teaching.”

21.88% of the students strongly agree with the statement “CAI took more time to understand the concept than usual classroom teaching.”

### Graphical Representation of analysis of statement 15 in Percentage

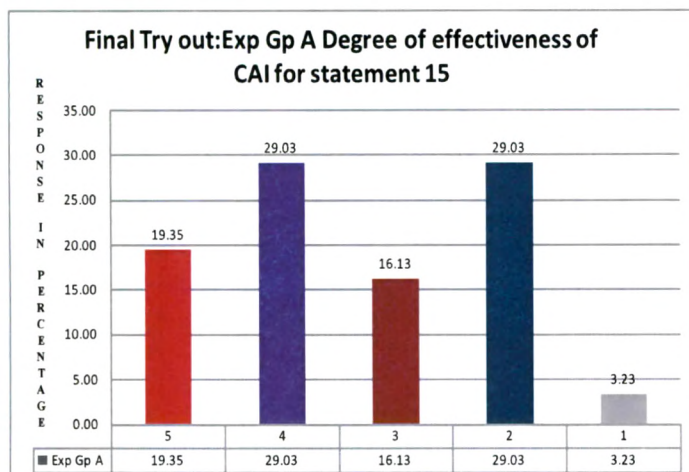


Figure 4.139 Graphical Representation of analysis of statement 15 in Percentage for Exp Gp A for Final Try-out

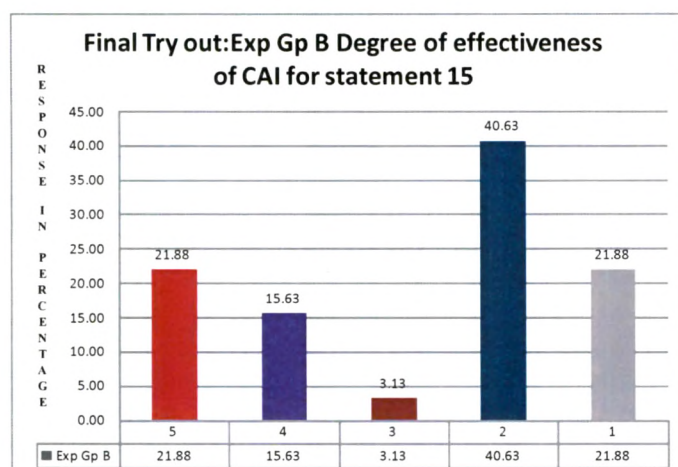


Figure 4.140 Graphical Representation of analysis of statement 15 in Percentage for Exp Gp B for Final Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.289 Chi Square Table for Exp Gp A for Statement 15 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	6	6
4	9	6
3	5	6
2	9	6
1	1	6

Expected Frequency = Sum of observed frequencies/5.

chi-square = 7.33333

degrees of freedom = 4

probability = 0.11929

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### **Experimental Group B**

**Table 4.290 Chi Square Table for Exp Gp B for Statement 15 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	7	6.6
4	5	6.6
3	1	6.6
2	13	6.6
1	7	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 11.3939

degrees of freedom = 4

probability = 0.02248

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "CAI took more time to understand the concept than usual classroom teaching".

**Statement 16** Illustrations given in CAI are enough to understand the concept clearly.

**Polarity: Positive**

### **Experimental Group A : Responses of the students in percentage**

**Table 4.291 Responses of Exp Gp A students in percentage for statement 16 for Final Try-out**

Points	Exp Gp A
5	16.13
4	41.94
3	12.90
2	16.13
1	9.68



16.13% of the students strongly agree with the statement “Illustrations given in CAI are enough to understand the concept clearly.”

41.94% of the students agree with the statement “Illustrations given in CAI are enough to understand the concept clearly.”

12.90% of the students not decided with the statement “Illustrations given in CAI are enough to understand the concept clearly.”

16.13% of the students disagree with the statement “Illustrations given in CAI are enough to understand the concept clearly.”

9.68% of the students strongly disagree with the statement “Illustrations given in CAI are enough to understand the concept clearly.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.292 Responses of Exp Gp B students in percentage for statement 16 for Final Try-out**

Points	Exp Gp B
5	15.63
4	34.38
3	12.50
2	31.25
1	9.38

15.63% of the students strongly agree with the statement “Illustrations given in CAI are enough to understand the concept clearly.”

34.38% of the students agree with the statement “Illustrations given in CAI are enough to understand the concept clearly.”

12.50% of the students not decided with the statement “Illustrations given in CAI are enough to understand the concept clearly.”

31.25% of the students disagree with the statement “Illustrations given in CAI are enough to understand the concept clearly.”

9.38% of the students strongly disagree with the statement “Illustrations given in CAI are enough to understand the concept clearly.”

Graphical Representation of analysis of statement 16 in Percentage

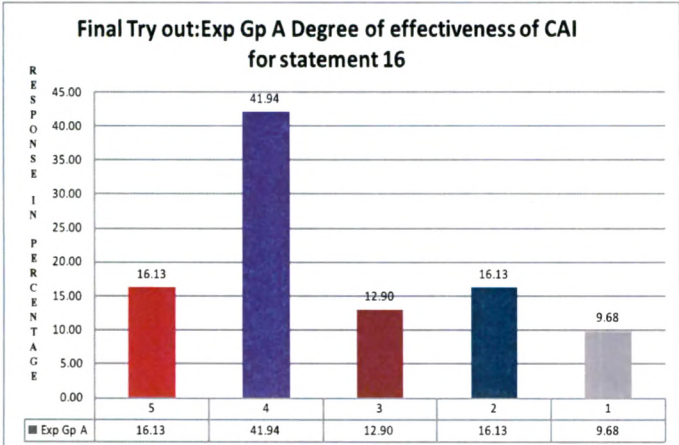


Figure 4.141 Graphical Representation of analysis of statement 16 in Percentage for Exp Gp A for Final Try-out

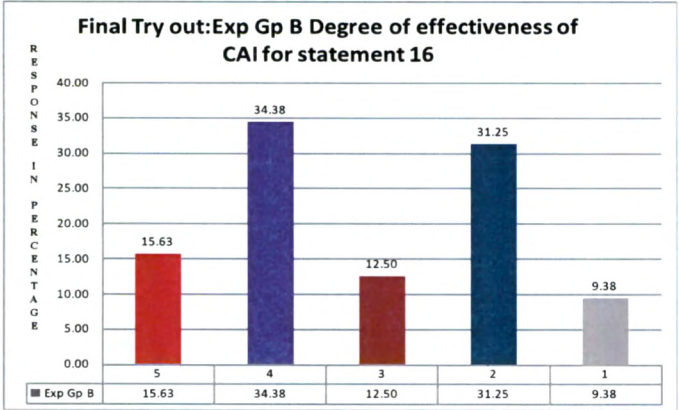


Figure 4.142 Graphical Representation of analysis of statement 16 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.293 Chi Square Table for Exp Gp A for Statement 16 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	5	6
4	13	6
3	4	6
2	5	6
1	3	6

Expected Frequency = Sum of observed frequencies/5

chi-square = 10.6667

degrees of freedom = 4

probability = 0.03058

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement “Illustrations given in CAI are enough to understand the concept clearly.”

**Experimental Group B**

**Table 4.294 Chi Square Table for Exp Gp B for Statement 16 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	5	6.6
4	11	6.6
3	4	6.6
2	10	6.6
1	3	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 8.06061

degrees of freedom = 4

probability = 0.08938

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 17:** Matter presented in CAI was logically arranged.

**Polarity: Positive**

**Experimental Group A : Responses of the students in percentage**

**Table 4.295 Responses of Exp Gp A students in percentage for statement 17 for Final Try-out**

Points	Exp Gp A
5	19.35
4	48.39
3	19.35
2	0.00
1	9.68

19.35% of the students strongly agree with the statement "Matter presented in CAI was logically arranged."

48.39% of the students agree with the statement "Matter presented in CAI was logically arranged."

19.35% of the students not decided with the statement "Matter presented in CAI was logically arranged."

0.00% of the students disagree with the statement "Matter presented in CAI was logically arranged."

9.68% of the students strongly disagree with the statement "Matter presented in CAI was logically arranged."

### **Experimental Group B : Responses of the students in percentage**

**Table 4.296 Responses of Exp Gp B students in percentage for statement 17 for Final Try-out**

Points	Exp Gp B
5	25.00
4	43.75
3	18.75
2	15.63
1	0.00

25.00% of the students strongly agree with the statement "Matter presented in CAI was logically arranged."

43.75% of the students agree with the statement "Matter presented in CAI was logically arranged."

18.75% of the students not decided with the statement "Matter presented in CAI was logically arranged."

15.63% of the students disagree with the statement "Matter presented in CAI was logically arranged."

0.00% of the students strongly disagree with the statement "Matter presented in CAI was logically arranged."

Graphical Representation of analysis of statement 17 in Percentage

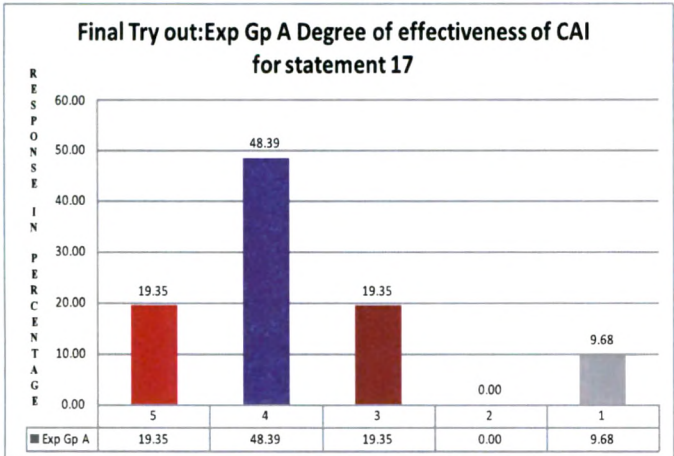


Figure 4.143 Graphical Representation of analysis of statement 17 in Percentage for Exp Gp A for Final Try-out

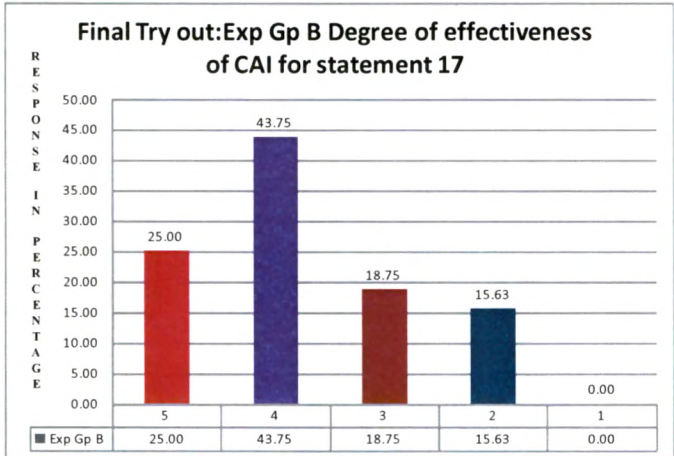


Figure 4.144 Graphical Representation of analysis of statement 17 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.297 Chi Square Table for Exp Gp A for Statement 17 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	6	6
4	15	6
3	6	6
2	0	6
1	3	6

Expected Frequency = Sum of observed frequencies/5

chi-square = 21

degrees of freedom = 4

probability = 0.00032

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement “Matter presented in CAI was logically arranged.”

**Experimental Group B**

**Table 4.298 Chi Square Table for Exp Gp B for Statement 17 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	8	6.6
4	14	6.6
3	6	6.6
2	5	6.6
1	0	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 15.6364

degrees of freedom = 4

probability = 0.00355

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement “Matter presented in CAI was logically arranged”.

**Statement 18:** Learning through CAI was waste of time.

**Polarity:** Negative

**Experimental Group A : Responses of the students in percentage**

**Table 4.299 Responses of Exp Gp A students in percentage for statement 18 for Final Try-out**

Points	Exp Gp A
5	58.33
4	12.50
3	33.33
2	0.00
1	20.83

58.33% of the students strongly disagree with the statement “Learning through CAI was waste of time.”

12.50% of the students disagree with the statement “Learning through CAI was waste of time.”

33.33% of the students not decided with the statement “Learning through CAI was waste of time.”

0.00% of the students agree with the statement “Learning through CAI was waste of time.”

20.83% of the students strongly agree with the statement “Learning through CAI was waste of time.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.300 Responses of Exp Gp B students in percentage for statement 18 for Final Try-out**

Points	Exp Gp B
5	32.14
4	42.86
3	21.43
2	3.57
1	21.43

32.14% of the students strongly disagree with the statement “Learning through CAI was waste of time.”

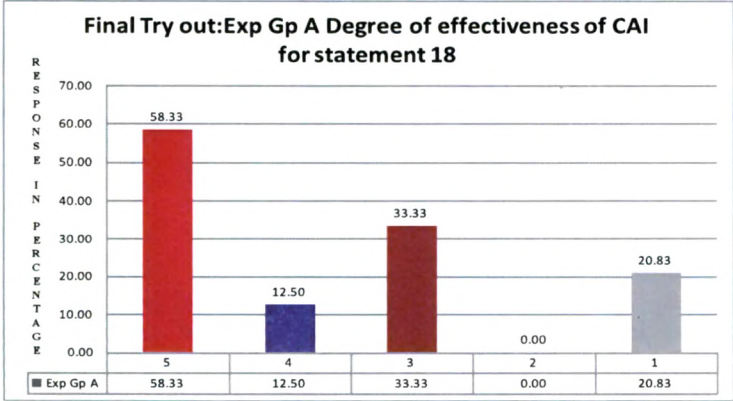
42.86% of the students disagree with the statement “Learning through CAI was waste of time.”

21.43% of the students not decided with the statement “Learning through CAI was waste of time.”

3.57% of the students agree with the statement “Learning through CAI was waste of time.”

21.43% of the students strongly agree with the statement “Learning through CAI was waste of time.”

**Graphical Representation of analysis of statement 18 in Percentage**



**Figure 4.145 Graphical Representation of analysis of statement 18 in Percentage for Exp Gp A for Final Try-out**



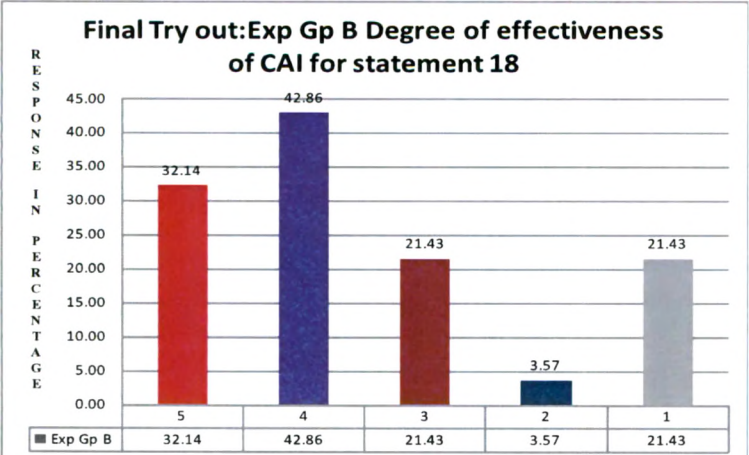


Figure 4.146 Graphical Representation of analysis of statement 18 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale  
H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.301 Chi Square Table for Exp Gp A for Statement 18 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	14	6
4	3	6
3	8	6
2	0	6
1	5	6

Expected Frequency = Sum of observed frequencies/5

chi-square = 19

degrees of freedom = 4

probability = 0.00079

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on strongly disagree therefore most of the students strongly disagree with the statement “Learning through CAI was waste of time.”

### Experimental Group B

**Table 4.302 Chi Square Table for Exp Gp A for Statement 18 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	8	6.6
4	14	6.6
3	6	6.6
2	5	6.6
1	0	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 15.6364

degrees of freedom = 4

probability = 0.00355

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Learning through CAI was waste of time".

**Statement 19:** Illustrations given in CAI are related to day today life experiences.

**Polarity: Positive**

### Experimental Group A : Responses of the students in percentage

**Table 4.303 Responses of Exp Gp A students in percentage for statement 19 for Final Try-out**

Points	Exp Gp A
5	19.35
4	51.61
3	12.90
2	12.90
1	0.00

19.35% of the students strongly agree with the statement "Illustrations given in CAI are related to day today life experiences."

51.61% of the students agree with the statement "Illustrations given in CAI are related to day today life experiences."

12.90% of the students not decided with the statement "Illustrations given in CAI are related to day today life experiences."

12.90% of the students disagree with the statement “Illustrations given in CAI are related to day today life experiences.”

0.00% of the students strongly disagree with the statement “Illustrations given in CAI are related to day today life experiences.”

### **Experimental Group B : Responses of the students in percentage**

**Table 4.304 Responses of Exp Gp B students in percentage for statement 19 for Final Try-out**

Points	Exp Gp B
5	15.63
4	43.75
3	25.00
2	15.63
1	0.00

15.63% of the students strongly agree with the statement “Illustrations given in CAI are related to day today life experiences.”

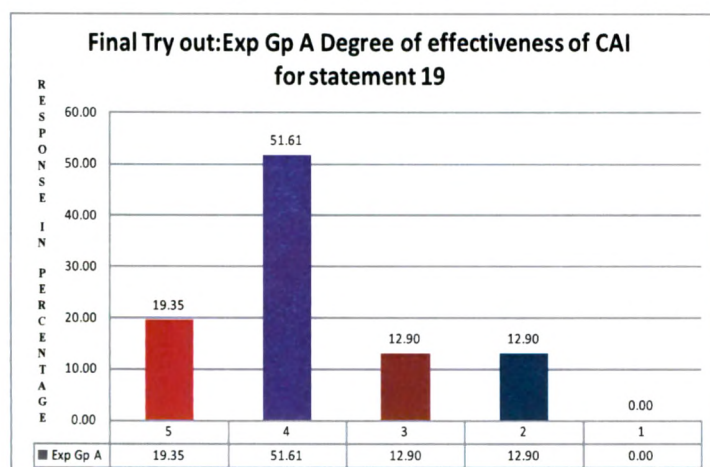
43.75% of the students agree with the statement “Illustrations given in CAI are related to day today life experiences.”

25.00% of the students not decided with the statement “Illustrations given in CAI are related to day today life experiences.”

15.63% of the students disagree with the statement “Illustrations given in CAI are related to day today life experiences.”

0.00% of the students strongly disagree with the statement “Illustrations given in CAI are related to day today life experiences.”

### **Graphical Representation of analysis of statement 19 in Percentage**



**Figure 4.147 Graphical Representation of analysis of statement 19 in Percentage for Exp Gp A for Final Try-out**

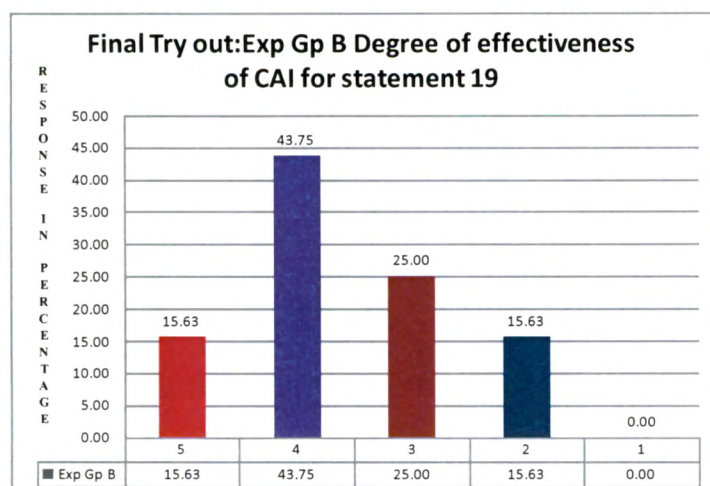


Figure 4.148 Graphical Representation of analysis of statement 19 in Percentage for Exp Gp B for Final Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.305 Chi Square Table for Exp Gp A for Statement 19 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	6	6
4	16	6
3	4	6
2	4	6
1	0	6

Expected Frequency = Sum of observed frequencies/5

chi-square = 24

degrees of freedom = 4

probability = 0.00

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement “Illustrations given in CAI are related to day today life experiences.”

**Experimental Group B**

**Table 4.306 Chi Square Table for Exp Gp B for Statement 19 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	5	6.4
4	14	6.4
3	8	6.4
2	5	6.4
1	0	6.4

Expected Frequency = Sum of observed frequencies/5

chi-square = 16.4375

degrees of freedom = 4

probability = 0.00248

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement “Illustrations given in CAI are related to day today life experiences”.

**Statement 20:** Classroom teaching is more enjoyable.

Polarity: Negative

**Experimental Group A : Responses of the students in percentage**

**Table 4.307 Responses of Exp Gp A students in percentage for statement 20 for Final Try-out**

Points	Exp Gp A
5	6.45
4	6.45
3	9.68
2	38.71
1	35.48

6.45% of the students strongly disagree with the statement “Classroom teaching is more enjoyable.”

6.45% of the students disagree with the statement “Classroom teaching is more enjoyable.”

9.68% of the students not decided with the statement “Classroom teaching is more enjoyable.”

38.71% of the students agree with the statement “Classroom teaching is more enjoyable.”

35.48% of the students strongly agree with the statement “Classroom teaching is more enjoyable.”



**Experimental Group B : Responses of the students in percentage**

**Table 4.308 Responses of Exp Gp B students in percentage for statement 20 for Final Try-out**

Points	Exp Gp B
5	15.63
4	18.75
3	25.00
2	12.50
1	31.25

15.63% of the students strongly disagree with the statement “Classroom teaching is more enjoyable.”

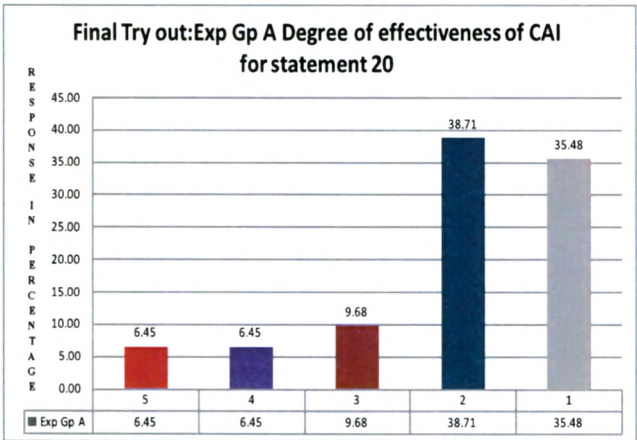
18.75% of the students disagree with the statement “Classroom teaching is more enjoyable.”

25.00% of the students not decided with the statement “Classroom teaching is more enjoyable.”

12.50% of the students agree with the statement “Classroom teaching is more enjoyable.”

31.25% of the students strongly agree with the statement “Classroom teaching is more enjoyable.”

**Graphical Representation of analysis of statement 20 in Percentage**



**Figure 4.149 Graphical Representation of analysis of statement 20 in Percentage for Exp Gp A for Final Try-out**

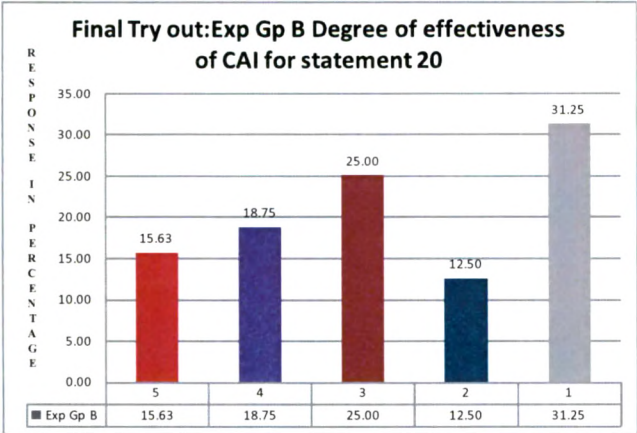


Figure 4.150 Graphical Representation of analysis of statement 20 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.309 Chi Square Table for Exp Gp A for Statement 20 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	2	6
4	2	6
3	3	6
2	12	6
1	11	6

Expected Frequency = Sum of observed frequencies/5

chi-square = 17

degrees of freedom = 4

probability = 0.00193

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement “Classroom teaching is more enjoyable.”



### Experimental Group B

**Table 4.310 Chi Square Table for Exp Gp B for Statement 20 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	5	6.6
4	6	6.6
3	8	6.6
2	4	6.6
1	10	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 3.51515

degrees of freedom = 4

probability = 0.47558

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 21:** The language used in CAI is easy and simple to understand.

Polarity: Positive

### Experimental Group A : Responses of the students in percentage

**Table 4.311 Responses of Exp Gp A students in percentage for statement 21 for Final Try-out**

Points	Exp Gp A
5	38.71
4	35.48
3	9.68
2	9.68
1	0.00

38.71% of the students strongly agree with the statement "The language used in CAI is easy and simple to understand."

35.48% of the students agree with the statement "The language used in CAI is easy and simple to understand."

9.68% of the students not decided with the statement "The language used in CAI is easy and simple to understand."

9.68% of the students disagree with the statement "The language used in CAI is easy and simple to understand."

0.00% of the students strongly disagree with the statement “The language used in CAI is easy and simple to understand.”

### **Experimental Group B : Responses of the students in percentage**

**Table 4.312 Responses of Exp Gp B students in percentage for statement 21 for Final Try-out**

Points	Exp Gp B
5	41.94
4	35.48
3	12.90
2	16.13
1	0.00

41.94% of the students strongly agree with the statement “The language used in CAI is easy and simple to understand.”

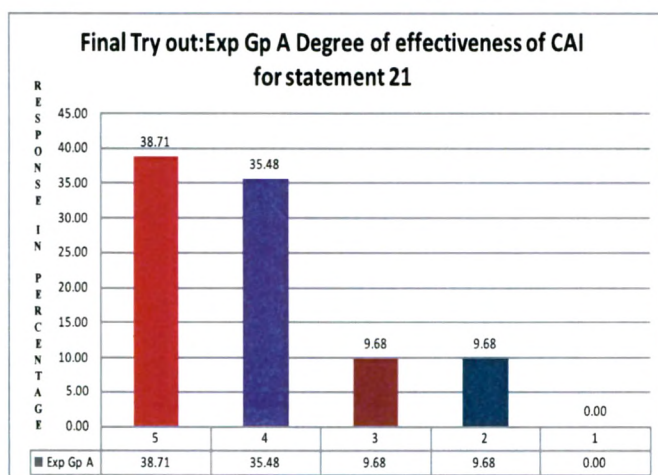
35.48% of the students agree with the statement “The language used in CAI is easy and simple to understand.”

12.90% of the students not decided with the statement “The language used in CAI is easy and simple to understand.”

16.13% of the students disagree with the statement “The language used in CAI is easy and simple to understand.”

0.00% of the students strongly disagree with the statement “The language used in CAI is easy and simple to understand.”

### **Graphical Representation of analysis of statement 21 in Percentage**



**Figure 4.151 Graphical Representation of analysis of statement 21 in Percentage for Exp Gp A for Final Try-out**

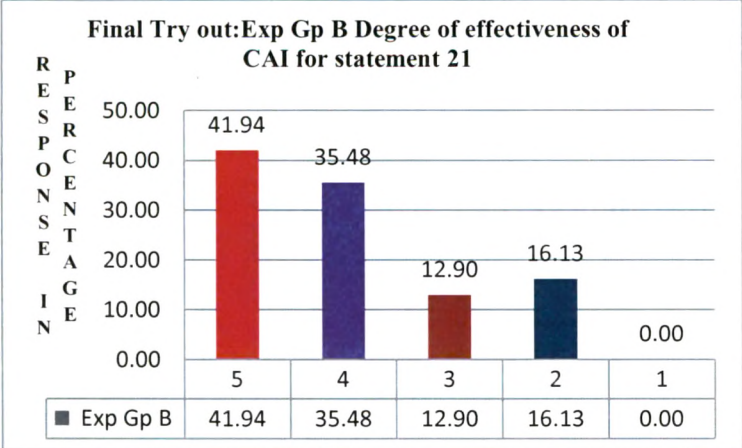


Figure 4.152 Graphical Representation of analysis of statement 21 in Percentage for Exp Gp B for Final Try-out

**Data Analysis using Chi Square**

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

**Experimental Group A**

Table 4.313 Chi Square Table for Exp Gp A for Statement 21 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	12	5.8
4	11	5.8
3	3	5.8
2	3	5.8
1	0	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 19.7931

degrees of freedom = 4

probability = 0.00055

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement “The language used in CAI is easy and simple to understand.”

### Experimental Group B

**Table 4.314 Chi Square Table for Exp Gp B for Statement 21 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	13	6.6
4	11	6.6
3	4	6.6
2	5	6.6
1	0	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 17.1515

degrees of freedom = 4

probability = 0.00181

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement “The language used in CAI is easy and simple to understand”.

**Statement 22:** The exercises given in each chapter is adequate.

Polarity: Positive

### Experimental Group A : Responses of the students in percentage

**Table 4.315 Responses of Exp Gp A students in percentage for statement 22 for Final Try-out**

Points	Exp Gp A
5	19.35
4	51.61
3	12.90
2	3.23
1	16.13

19.35% of the students strongly agree with the statement “The exercises given in each chapter is adequate.”

51.61% of the students agree with the statement “The exercises given in each chapter is adequate.”

12.90% of the students not decided with the statement “The exercises given in each chapter is adequate.”

3.23% of the students disagree with the statement “The exercises given in each chapter is adequate.”

16.13% of the students strongly disagree with the statement “The exercises given in each chapter is adequate.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.316 Responses of Exp Gp B students in percentage for statement 22 for Final Try-out**

Points	Exp Gp B
5	25.00
4	37.50
3	9.38
2	25.00
1	6.25

25.00% of the students strongly agree with the statement “The exercises given in each chapter is adequate.”

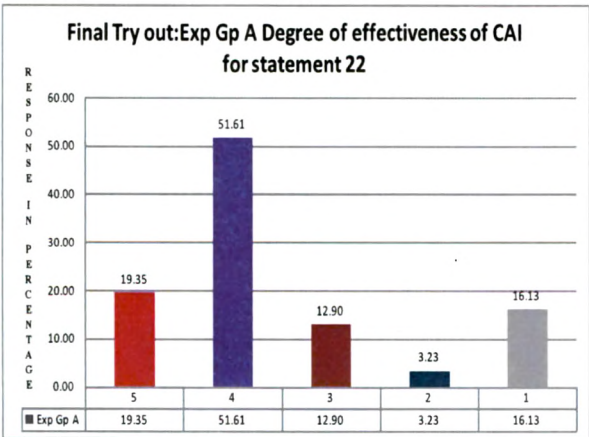
37.50% of the students agree with the statement “The exercises given in each chapter is adequate.”

9.38% of the students not decided with the statement “The exercises given in each chapter is adequate.”

25.00% of the students disagree with the statement “The exercises given in each chapter is adequate.”

6.25% of the students strongly disagree with the statement “The exercises given in each chapter is adequate.”

**Graphical Representation of analysis of statement 22 in Percentage**



**Figure 4.153 Graphical Representation of analysis of statement 22 in Percentage for Exp Gp A for Final Try-out**



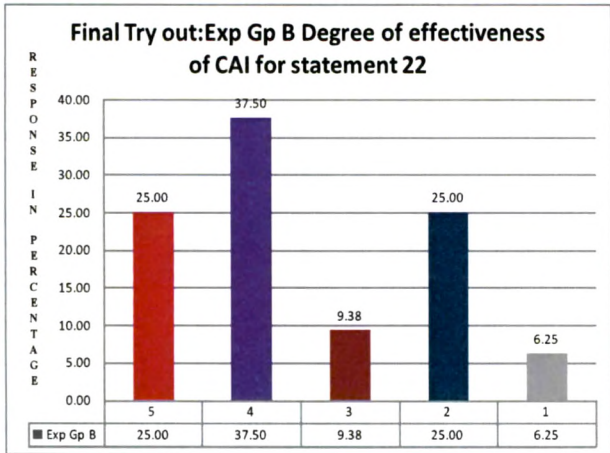


Figure 4.154 Graphical Representation of analysis of statement 22 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

- H<sub>0</sub>: Response is uniformly distributed in the 5 point scale
- H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.317 Chi Square Table for Exp Gp A for Statement 22 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	6	6.4
4	16	6.4
3	4	6.4
2	1	6.4
1	5	6.4

Expected Frequency = Sum of observed frequencies/5

chi-square = 20.1875

degrees of freedom = 4

probability = 0.00046

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement “The exercises given in each chapter is adequate”

### Experimental Group B

**Table 4.318 Chi Square Table for Exp Gp B for Statement 22 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	8	6.6
4	12	6.6
3	3	6.6
2	8	6.6
1	2	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 10.1818

degrees of freedom = 4

probability = 0.03747

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "The exercises given in each chapter is adequate".

**Statement 23:** CAI takes care of previous knowledge in the subject.

Polarity: Positive

### Experimental Group A : Responses of the students in percentage

**Table 4.319 Responses of Exp Gp A students in percentage for statement 23 for Final Try-out**

Points	Exp Gp A
5	22.58
4	38.71
3	16.13
2	0.00
1	19.35

22.58% of the students strongly agree with the statement "CAI takes care of previous knowledge in the subject."

38.71% of the students agree with the statement "CAI takes care of previous knowledge in the subject."

16.13% of the students not decided with the statement "CAI takes care of previous knowledge in the subject."



0.00% of the students disagree with the statement “CAI takes care of previous knowledge in the subject.”

19.35% of the students strongly disagree with the statement “CAI takes care of previous knowledge in the subject.”

### **Experimental Group B : Responses of the students in percentage**

**Table 4.320 Responses of Exp Gp A students in percentage for statement 23 for Final Try-out**

Points	Exp Gp B
5	25.00
4	46.88
3	15.63
2	12.50
1	3.13

25.00% of the students strongly agree with the statement “CAI takes care of previous knowledge in the subject.”

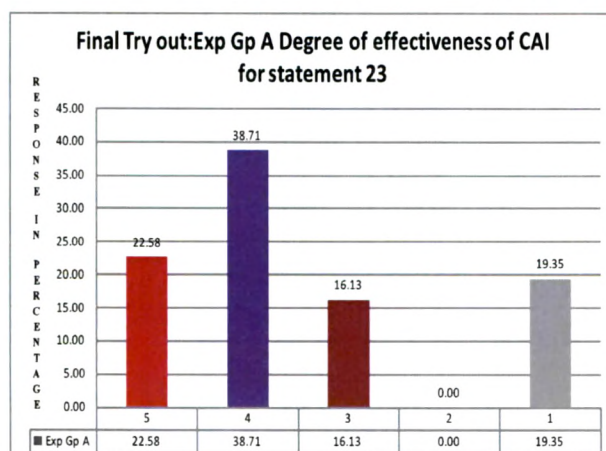
46.88% of the students agree with the statement “CAI takes care of previous knowledge in the subject.”

15.63% of the students not decided with the statement “CAI takes care of previous knowledge in the subject.”

12.50% of the students disagree with the statement “CAI takes care of previous knowledge in the subject.”

3.13% of the students strongly disagree with the statement “CAI takes care of previous knowledge in the subject.”

### **Graphical Representation of analysis of statement 23 in Percentage**



**Figure 4.155 Graphical Representation of analysis of statement 23 in Percentage for Exp Gp A for Final Try-out**

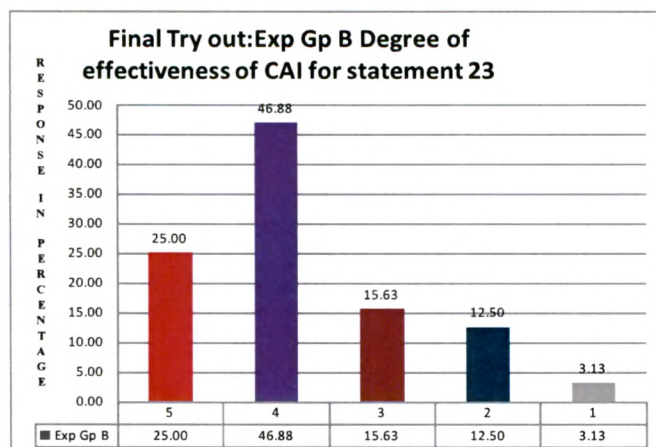


Figure 4.156 Graphical Representation of analysis of statement 23 in Percentage for Exp Gp B for Final Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.321 Chi Square Table for Exp Gp A for Statement 23 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	7	6
4	12	6
3	5	6
1	0	6
1	6	6

Expected Frequency = Sum of observed frequencies/5

chi-square = 12.3333

degrees of freedom = 4

probability = 0.01504

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement “CAI takes care of previous knowledge in the subject.”

### Experimental Group B

**Table 4.322 Chi Square Table for Exp Gp B for Statement 23 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	8	6.6
4	15	6.6
3	5	6.6
4	4	6.6
1	1	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 17.1515

degrees of freedom = 4

probability = 0.00181

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "CAI takes care of previous knowledge in the subject".

**Statement 24:** The solution to the problem is not easy to understand.

Polarity: Negative

### Experimental Group A : Responses of the students in percentage

**Table 4.323 Responses of Exp Gp A students in percentage for statement 24 for Final Try-out**

Points	Exp Gp A
5	16.13
4	29.03
3	16.13
2	25.81
1	12.90

16.13% of the students strongly disagree with the statement "The solution to the problem is not easy to understand."

29.03% of the students disagree with the statement "The solution to the problem is not easy to understand."

16.13% of the students not decided with the statement "The solution to the problem is not easy to understand."

25.81% of the students agree with the statement “The solution to the problem is not easy to understand.”

12.90% of the students strongly agree with the statement “The solution to the problem is not easy to understand.”

### **Experimental Group B : Responses of the students in percentage**

**Table 4.324 Responses of Exp Gp B students in percentage for statement 24 for Final Try-out**

Points	Exp Gp B
5	21.88
4	50.00
3	6.25
2	21.88
1	9.38

21.88% of the students strongly disagree with the statement “The solution to the problem is not easy to understand.”

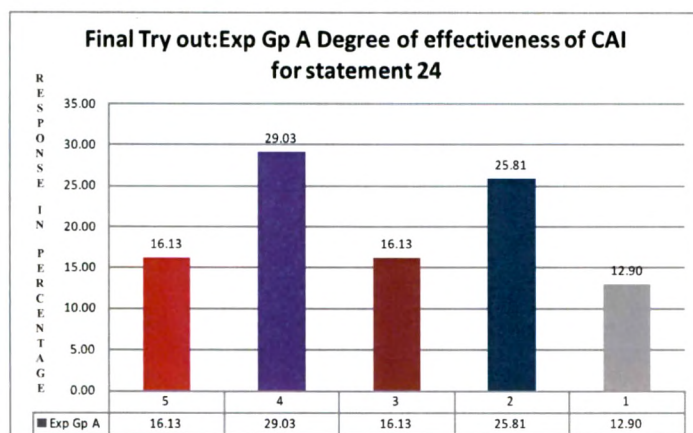
50.00% of the students disagree with the statement “The solution to the problem is not easy to understand.”

6.25% of the students not decided with the statement “The solution to the problem is not easy to understand.”

21.88% of the students agree with the statement “The solution to the problem is not easy to understand.”

9.38% of the students strongly agree with the statement “The solution to the problem is not easy to understand.”

### **Graphical Representation of analysis of statement 24 in Percentage**



**Figure 4.157 Graphical Representation of analysis of statement 24 in Percentage for Exp Gp A for Final Try-out**

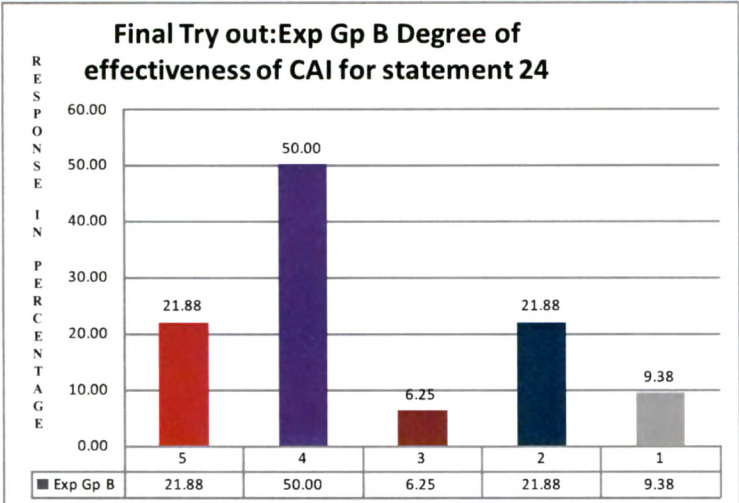


Figure 4.158 Graphical Representation of analysis of statement 24 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.325 Chi Square Table for Exp Gp A for Statement 24 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	5	6.2
4	9	6.2
3	5	6.2
2	8	6.2
1	4	6.2

Expected Frequency = Sum of observed frequencies/5

chi-square = 3.03226

degrees of freedom = 4

probability = 0.55244

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.



### Experimental Group B

**Table 4.326 Chi Square Table for Exp Gp B for Statement 24 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	7	7
4	16	7
3	2	7
2	7	7
1	3	7

Expected Frequency = Sum of observed frequencies/5

chi-square = 17.4286

degrees of freedom = 4

probability = 0.0016

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on disagree therefore most of the students disagree with the statement "The solution to the problem is not easy to understand".

**Statement 25:** The exercises helped in understanding the chapter in depth.

**Polarity: Positive**

### Experimental Group A : Responses of the students in percentage

**Table 4.327 Responses of Exp Gp A students in percentage for statement 25 for Final Try-out**

Points	Exp Gp A
5	19.35
4	41.94
3	22.58
2	16.13
1	0.00

19.35% of the students strongly agree with the statement "The exercises helped in understanding the chapter in depth."

41.94% of the students agree with the statement "The exercises helped in understanding the chapter in depth."

22.58% of the students not decided with the statement "The exercises helped in understanding the chapter in depth."

16.13% of the students disagree with the statement “The exercises helped in understanding the chapter in depth.”

0.00% of the students strongly disagree with the statement “The exercises helped in understanding the chapter in depth.”

### **Experimental Group B : Responses of the students in percentage**

**Table 4.328 Responses of Exp Gp B students in percentage for statement 25 for Final Try-out**

Points	Exp Gp B
5	28.13
4	37.50
3	25.00
2	15.63
1	6.25

28.13% of the students strongly agree with the statement “The exercises helped in understanding the chapter in depth.”

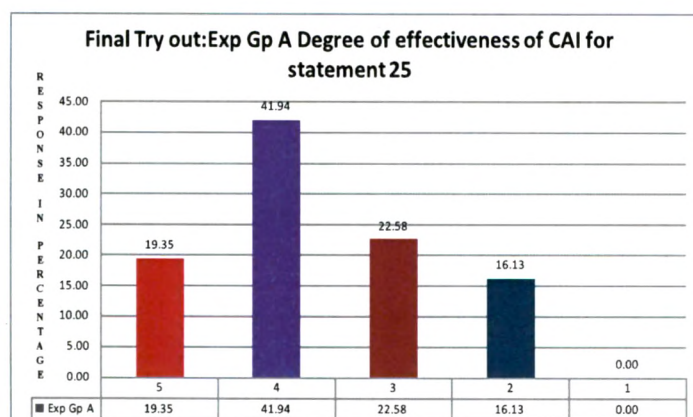
37.50% of the students agree with the statement “The exercises helped in understanding the chapter in depth.”

25.00% of the students not decided with the statement “The exercises helped in understanding the chapter in depth.”

15.63% of the students disagree with the statement “The exercises helped in understanding the chapter in depth.”

6.25% of the students strongly disagree with the statement “The exercises helped in understanding the chapter in depth.”

### **Graphical Representation of analysis of statement 25 in Percentage**



**Figure 4.159 Graphical Representation of analysis of statement 25 in Percentage for Exp Gp A for Final Try-out**



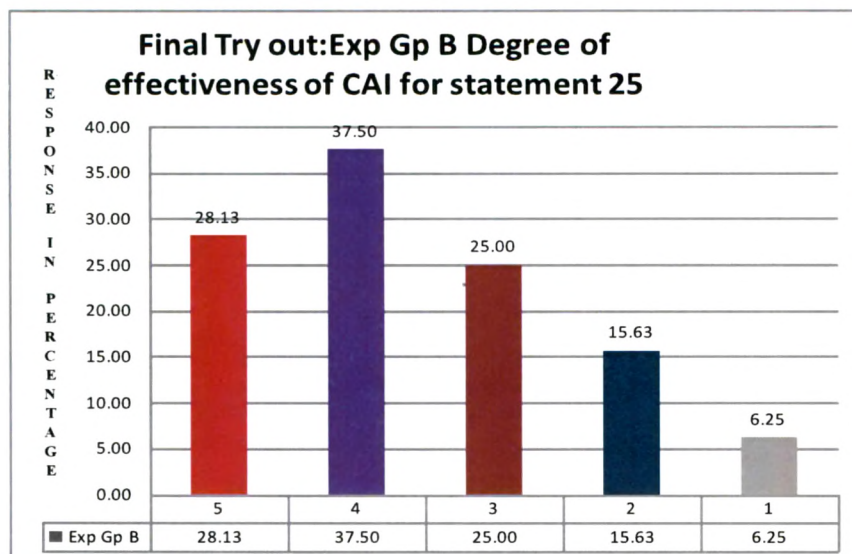


Figure 4.160 Graphical Representation of analysis of statement 25 in Percentage for Exp Gp B for Final Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.329 Chi Square Table for Exp Gp A for Statement 25 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	6	6.2
4	13	6.2
3	7	6.2
2	5	6.2
1	0	6.2

Expected Frequency = Sum of observed frequencies/5

chi-square = 14

degrees of freedom = 4

probability = 0.0073

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement “The exercises helped in understanding the chapter in depth.”

### Experimental Group B

**Table 4.330 Chi Square Table for Exp Gp B for Statement 25 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	9	7.2
4	12	7.2
3	8	7.2
2	5	7.2
1	2	7.2

Expected Frequency = Sum of observed frequencies/5

chi-square = 8.16667

degrees of freedom = 4

probability = 0.08566

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 26:** Solutions did not help me whenever I was not able to solve the problem.

**Polarity: Negative**

### Experimental Group A : Responses of the students in percentage

**Table 4.331 Responses of Exp Gp A students in percentage for statement 26 for Final Try-out**

Points	Exp Gp A
5	29.03
4	6.45
3	29.03
2	22.58
1	6.45

29.03% of the students strongly disagree with the statement "Solutions didn't help me whenever I was not able to solve the problem."

6.45% of the students disagree with the statement "Solutions didn't help me whenever I was not able to solve the problem."

29.03% of the students not decided with the statement "Solutions didn't help me whenever I was not able to solve the problem."

22.58% of the students agree with the statement "Solutions didn't help me whenever I was not able to solve the problem."

6.45% of the students strongly agree with the statement “Solutions didn’t help me whenever I was not able to solve the problem.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.332 Responses of Exp Gp B students in percentage for statement 26 for Final Try-out**

Points	Exp Gp B
5	40.63
4	18.75
3	6.25
2	31.25
1	12.50

40.63% of the students strongly disagree with the statement “Solutions didn’t help me whenever I was not able to solve the problem.”

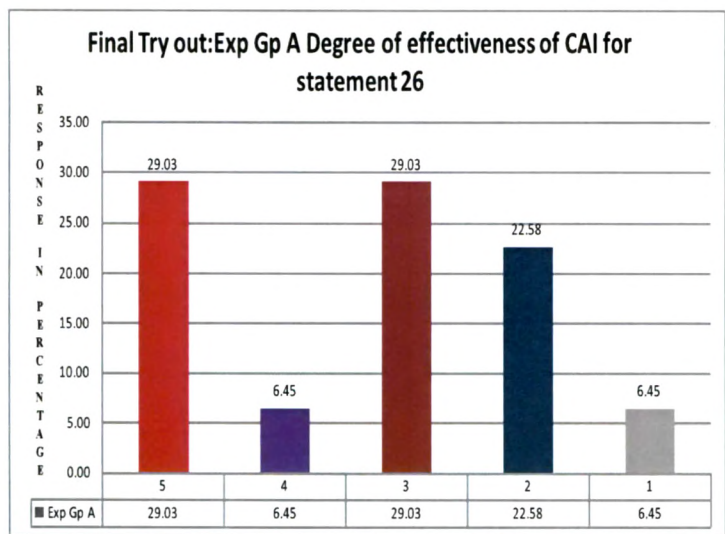
18.75% of the students disagree with the statement “Solutions didn’t help me whenever I was not able to solve the problem.”

6.25% of the students not decided with the statement “Solutions didn’t help me whenever I was not able to solve the problem.”

31.25% of the students agree with the statement “Solutions didn’t help me whenever I was not able to solve the problem.”

12.50% of the students strongly agree with the statement “Solutions didn’t help me whenever I was not able to solve the problem.”

**Graphical Representation of analysis of statement 26 in Percentage**



**Figure 4.161 Graphical Representation of analysis of statement 26 in Percentage for Exp Gp A for Final Try-out**

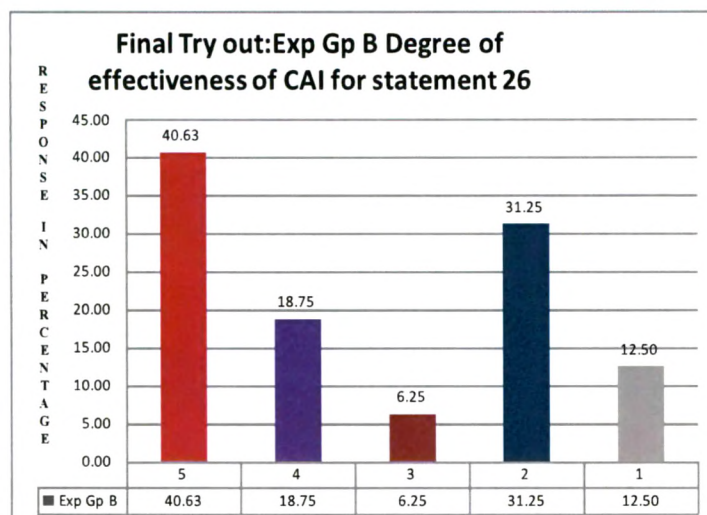


Figure 4.162 Graphical Representation of analysis of statement 26 in Percentage for Exp Gp B for Final Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.333 Chi Square Table for Exp Gp A for Statement 26 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	9	5.8
4	2	5.8
3	9	5.8
2	7	5.8
1	2	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 8.75862

degrees of freedom = 4

probability = 0.06742

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

**Table 4.334 Chi Square Table for Exp Gp B for Statement 26 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	13	7
4	6	7
3	2	7
2	10	7
1	4	7

Expected Frequency = Sum of observed frequencies/5

chi-square = 11.4286

degrees of freedom = 4

probability = 0.02215

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly disagree therefore most of the students strongly disagree with the statement "Solutions didn't help me whenever I was not able to solve the problem".

**Statement 27** Break given in CAI helped me to refresh my mind.

**Polarity: Positive**

### Experimental Group A : Responses of the students in percentage

**Table 4.335 Responses of Exp Gp A students in percentage for statement 27 for Final Try-out**

Points	Exp Gp A
5	12.90
4	32.26
3	12.90
2	9.68
1	25.81

12.90% of the students strongly agree with the statement "Break given in CAI helped me to refresh my mind."

32.26% of the students agree with the statement "Break given in CAI helped me to refresh my mind."

12.90% of the students not decided with the statement "Break given in CAI helped me to refresh my mind."

9.68% of the students disagree with the statement “Break given in CAI helped me to refresh my mind.”

25.81% of the students strongly disagree with the statement “Break given in CAI helped me to refresh my mind.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.336 Responses of Exp Gp B students in percentage for statement 27 for Final Try-out**

Points	Exp Gp B
5	31.25
4	31.25
3	12.50
2	15.63
1	12.50

31.25% of the students strongly agree with the statement “Break given in CAI helped me to refresh my mind.”

31.25% of the students agree with the statement “Break given in CAI helped me to refresh my mind.”

12.50% of the students not decided with the statement “Break given in CAI helped me to refresh my mind.”

15.63% of the students disagree with the statement “Break given in CAI helped me to refresh my mind.”

12.50% of the students strongly disagree with the statement “Break given in CAI helped me to refresh my mind.”



Graphical Representation of analysis of statement 27 in Percentage

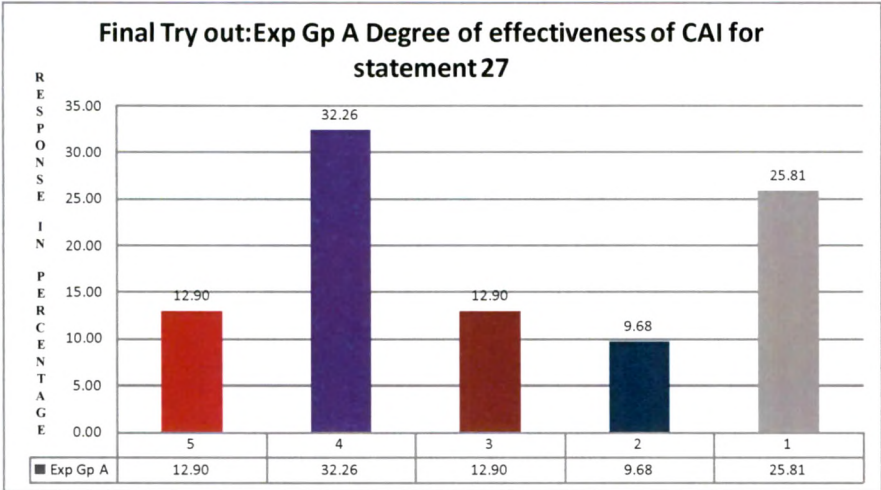


Figure 4.163 Graphical Representation of analysis of statement 27 in Percentage for Exp Gp A for Final Try-out

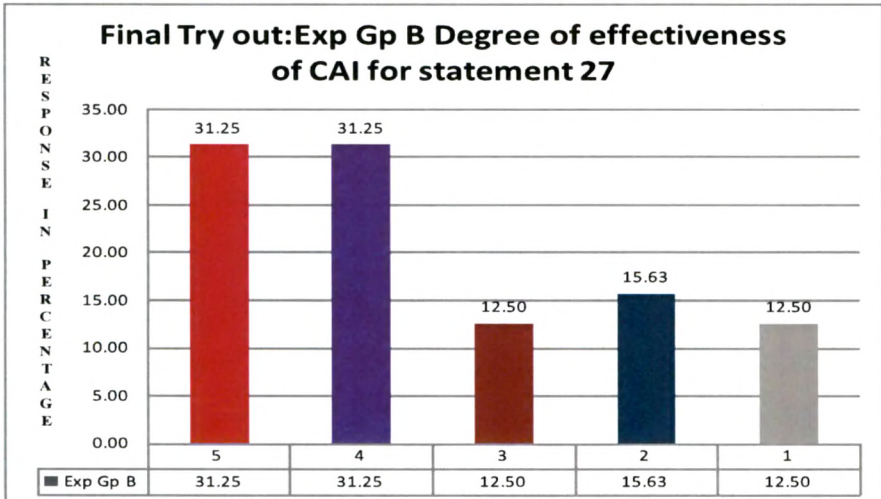


Figure 4.164 Graphical Representation of analysis of statement 27 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.337 Chi Square Table for Exp Gp A for Statement 27 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	4	5.8
4	10	5.8
3	4	5.8
2	3	5.8
1	8	5.8



Expected Frequency = Sum of observed frequencies/5

chi-square = 6.34483

degrees of freedom = 4

probability = 0.17483

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### **Experimental Group B**

**Table 4.338 Chi Square Table for Exp Gp B for Statement 27 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	10	6.6
4	10	6.6
3	4	6.6
2	5	6.6
1	4	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 5.93939

degrees of freedom = 4

probability = 0.20372

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 28** I am feeling tired while going through the slide.

**Polarity: Negative**

### **Experimental Group A : Responses of the students in percentage**

**Table 4.339 Responses of Exp Gp A students in percentage for statement 28 for Final Try-out**

Points	Exp Gp A
5	16.13
4	19.35
3	22.58
2	22.58
1	12.90

16.13% of the students strongly disagree with the statement “I am feeling tired while going through the slide.”

19.35% of the students disagree with the statement “I am feeling tired while going through the slide.”

22.58% of the students not decided with the statement “I am feeling tired while going through the slide.”

22.58% of the students agree with the statement “I am feeling tired while going through the slide.”

12.90% of the students strongly agree with the statement “I am feeling tired while going through the slide.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.340 Responses of Exp Gp B students in percentage for statement 28 for Final Try-out**

Points	Exp Gp B
5	18.75
4	46.88
3	15.63
2	9.38
1	12.50

18.75% of the students strongly disagree with the statement “I am feeling tired while going through the slide.”

46.88% of the students disagree with the statement “I am feeling tired while going through the slide.”

15.63% of the students not decided with the statement “I am feeling tired while going through the slide.”

9.38% of the students agree with the statement “I am feeling tired while going through the slide.”

12.50% of the students strongly agree with the statement “I am feeling tired while going through the slide.”

Graphical Representation of analysis of statement 28 in Percentage

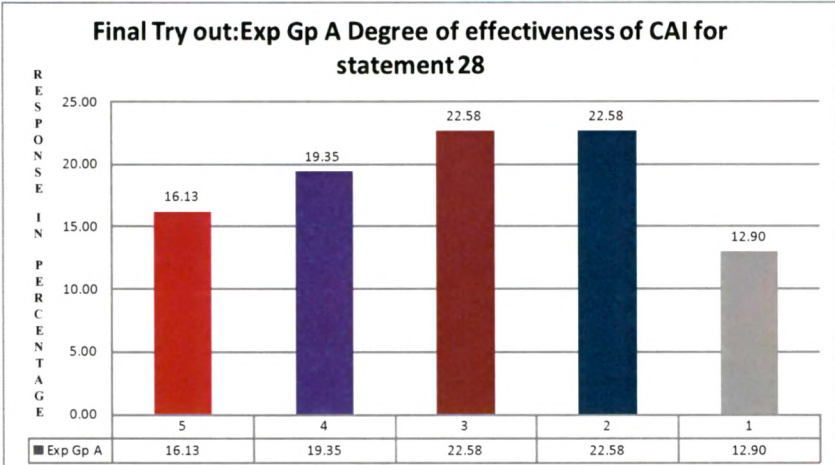


Figure 4.165 Graphical Representation of analysis of statement 28 in Percentage for Exp Gp A for Final Try-out

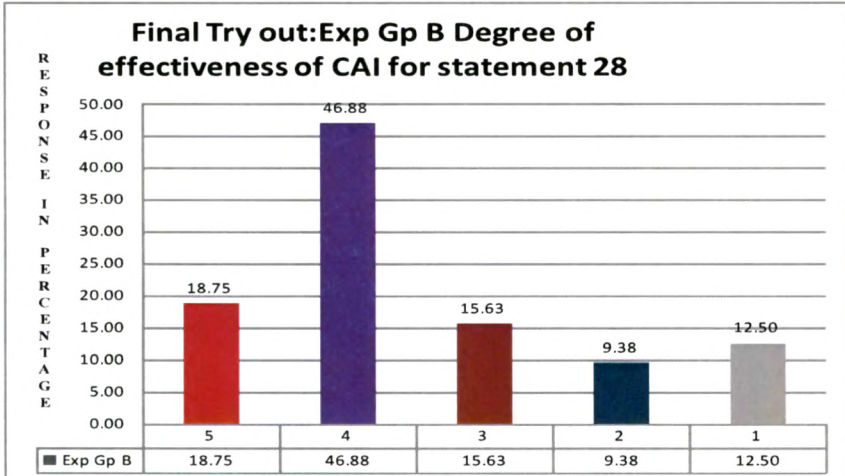


Figure 4.166 Graphical Representation of analysis of statement 28 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.341 Chi Square Table for Exp Gp A for Statement 28 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	5	5.8
4	6	5.8
3	7	5.8
2	7	5.8
1	4	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 1.17241

degrees of freedom = 4

probability = 0.88262

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### **Experimental Group B**

**Table 4.342 Chi Square Table for Exp Gp B for Statement 28 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	6	6.6
4	15	6.6
3	5	6.6
2	3	6.6
1	4	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 14.1212

degrees of freedom = 4

probability = 0.00692

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on disagree therefore most of the students disagree with the statement “I am feeling tired while going through the slide”.

**Statement 29:** Animation shown in CAI is appropriate to help me in understanding the concept.

**Polarity: Positive**

### **Experimental Group A : Responses of the students in percentage**

**Table 4.343 Responses of Exp Gp A students in percentage for statement 29 for Final Try-out**

Points	Exp Gp A
5	38.71
4	25.81
3	19.35
2	9.68
1	0.00

38.71% of the students strongly agree with the statement “Animation shown in CAI is appropriate to help me in understanding the concept.”

25.81% of the students agree with the statement “Animation shown in CAI is appropriate to help me in understanding the concept.”

19.35% of the students not decided with the statement “Animation shown in CAI is appropriate to help me in understanding the concept.”

9.68% of the students disagree with the statement “Animation shown in CAI is appropriate to help me in understanding the concept.”

0.00% of the students strongly disagree with the statement “Animation shown in CAI is appropriate to help me in understanding the concept.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.344: Responses of Exp Gp B students in percentage for statement 29 for Final Try-out**

Points	Exp Gp B
5	25.00
4	21.88
3	12.50
2	15.63
1	28.13

25.00% of the students strongly agree with the statement “Animation shown in CAI is appropriate to help me in understanding the concept.”

21.88% of the students agree with the statement “Animation shown in CAI is appropriate to help me in understanding the concept.”

12.50% of the students not decided with the statement “Animation shown in CAI is appropriate to help me in understanding the concept.”

15.63% of the students disagree with the statement “Animation shown in CAI is appropriate to help me in understanding the concept.”

28.13% of the students strongly disagree with the statement “Animation shown in CAI is appropriate to help me in understanding the concept.”

Graphical Representation of analysis of statement 29 in Percentage

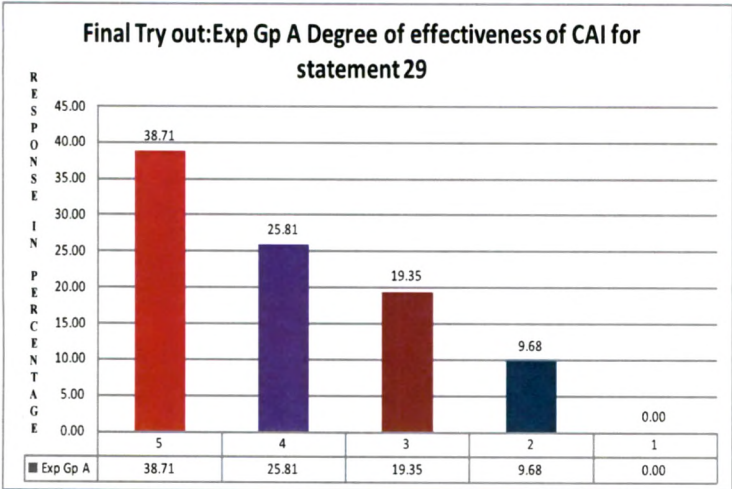


Figure 4.167 Graphical Representation of analysis of statement 29 in Percentage for Exp Gp A for Final Try-out

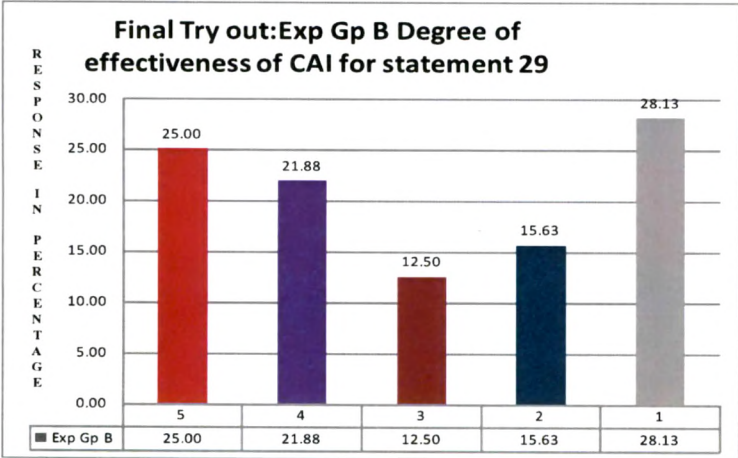


Figure 4.168 Graphical Representation of analysis of statement 29 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

Experimental Group A

Table 4.345 Chi Square Table for Exp Gp A for Statement 29 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	12	5.8
4	8	5.8
3	6	5.8
2	3	5.8
1	0	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 14.6207

degrees of freedom = 4

probability = 0.00556

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "Animation shown in CAI is appropriate to help me in understanding the concept".

### **Experimental Group B**

**Table 4.346 Chi Square Table for Exp Gp B for Statement 29 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	8	6.6
4	7	6.6
3	4	6.6
2	5	6.6
1	9	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 2.60606

degrees of freedom = 4

probability = 0.62575

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 30** Topic is not introduced properly.

**Polarity:** Negative



### **Experimental Group A : Responses of the students in percentage**

**Table 4.347 Responses of Exp Gp A students in percentage for statement 30 for Final Try-out**

Points	Exp Gp A
5	38.71
4	29.03
3	16.13
2	6.45
1	3.23

38.71% of the students strongly disagree with the statement "Topic is not introduced properly."

29.03% of the students disagree with the statement "Topic is not introduced properly."

16.13% of the students not decided with the statement "Topic is not introduced properly."

6.45% of the students agree with the statement "Topic is not introduced properly."

3.23% of the students strongly agree with the statement "Topic is not introduced properly."

### **Experimental Group B : Responses of the students in percentage**

**Table 4.348 Responses of Exp Gp B students in percentage for statement 30 for Final Try-out**

Points	Exp Gp B
5	28.13
4	34.38
3	6.25
2	28.13
1	6.25

28.13% of the students strongly disagree with the statement "Topic is not introduced properly."

34.38% of the students disagree with the statement "Topic is not introduced properly."

6.25% of the students not decided with the statement "Topic is not introduced properly."

28.13% of the students agree with the statement "Topic is not introduced properly."

6.25% of the students strongly agree with the statement "Topic is not introduced properly."

Graphical Representation of analysis of statement 30 in Percentage

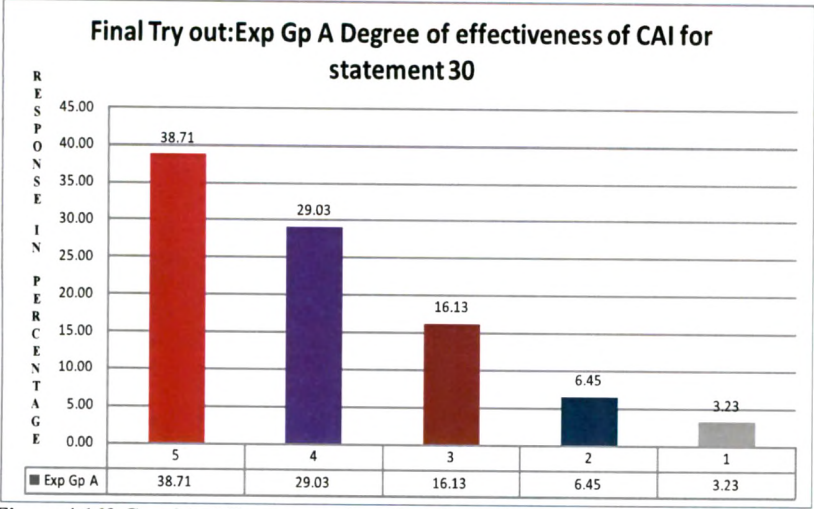


Figure 4.169 Graphical Representation of analysis of statement 30 in Percentage for Exp Gp A for Final Try-out

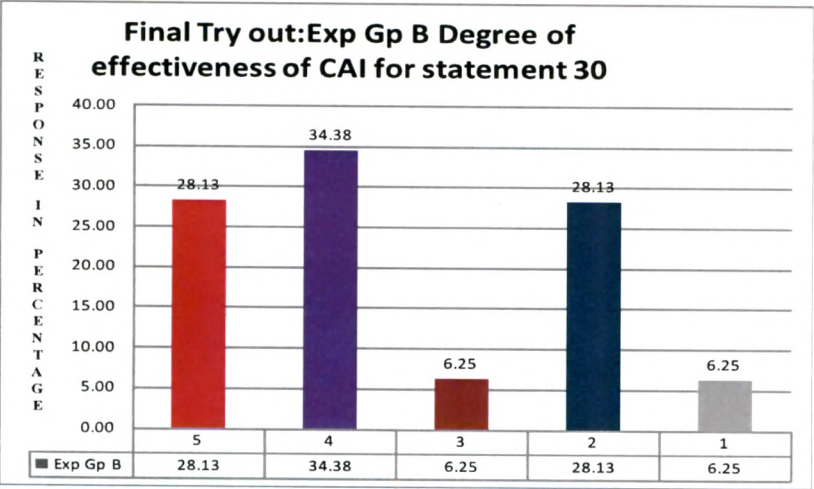


Figure 4.170 Graphical Representation of analysis of statement 30 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

- H<sub>0</sub>: Response is uniformly distributed in the 5 point scale
- H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.349 Chi Square Table for Exp Gp A for Statement 30 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	12	5.8
4	9	5.8
3	5	5.8
2	2	5.8
1	1	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 14.9655

degrees of freedom = 4

probability = 0.00477

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on strongly disagree therefore most of the students strongly disagree with the statement "Topic is not introduced properly."

### Experimental Group B

**Table 4.350 Chi Square Table for Exp Gp B for Statement 30 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	9	6.6
4	11	6.6
3	2	6.6
2	9	6.6
1	2	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 11.0909

degrees of freedom = 4

probability = 0.02556

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on disagree therefore most of the students disagree with the statement "Topic is not introduced properly".

**Statement 31** CAI does not take care of previous knowledge (percentage) needed to understand the present concept.

**Polarity Negative**

**Experimental Group A : Responses of the students in percentage**

**Table 4.351 Responses of Exp Gp A students in percentage for statement 31 for Final Try-out**

Points	Exp Gp A
5	16.13
4	35.48
3	22.58
2	19.35
1	0.00

16.13% of the students strongly disagree with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

35.48% of the students disagree with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

22.58% of the students not decided with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

19.35% of the students agree with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

0.00% of the students strongly agree with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.352 Responses of Exp Gp B students in percentage for statement 31 for Final Try-out**

Points	Exp Gp B
5	18.75
4	37.50
3	28.13
2	9.38
1	9.38

18.75% of the students strongly disagree with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

37.50% of the students disagree with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

28.13% of the students not decided with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

9.38% of the students agree with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

9.38% of the students strongly agree with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

#### Graphical Representation of analysis of statement 31 in Percentage

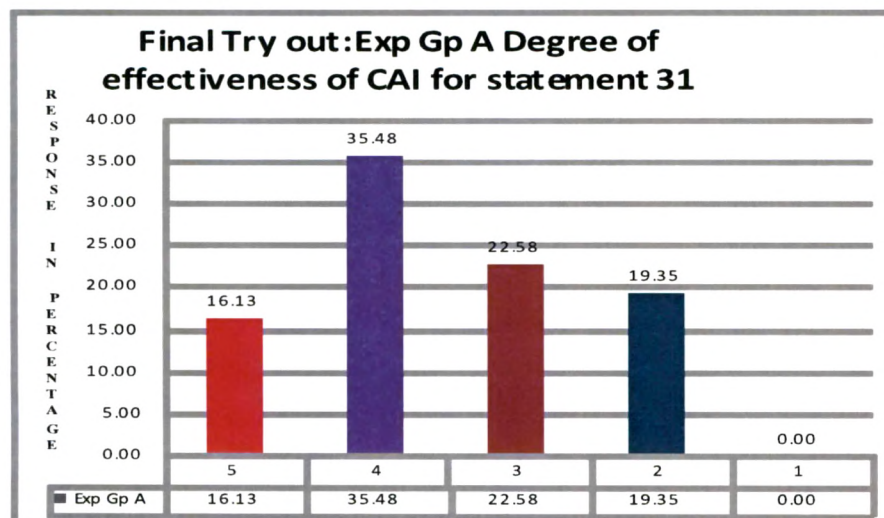


Figure 4.171 Graphical Representation of analysis of statement 31 in Percentage for Exp Gp A for Final Try-out

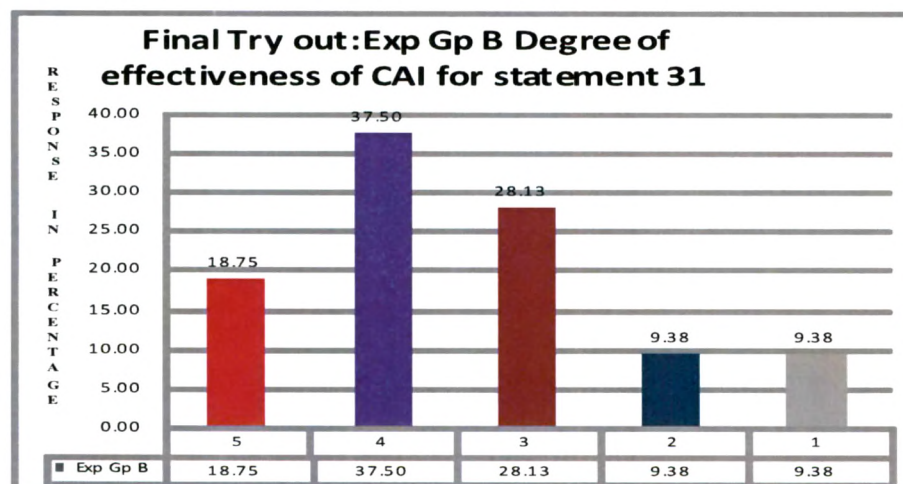


Figure 4.172 Graphical Representation of analysis of statement 31 in Percentage for Exp Gp B for Final Try-out

#### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

**Experimental Group A**

**Table 4.353 Chi Square Table for Exp Gp A for Statement 31 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	5	5.8
4	11	5.8
3	7	5.8
2	6	5.8
1	0	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 10.8276

degrees of freedom = 4

probability = 0.02857

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on disagree therefore most of the students disagree with the statement “CAI does not take care of previous knowledge (percentage) needed to understand the present concept.”

**Experimental Group B**

**Table 4.354 Chi Square Table for Exp Gp B for Statement 31 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	6	6.6
4	12	6.6
3	9	6.6
2	3	6.6
1	3	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 9.27273

degrees of freedom = 4

probability = 0.05463

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 32** Enough revision is not done in CAI after the topic simple interest.

**Polarity: Negative**

**Experimental Group A : Responses of the students in percentage**

**Table 4.355 Responses of Exp Gp A students in percentage for statement 32 for Final Try-out**

Points	Exp Gp A
5	9.68
4	32.26
3	32.26
2	25.81
1	3.23

9.68% of the students strongly disagree with the statement “Enough revision is not done in CAI after the topic simple interest.”

32.26% of the students disagree with the statement “Enough revision is not done in CAI after the topic simple interest.”

32.26% of the students not decided with the statement “Enough revision is not done in CAI after the topic simple interest.”

25.81% of the students agree with the statement “Enough revision is not done in CAI after the topic simple interest.”

3.23% of the students strongly agree with the statement “Enough revision is not done in CAI after the topic simple interest.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.356 Responses of Exp Gp B students in percentage for statement 32 for Final Try-out**

Points	Exp Gp B
5	12.50
4	40.63
3	9.38
2	31.25
1	12.50

12.50% of the students strongly disagree with the statement “Enough revision is not done in CAI after the topic simple interest.”

40.63% of the students disagree with the statement “Enough revision is not done in CAI after the topic simple interest.”

9.38% of the students not decided with the statement “Enough revision is not done in CAI after the



topic simple interest.”

31.25% of the students agree with the statement “Enough revision is not done in CAI after the topic simple interest.”

12.50% of the students strongly agree with the statement “Enough revision is not done in CAI after the topic simple interest.”

#### Graphical Representation of analysis of statement 32 in Percentage

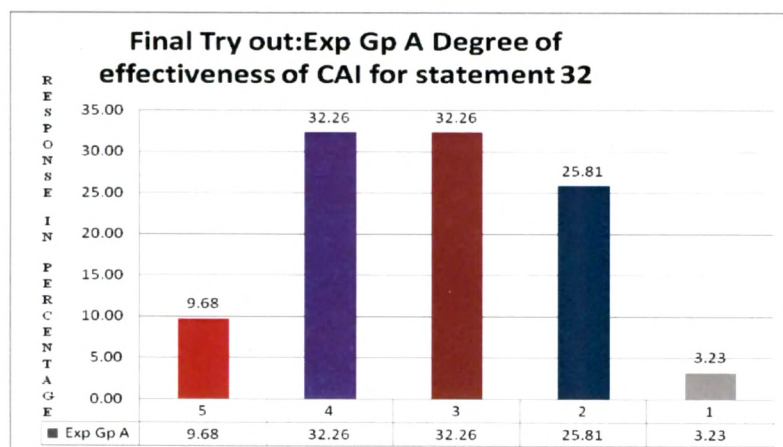


Figure 4.173 Graphical Representation of analysis of statement 32 in Percentage for Exp Gp A for Final Try-out

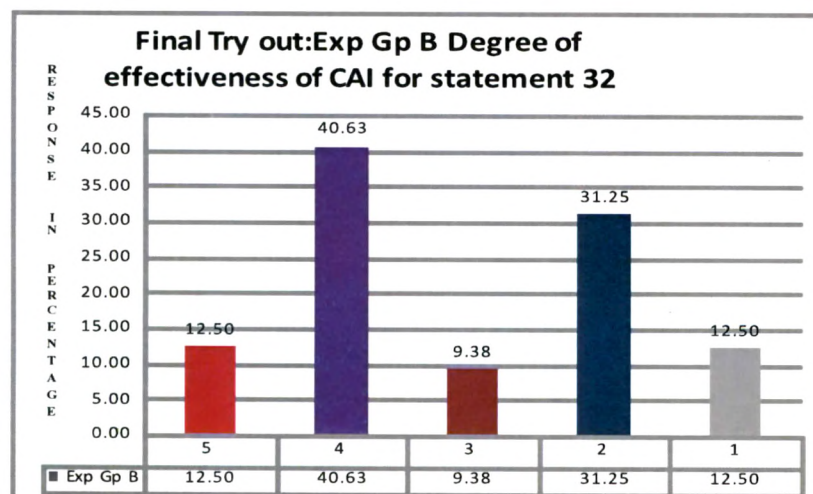


Figure 4.174 Graphical Representation of analysis of statement 32 in Percentage for Exp Gp B for Final Try-out

#### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.357 Chi Square Table for Exp Gp A for Statement 32 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	3	6.4
4	10	6.4
3	10	6.4
2	8	6.4
1	1	6.4

Expected Frequency = Sum of observed frequencies/5

chi-square = 10.8125

degrees of freedom = 4

probability = 0.02875

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. Equal load is on disagree and not decided therefore equal number of students who disagree and equal number of students who are not decided with the statement "Enough revision is not done in CAI after the topic simple interest."

### Experimental Group B

**Table 4.358 Chi Square Table for Exp Gp B for Statement 32 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	4	6.8
4	13	6.8
3	3	6.8
2	10	6.8
1	4	6.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 11.5882

degrees of freedom = 4

probability = 0.02069

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on disagree therefore most of the students disagree with the statement "Enough revision is not done in CAI after the topic simple interest."

**Statement 33:** Enough revision is not done in CAI after the topic compound interest.

**Polarity:** Negative

**Experimental Group A : Responses of the students in percentage**

**Table 4.359 Responses of Exp Gp A students in percentage for statement 33 for Final Try-out**

Points	Exp Gp A
5	19.35
4	32.26
3	6.45
2	22.58
1	25.81

19.35% of the students strongly disagree with the statement “Enough revision is not done in CAI after the topic compound interest.”

32.26% of the students disagree with the statement “Enough revision is not done in CAI after the topic compound interest.”

6.45% of the students not decided with the statement “Enough revision is not done in CAI after the topic compound interest.”

22.58% of the students agree with the statement “Enough revision is not done in CAI after the topic compound interest.”

25.81% of the students strongly agree with the statement “Enough revision is not done in CAI after the topic compound interest.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.360 Responses of Exp Gp B students in percentage for statement 33 for Final Try-out**

Points	Exp Gp B
5	12.50
4	31.25
3	21.88
2	15.63
1	9.38

12.50% of the students strongly disagree with the statement “Enough revision is not done in CAI after the topic compound interest.”

31.25% of the students disagree with the statement “Enough revision is not done in CAI after the topic compound interest.”

21.88% of the students not decided with the statement “Enough revision is not done in CAI after the

topic compound interest.”

15.63% of the students agree with the statement “Enough revision is not done in CAI after the topic compound interest.”

9.38% of the students strongly agree with the statement “Enough revision is not done in CAI after the topic compound interest.”

#### Graphical Representation of analysis of statement 33 in Percentage

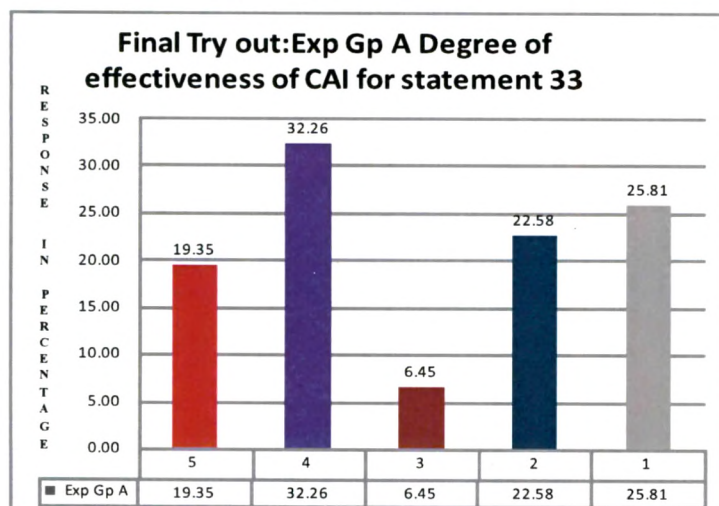


Figure 4.175 Graphical Representation of analysis of statement 33 in Percentage for Exp Gp A for Final Try-out

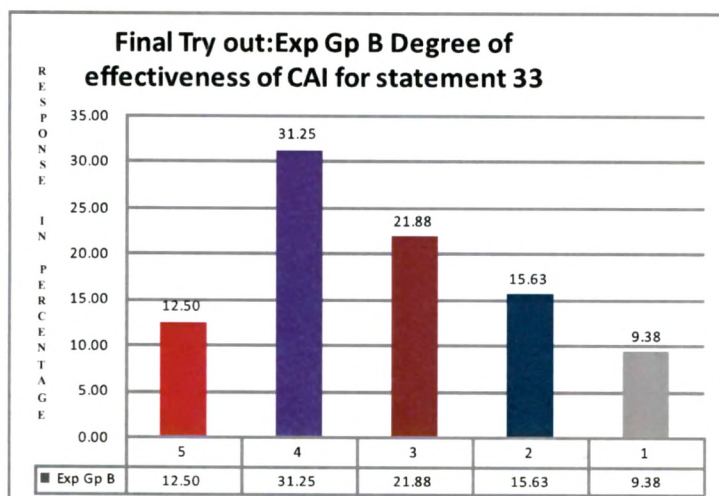


Figure 4.176 Graphical Representation of analysis of statement 33 in Percentage for Exp Gp B for Final Try-out

#### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

**Experimental Group A**

**Table 4.361 Chi Square Table for Exp Gp A for Statement 33 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	6	6.6
4	10	6.6
3	2	6.6
2	7	6.6
1	8	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 5.33333

degrees of freedom = 4

probability = 0.25477

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

**Experimental Group B**

**Table 4.362 Chi Square Table for Exp Gp B for Statement 33 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	4	5.8
4	10	5.8
3	7	5.8
2	5	5.8
1	3	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 5.31034

degrees of freedom = 4

probability = 0.25691

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 34:** Enough revision is not done in CAI after the topic profit and loss.

**Polarity: Negative**

### **Experimental Group A : Responses of the students in percentage**

**Table 4.363 Responses of Exp Gp A students in percentage for statement 34 for Final Try-out**

Points	Exp Gp A
5	6.45
4	25.81
3	32.26
2	19.35
1	12.90

6.45% of the students strongly disagree with the statement “Enough revision is not done in CAI after the topic profit and loss.”

25.81% of the students disagree with the statement “Enough revision is not done in CAI after the topic profit and loss.”

32.26% of the students not decided with the statement “Enough revision is not done in CAI after the topic profit and loss.”

19.35% of the students agree with the statement “Enough revision is not done in CAI after the topic profit and loss.”

12.90% of the students strongly agree with the statement “Enough revision is not done in CAI after the topic profit and loss.”

### **Experimental Group B : Responses of the students in percentage**

**Table 4.364 Responses of Exp Gp B students in percentage for statement 34 for Final Try-out**

Points	Exp Gp B
5	18.75
4	37.50
3	12.50
2	15.63
1	18.75

18.75% of the students strongly disagree with the statement “Enough revision is not done in CAI after the topic profit and loss.”

37.50% of the students disagree with the statement “Enough revision is not done in CAI after the topic profit and loss.”

12.50% of the students not decided with the statement “Enough revision is not done in CAI after the topic profit and loss.”

15.63% of the students agree with the statement “Enough revision is not done in CAI after the topic

profit and loss.”

18.75% of the students strongly agree with the statement “Enough revision is not done in CAI after the topic profit and loss.”

Graphical Representation of analysis of statement 34 in Percentage

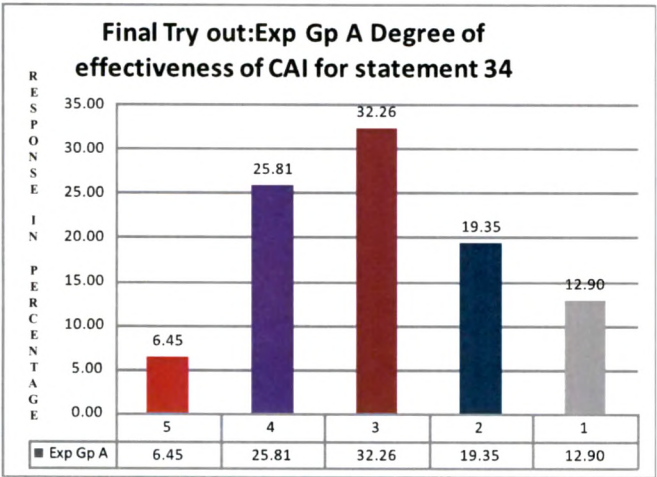


Figure 4.177 Graphical Representation of analysis of statement 34 in Percentage for Exp Gp A for Final Try-out

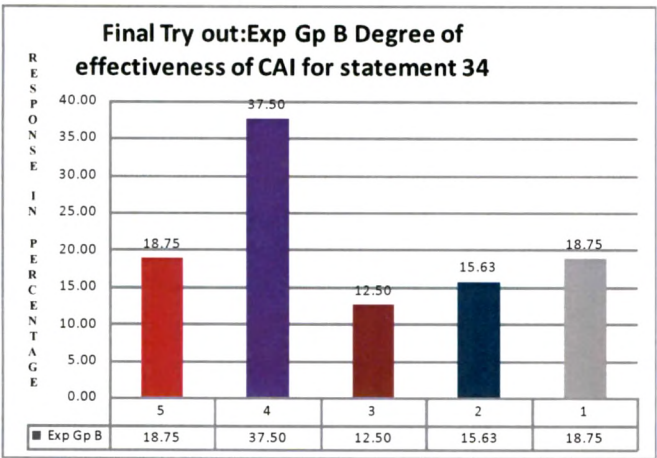


Figure 4.178 Graphical Representation of analysis of statement 34 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale



### Experimental Group A

**Table 4.365 Chi Square Table for Exp Gp A for Statement 34 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	2	6
4	8	6
3	10	6
2	6	6
1	4	6

Expected Frequency = Sum of observed frequencies/5

chi-square = 6.66667

degrees of freedom = 4

probability = 0.15459

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

**Table 4.366 Chi Square Table for Exp Gp B for Statement 34 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	6	6.6
4	12	6.6
3	4	6.6
2	5	6.6
1	6	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 5.93939

degrees of freedom = 4

probability = 0.20372

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 35:** Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.

**Polarity:** Negative

### **Experimental Group A : Responses of the students in percentage**

**Table 4.367 Responses of Exp Gp A students in percentage for statement 35 for Final Try-out**

Points	Exp Gp A
5	16.13
4	32.26
3	16.13
2	16.13
1	12.90

16.13% of the students strongly disagree with the statement “Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.”

32.26% of the students disagree with the statement “Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.”

16.13% of the students not decided with the statement “Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.”

16.13% of the students agree with the statement “Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.”

12.90% of the students strongly agree with the statement “Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.”

### **Experimental Group B : Responses of the students in percentage**

**Table 4.368 Responses of Exp Gp B students in percentage for statement 35 for Final Try-out**

Points	Exp Gp B
5	18.75
4	31.25
3	6.25
2	40.63
1	3.13

18.75% of the students strongly disagree with the statement “Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.”

31.25% of the students disagree with the statement “Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.”

6.25% of the students not decided with the statement “Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.”

40.63% of the students agree with the statement “Remedial (re teaching the difficult concept which

is not understood by you) teaching is not done.”

3.13% of the students strongly agree with the statement “Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.”

Graphical Representation of analysis of statement 35

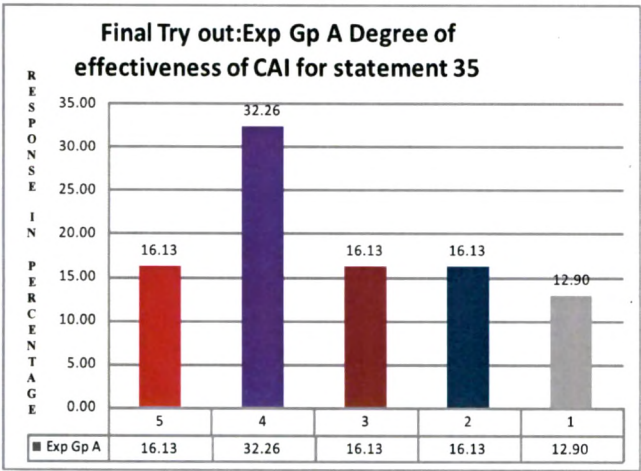


Figure 4.179 Graphical Representation of analysis of statement 35 in Percentage for Exp Gp A for Final Try-out

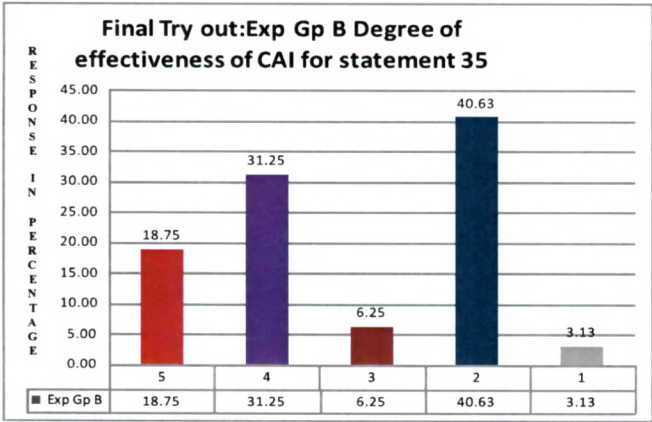


Figure 4.180 Graphical Representation of analysis of statement 35 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

- H<sub>0</sub>: Response is uniformly distributed in the 5 point scale
- H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.369 Chi Square Table for Exp Gp A for Statement 35 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	5	5.8
4	10	5.8
3	5	5.8
2	5	5.8
1	4	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 3.93103

degrees of freedom = 4

probability = 0.41542

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

**Table 4.370 Chi Square Table for Exp Gp A for Statement 35 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	6	6.4
4	10	6.4
3	2	6.4
2	13	6.4
1	1	6.4

Expected Frequency = Sum of observed frequencies/5

chi-square = 16.4375

degrees of freedom = 4

probability = 0.00248

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Remedial (re teaching the difficult concept which is not understood by you) teaching is not done."

**Statement 36:** I have to read the slide many times to understand what is being said as there was no clarity.

**Polarity:** Negative

**Experimental Group A : Responses of the students in percentage**

**Table 4.371 Responses of Exp Gp A students in percentage for statement 36 for Final Try-out**

Points	Exp Gp A
5	12.90
4	29.03
3	12.90
2	19.35
1	19.35

12.90% of the students strongly disagree with the statement “I have to read the slide many times to understand what is being said as there was no clarity.”

29.03% of the students disagree with the statement “I have to read the slide many times to understand what is being said as there was no clarity.”

12.90% of the students not decided with the statement “I have to read the slide many times to understand what is being said as there was no clarity.”

19.35% of the students agree with the statement “I have to read the slide many times to understand what is being said as there was no clarity.”

19.35% of the students strongly agree with the statement “I have to read the slide many times to understand what is being said as there was no clarity.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.372 Responses of Exp Gp B students in percentage for statement 36 for Final Try-out**

Points	Exp Gp B
5	15.63
4	46.88
3	12.50
2	21.88
1	9.38

15.63% of the students strongly disagree with the statement “I have to read the slide many times to understand what is being said as there was no clarity.”

46.88% of the students disagree with the statement “I have to read the slide many times to understand what is being said as there was no clarity.”

12.50% of the students not decided with the statement “I have to read the slide many times to

understand what is being said as there was no clarity.”

21.88% of the students agree with the statement “I have to read the slide many times to understand what is being said as there was no clarity.”

9.38% of the students strongly agree with the statement “I have to read the slide many times to understand what is being said as there was no clarity.”

Graphical Representation of analysis of statement 36

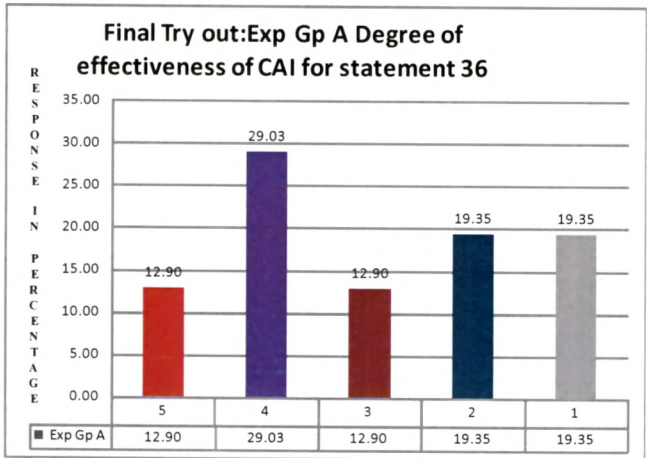


Figure 4.181 Graphical Representation of analysis of statement 36 in Percentage for Exp Gp A for Final Try-out

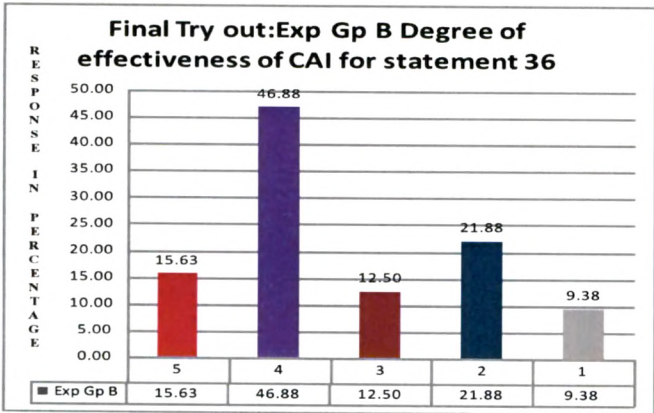


Figure 4.182 Graphical Representation of analysis of statement 36 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.373 Chi Square Table for Exp Gp A for Statement 36 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	4	5.8
4	9	5.8
3	4	5.8
2	6	5.8
1	6	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 2.89655

degrees of freedom = 4

probability = 0.57528

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

**Table 4.374 Chi Square Table for Exp Gp B for Statement 36 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	5	6.8
4	15	6.8
3	4	6.8
2	7	6.8
1	3	6.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 13.6471

degrees of freedom = 4

probability = 0.00851

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on disagree therefore most of the students disagree with the statement "I have to read the slide many times to understand what is being said as there was no clarity".



**Statement 37:** Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.

**Polarity: Positive**

**Experimental Group A : Responses of the students in percentage**

**Table 4.375 Responses of Exp Gp A students in percentage for statement 37 for Final Try-out**

Points	Exp Gp A
5	16.13
4	35.48
3	16.13
2	9.68
1	19.35

16.13% of the students strongly agree with the statement “Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

35.48% of the students agree with the statement “Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

16.13% of the students not decided with the statement “Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

9.68% of the students disagree with the statement “Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

19.35% of the students strongly disagree with the statement“Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.376 Responses of Exp Gp B students in percentage for statement 37 for Final Try-out**

Points	Exp Gp B
5	15.63
4	46.88
3	9.38
2	18.75
1	9.38

15.63% of the students strongly agree with the statement “Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

46.88% of the students agree with the statement “Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

9.38% of the students not decided with the statement “Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

18.75% of the students disagree with the statement “Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

9.38% of the students strongly disagree with the statement “Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.”

#### Graphical Representation of analysis of statement 37

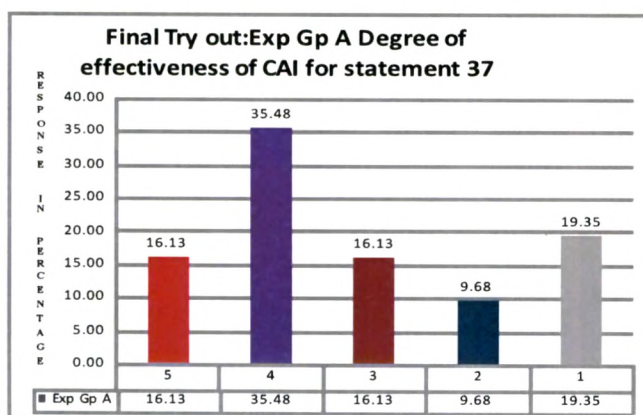


Figure 4.183 Graphical Representation of analysis of statement 37 in Percentage for Exp Gp A for Final Try-out

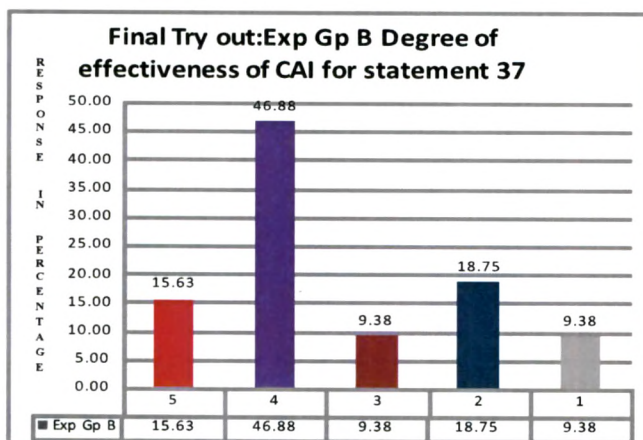


Figure 4.184 Graphical Representation of analysis of statement 37 in Percentage for Exp Gp B for Final Try-out

#### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.377 Chi Square Table for Exp Gp A for Statement 37 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	5	6
4	11	6
3	5	6
2	3	6
1	6	6

Expected Frequency = Sum of observed frequencies/5

chi-square = 6

degrees of freedom = 4

probability = 0.19915

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

**Table 4.378 Chi Square Table for Exp Gp B for Statement 37 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	5	6.4
4	15	6.4
3	3	6.4
2	6	6.4
1	3	6.4

Expected Frequency = Sum of observed frequencies/5

chi-square = 15.5

degrees of freedom = 4

probability = 0.00377

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice."

**Statement 38:** Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.

**Polarity: Positive**

**Experimental Group A : Responses of the students in percentage**

**Table 4.379 Responses of Exp Gp A students in percentage for statement 38 for Final Try-out**

Points	Exp Gp A
5	25.81
4	38.71
3	16.13
2	9.68
1	6.45

25.81% of the students strongly agree with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

38.71% of the students agree with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

16.13% of the students not decided with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

9.68% of the students disagree with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

6.45% of the students strongly disagree with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.380 Responses of Exp Gp B students in percentage for statement 38 for Final Try-out**

Points	Exp Gp B
5	15.63
4	40.63
3	9.38
2	31.25
1	6.25

15.63% of the students strongly agree with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

40.63% of the students agree with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

9.38% of the students not decided with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

31.25% of the students disagree with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

6.25% of the students strongly disagree with the statement “Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.”

### Graphical Representation of analysis of statement 38 in Percentage

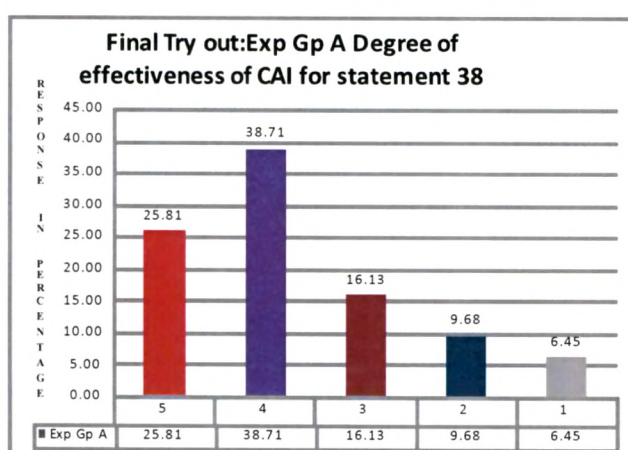


Figure 4.185 Graphical Representation of analysis of statement 38 in Percentage for Exp Gp A for Final Try-out

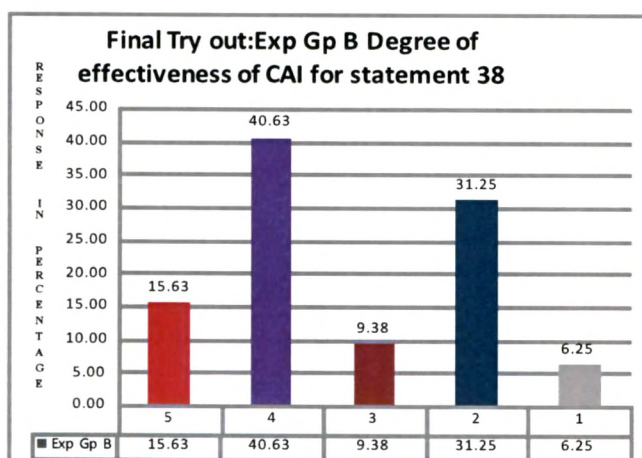


Figure 4.186 Graphical Representation of analysis of statement 38 in Percentage for Exp Gp B for Final Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.381 Chi Square Table for Exp Gp A for Statement 38 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	8	6
4	12	6
3	5	6
2	3	6
1	2	6

Expected Frequency = Sum of observed frequencies/5

chi-square = 11

degrees of freedom = 4

probability = 0.02656

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Number of questions at the end of the slides for the topic simple interest is adequate for providing practice."

### Experimental Group B

**Table 4.382 Chi Square Table for Exp Gp B for Statement 38 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	5	6.6
4	13	6.6
3	3	6.6
2	10	6.6
1	2	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 13.5152

degrees of freedom = 4

probability = 0.00901

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Number of questions at the end of the slides for the topic simple interest is

adequate for providing practice.”

**Statement 39:** Number of questions at the end of the slides for the topic compound interest is adequate for providing practice.

**Polarity: Positive**

**Experimental Group A : Responses of the students in percentage**

**Table 4.383 Responses of Exp Gp A students in percentage for statement 39 for Final Try-out**

Points	Exp Gp A
5	16.13
4	38.71
3	6.45
2	38.71
1	9.68

16.13% of the students strongly agree with the statement “Number of questions at the end of the slides for the topic compound interest is adequate for providing practice.”

38.71% of the students agree with the statement “Number of questions at the end of the slides for the topic compound interest is adequate for providing practice.”

6.45% of the students not decided with the statement “Number of questions at the end of the slides for the topic compound interest is adequate for providing practice.”

38.71% of the students disagree with the statement “Number of questions at the end of the slides for the topic compound interest is adequate for providing practice.”

9.68% of the students strongly disagree with the statement “Number of questions at the end of the slides for the topic compound interest is adequate for providing practice.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.384 Responses of Exp Gp B students in percentage for statement 39 for Final Try-out**

Points	Exp Gp B
5	28.13
4	28.13
3	15.63
2	12.50
1	9.38

28.13% of the students strongly agree with the statement “Number of questions at the end of the slides for the topic compound interest is adequate for providing practice.”



28.13% of the students agree with the statement “Number of questions at the end of the slides for the topic compound interest is adequate for providing practice.”

15.63% of the students not decided with the statement “Number of questions at the end of the slides for the topic compound interest is adequate for providing practice.”

12.50% of the students disagree with the statement “Number of questions at the end of the slides for the topic compound interest is adequate for providing practice.”

9.38% of the students strongly disagree with the statement “Number of questions at the end of the slides for the topic compound interest is adequate for providing practice.”

### Graphical Representation of analysis of statement 39 in Percentage

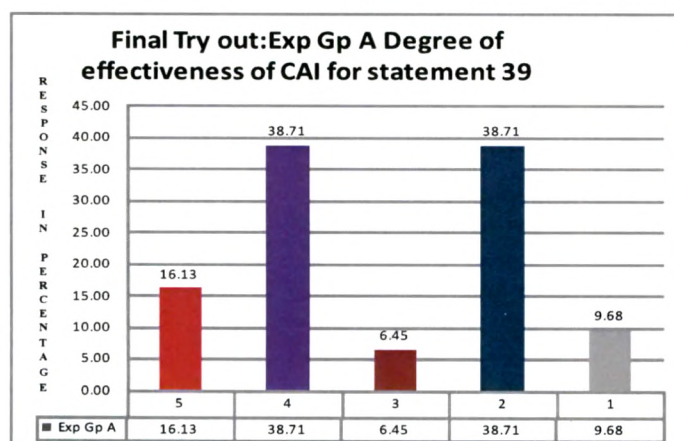


Figure 4.187 Graphical Representation of analysis of statement 39 in Percentage for Exp Gp A for Final Try-out

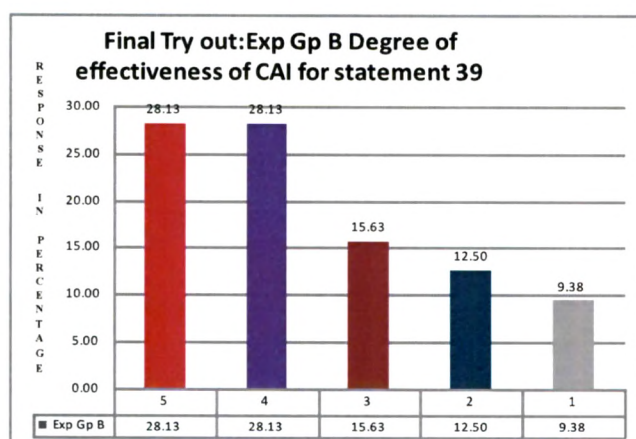


Figure 4.188 Graphical Representation of analysis of statement 39 in Percentage for Exp Gp B for Final Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.385 Chi Square Table for Exp Gp A for Statement 39 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	5	6.8
4	12	6.8
3	2	6.8
2	12	6.8
1	3	6.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 13.9412

degrees of freedom = 4

probability = 0.00749

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. Equal load is on agree and disagree therefore equal number of students who agree and equal number of students who disagree with the statement "Number of questions at the end of the slides for the topic compound interest is adequate for providing practice."

### Experimental Group B

**Table 4.386 Chi Square Table for Exp Gp B for Statement 39 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	9	6
4	9	6
3	5	6
2	4	6
1	3	6

Expected Frequency = Sum of observed frequencies/5

chi-square = 5.33333

degrees of freedom = 4

probability = 0.25477

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 40:** CAI is not enough in understanding the concept very clearly.

**Polarity: Negative**

**Experimental Group A : Responses of the students in percentage**

**Table 4.387 Responses of Exp Gp A students in percentage for statement 40 for Final Try-out**

Points	Exp Gp A
5	19.35
4	32.26
3	29.03
2	12.90
1	3.23

19.35% of the students strongly disagree with the statement “CAI is not enough in understanding the concept very clearly.”

32.26% of the students disagree with the statement “CAI is not enough in understanding the concept very clearly.”

29.03% of the students not decided with the statement “CAI is not enough in understanding the concept very clearly.”

12.90% of the students agree with the statement “CAI is not enough in understanding the concept very clearly.”

3.23% of the students strongly agree with the statement “CAI is not enough in understanding the concept very clearly.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.388 Responses of Exp Gp B students in percentage for statement 40 for Final Try-out**

Points	Exp Gp B
5	15.63
4	34.38
3	18.75
2	15.63
1	18.75

15.63% of the students strongly disagree with the statement “CAI is not enough in understanding the concept very clearly.”

34.38% of the students disagree with the statement “CAI is not enough in understanding the concept very clearly.”

18.75% of the students not decided with the statement “CAI is not enough in understanding the concept very clearly.”

15.63% of the students agree with the statement “CAI is not enough in understanding the concept very clearly.”

18.75% of the students strongly agree with the statement “CAI is not enough in understanding the concept very clearly.”

#### Graphical Representation of analysis of statement 40 in Percentage

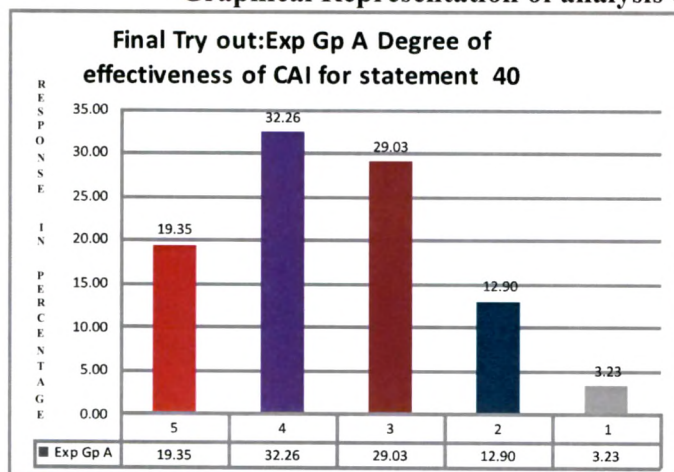


Figure 4.189 Graphical Representation of analysis of statement 40 in Percentage for Exp Gp A for Final Try-out

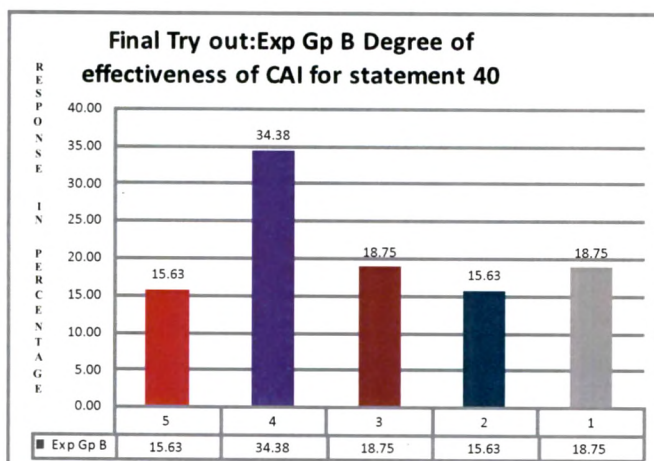


Figure 4.190 Graphical Representation of analysis of statement 40 in Percentage for Exp Gp B for Final Try-out

#### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.389 Chi Square Table for Exp Gp A for Statement 40 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	6	6
4	10	6
3	9	6
2	4	6
1	1	6

Expected Frequency = Sum of observed frequencies/5

chi-square = 9

degrees of freedom = 4

probability = 0.0611

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on disagree therefore most of the students disagree with the statement "CAI is not enough in understanding the concept very clearly"

### Experimental Group B

**Table 4.390 Chi Square Table for Exp Gp B for Statement 40 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	5	6.6
4	11	6.6
3	6	6.6
2	5	6.6
1	6	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 3.81818

degrees of freedom = 4

probability = 0.43117

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 41:** Independent learning is not possible through CAI.

**Polarity:** Negative

### **Experimental Group A : Responses of the students in percentage**

**Table 4.391 Responses of Exp Gp A students in percentage for statement 41 for Final Try-out**

Points	Exp Gp A
5	22.58
4	16.13
3	32.26
2	9.68
1	12.90

22.58% of the students strongly disagree with the statement “Independent learning is not possible through CAI.”

16.13% of the students disagree with the statement “Independent learning is not possible through CAI.”

32.26% of the students not decided with the statement “Independent learning is not possible through CAI.”

9.68% of the students agree with the statement “Independent learning is not possible through CAI.”

12.90% of the students strongly agree with the statement “Independent learning is not possible through CAI.”

### **Experimental Group B : Responses of the students in percentage**

**Table 4.392 Responses of Exp Gp B students in percentage for statement 41 for Final Try-out**

Points	Exp Gp B
5	31.25
4	53.13
3	6.25
2	12.50
1	0.00

31.25% of the students strongly disagree with the statement “Independent learning is not possible through CAI.”

53.13% of the students disagree with the statement “Independent learning is not possible through CAI.”

6.25% of the students not decided with the statement “Independent learning is not possible through CAI.”

12.50% of the students agree with the statement “Independent learning is not possible through CAI.”

0.00% of the students strongly agree with the statement “Independent learning is not possible through CAI.”

#### Graphical Representation of analysis of statement 41 in Percentage

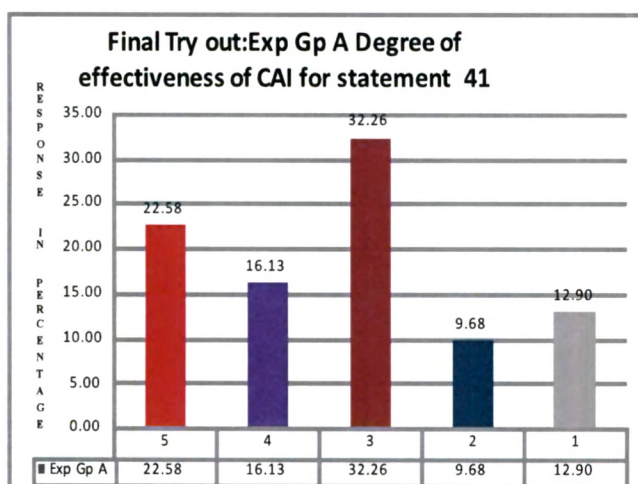


Figure 4.191 Graphical Representation of analysis of statement 41 in Percentage for Exp Gp A for Final Try-out

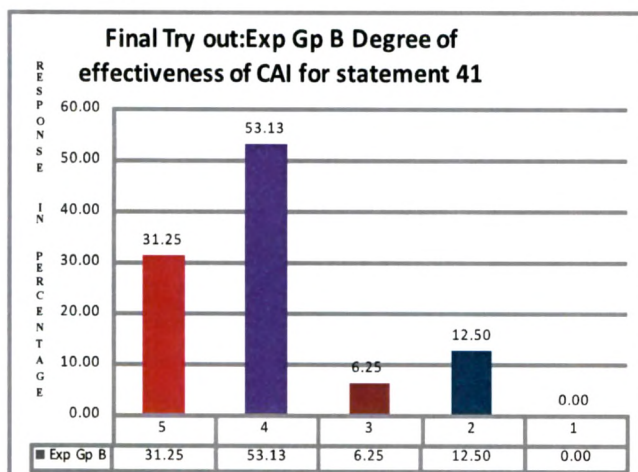


Figure 4.192 Graphical Representation of analysis of statement 41 in Percentage for Exp Gp B for Final Try-out

#### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale



### Experimental Group A

Table 4.393 Chi Square Table for Exp Gp A for Statement 41 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	7	5.8
4	5	5.8
3	10	5.8
2	3	5.8
1	4	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 5.31034

degrees of freedom = 4

probability = 0.25691

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

Table 4.394 Chi Square Table for Exp Gp B for Statement 41 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	10	6.6
4	17	6.6
3	2	6.6
2	4	6.6
1	0	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 28.9697

degrees of freedom = 4

probability = 0.00

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on disagree therefore most of the students disagree with the statement "Independent learning is not possible through CAI".

**Statement 42:** Evaluation is done objectively (objective questions) so no partiality is involved in scoring.

**Polarity: Positive**

**Experimental Group A : Responses of the students in percentage**

**Table 4.395 Responses of Exp Gp A students in percentage for statement 42 for Final Try-out**

Points	Exp Gp A
5	29.03
4	25.81
3	22.58
2	12.90
1	3.23

29.03% of the students strongly agree with the statement "Evaluation is done objectively (objective questions) so no partiality is involved in scoring."

25.81% of the students agree with the statement "Evaluation is done objectively (objective questions) so no partiality is involved in scoring."

22.58% of the students not decided with the statement "Evaluation is done objectively (objective questions) so no partiality is involved in scoring."

12.90% of the students disagree with the statement "Evaluation is done objectively (objective questions) so no partiality is involved in scoring."

3.23% of the students strongly disagree with the statement "Evaluation is done objectively (objective questions) so no partiality is involved in scoring."

**Experimental Group B : Responses of the students in percentage**

**Table 4.396 Responses of Exp Gp B students in percentage for statement 42 for Final Try-out**

Points	Exp Gp B
5	28.13
4	43.75
3	15.63
2	9.38
1	6.25

28.13% of the students strongly agree with the statement "Evaluation is done objectively (objective questions) so no partiality is involved in scoring."

43.75% of the students agree with the statement "Evaluation is done objectively (objective questions) so no partiality is involved in scoring."

15.63% of the students not decided with the statement "Evaluation is done objectively (objective

questions) so no partiality is involved in scoring.”

9.38% of the students disagree with the statement “Evaluation is done objectively (objective questions) so no partiality is involved in scoring.”

6.25% of the students strongly disagree with the statement “Evaluation is done objectively (objective questions) so no partiality is involved in scoring.”

**Graphical Representation of analysis of statement 42 in Percentage**

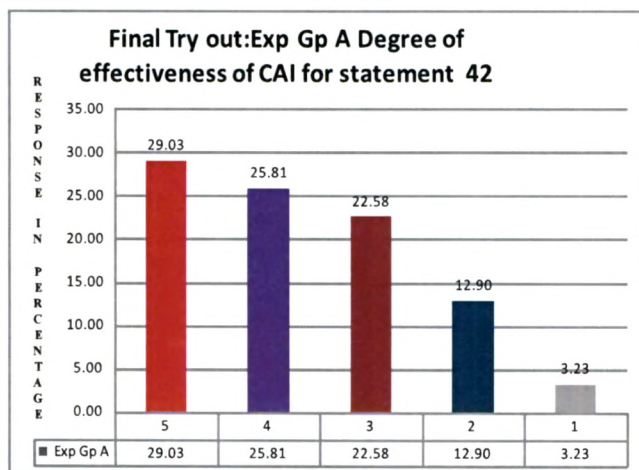


Figure 4.193 Graphical Representation of analysis of statement 42 in Percentage for Exp Gp A for Final Try-out

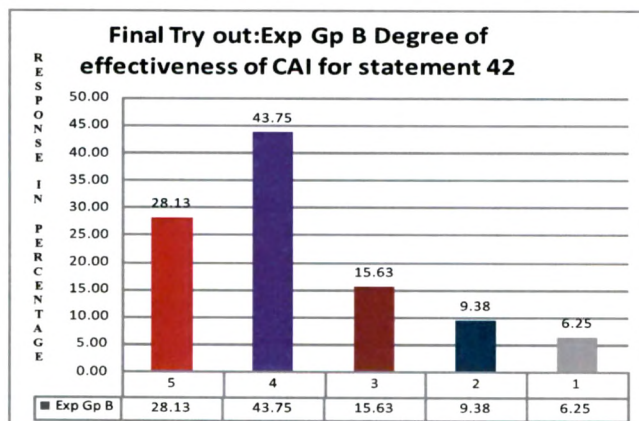


Figure 4.194 Graphical Representation of analysis of statement 42 in Percentage for Exp Gp B for Final Try-out

**Data Analysis using Chi Square**

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

**Experimental Group A**

**Table 4.397**Chi Square Table for Exp Gp A for Statement 42 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	9	5.8
4	8	5.8
3	7	5.8
2	4	5.8
1	1	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 7.37931

degrees of freedom = 4

probability = 0.11715

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

**Experimental Group B**

**Table 4.398** Chi Square Table for Exp Gp B for Statement 42 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	9	6.6
4	14	6.6
3	5	6.6
2	3	6.6
1	2	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 14.7273

degrees of freedom = 4

probability = 0.0053

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement “Evaluation is done objectively (objective questions) so no partiality is involved in scoring.”

**Statement 43:** Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.

**Polarity:** Negative

**Experimental Group A : Responses of the students in percentage**

**Table 4.399 Responses of Exp Gp A students in percentage for statement 43 for Final Try-out**

Points	Exp Gp A
5	16.13
4	25.81
3	38.71
2	12.90
1	6.45

16.13% of the students strongly disagree with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

25.81% of the students disagree with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

38.71% of the students not decided with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

12.90% of the students agree with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

6.45% of the students strongly agree with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.400 Responses of Exp Gp B students in percentage for statement 43 for Final Try-out**

Points .	Exp Gp B
5	12.50
4	28.13
3	28.13
2	28.13
1	6.25

12.50% of the students strongly disagree with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

28.13% of the students disagree with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

28.13% of the students not decided with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

28.13% of the students agree with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

6.25% of the students strongly agree with the statement “Evaluation done at the end of the topic “simple interest” is not suitable measure to know my understanding about that topic.”

### Graphical Representation of analysis of statement 43 in Percentage

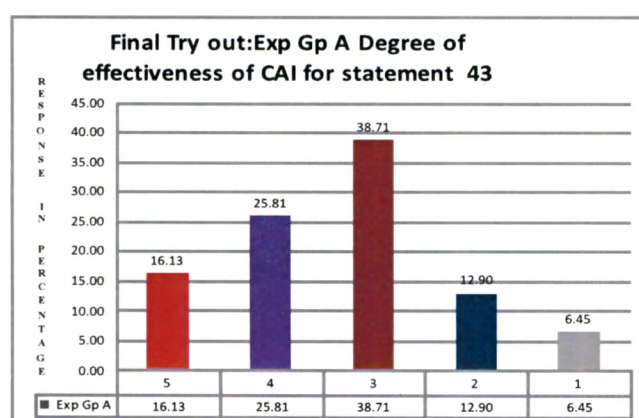


Figure 4.195 Graphical Representation of analysis of statement 43 in Percentage for Exp Gp A for Final Try-out

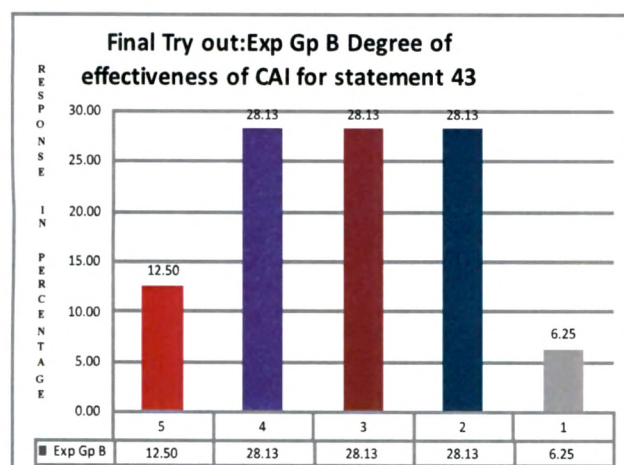


Figure 4.196 Graphical Representation of analysis of statement 43 in Percentage for Exp Gp B for Final Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.401 Chi Square Table for Exp Gp A for Statement 43 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	5	6.2
4	8	6.2
3	12	6.2
2	4	6.2
1	2	6.2

Expected Frequency = Sum of observed frequencies/5

chi-square = 9.80645

degrees of freedom = 4

probability = 0.04382

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on not decided therefore most of the students not decided with the statement "Evaluation done at the end of the topic "simple interest" is not suitable measure to know my understanding about that topic."

### Experimental Group B

**Table 4.402 Chi Square Table for Exp Gp B for Statement 43 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	4	6.6
4	9	6.6
3	9	6.6
2	9	6.6
1	2	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 6.84848

degrees of freedom = 4

probability = 0.14412

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.



**Statement 44:** Instruction given in each slide of CAI is easy and clear to follow.

**Polarity: Positive**

**Experimental Group A : Responses of the students in percentage**

**Table 4.403 Responses of Exp Gp A students in percentage for statement 44 for Final Try-out**

Points	Exp Gp A
5	41.94
4	29.03
3	16.13
2	0.00
1	6.45

41.94% of the students strongly agree with the statement "Instruction given in each slide of CAI is easy and clear to follow."

29.03% of the students agree with the statement "Instruction given in each slide of CAI is easy and clear to follow."

16.13% of the students not decided with the statement "Instruction given in each slide of CAI is easy and clear to follow."

0.00% of the students disagree with the statement "Instruction given in each slide of CAI is easy and clear to follow."

6.45% of the students strongly disagree with the statement "Instruction given in each slide of CAI is easy and clear to follow."

**Experimental Group B : Responses of the students in percentage**

**Table 4.404 Responses of Exp Gp B students in percentage for statement 44 for Final Try-out**

Points	Exp Gp B
5	31.25
4	34.38
3	25.00
2	12.50
1	0.00

31.25% of the students strongly agree with the statement "Instruction given in each slide of CAI is easy and clear to follow."

34.38% of the students agree with the statement "Instruction given in each slide of CAI is easy and clear to follow."

25.00% of the students not decided with the statement "Instruction given in each slide of CAI is easy and clear to follow."

12.50% of the students disagree with the statement “Instruction given in each slide of CAI is easy and clear to follow.”

0.00% of the students strongly disagree with the statement “Instruction given in each slide of CAI is easy and clear to follow.”

Graphical Representation of analysis of statement 44 in Percentage

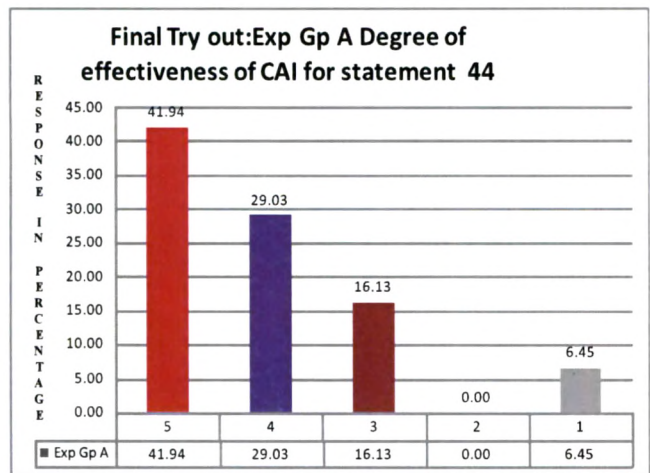


Figure 4.197 Graphical Representation of analysis of statement 44 in Percentage for Exp Gp A for Final Try-out

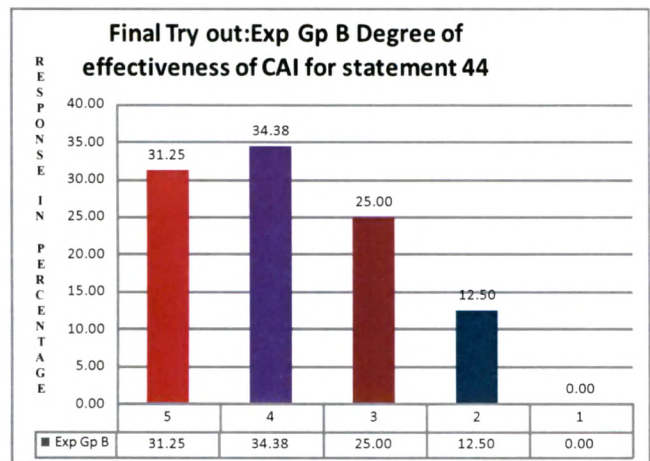


Figure 4.198 Graphical Representation of analysis of statement 44 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.405 Chi Square Table for Exp Gp A for Statement 44 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	13	5.8
4	9	5.8
3	5	5.8
2	0	5.8
1	2	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 19.1034

degrees of freedom = 4

probability = 0.00075

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "Instruction given in each slide of CAI is easy and clear to follow."

### Experimental Group B

**Table 4.406 Chi Square Table for Exp Gp B for Statement 44 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	10	6.6
4	11	6.6
3	8	6.6
2	4	6.6
1	0	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 12.6061

degrees of freedom = 4

probability = 0.01337

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Instruction given in each slide of CAI is easy and clear to follow."

**Statement 45:** Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.

**Polarity: Negative**

**Experimental Group A : Responses of the students in percentage**

**Table 4.407 Responses of Exp Gp A students in percentage for statement 45 for Final Try-out**

Points	Exp Gp A
5	9.68
4	9.68
3	35.48
2	22.58
1	16.13

9.68% of the students strongly disagree with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

9.68% of the students disagree with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

35.48% of the students not decided with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

22.58% of the students agree with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

16.13% of the students strongly agree with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.408 Responses of Exp Gp B students in percentage for statement 45 for Final Try-out**

Points	Exp Gp B
5	18.75
4	28.13
3	25.00
2	21.88
1	9.38

18.75% of the students strongly disagree with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

28.13% of the students disagree with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

25.00% of the students not decided with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

21.88% of the students agree with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

9.38% of the students strongly agree with the statement “Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.”

Graphical Representation of analysis of statement 45 in Percentage

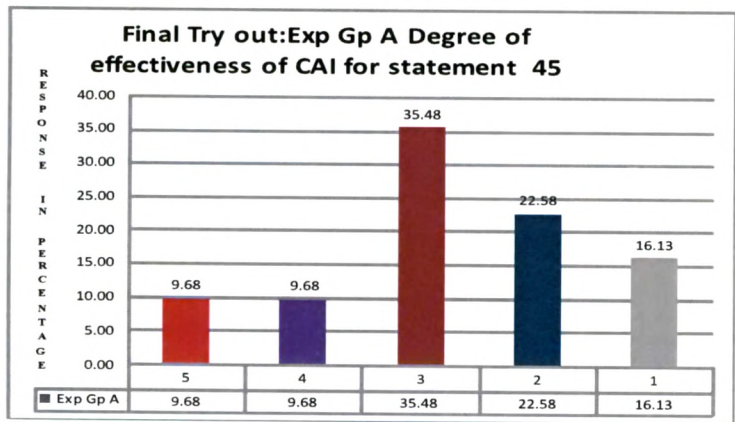


Figure 4.199 Graphical Representation of analysis of statement 45 in Percentage for Exp Gp A for Final Try-out

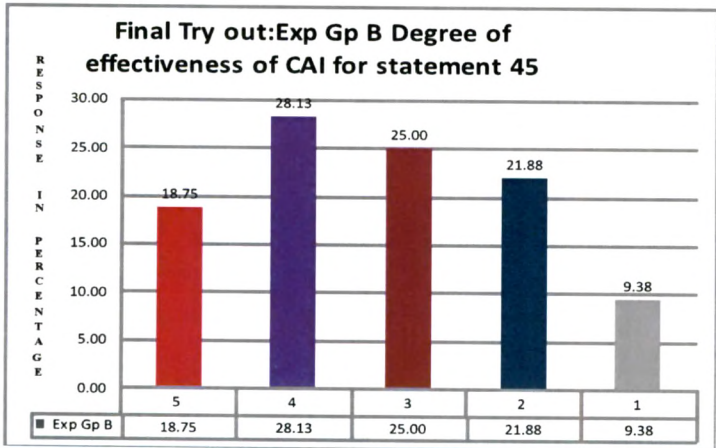


Figure 4.200 Graphical Representation of analysis of statement 45 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.409 Chi Square Table for Exp Gp A for Statement 45 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	3	5.8
4	3	5.8
3	11	5.8
2	7	5.8
1	5	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 7.72414

degrees of freedom = 4

probability = 0.10222

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

**Table 4.410 Chi Square Table for Exp Gp B for Statement 45 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	6	6.6
4	9	6.6
3	8	6.6
2	7	6.6
1	3	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 3.21212

degrees of freedom = 4

probability = 0.52298

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 46:** Interaction with mathematics teacher is not possible while using this CAI (no face to face interaction).

**Polarity: Negative**

**Experimental Group A : Responses of the students in percentage**

**Table 4.411 Responses of Exp Gp A students in percentage for statement 46 for Final Try-out**

Points	Exp Gp A
5	9.68
4	16.13
3	25.81
2	32.26
1	9.68

9.68% of the students strongly disagree with the statement “Interaction with mathematics teacher is not possible while using this CAI(no face to face interaction).”

16.13% of the students disagree with the statement “Interaction with mathematics teacher is not possible while using this CAI(no face to face interaction).”

25.81% of the students not decided with the statement “Interaction with mathematics teacher is not possible while using this CAI(no face to face interaction).”

32.26% of the students agree with the statement “Interaction with mathematics teacher is not possible while using this CAI(no face to face interaction).”

9.68% of the students strongly agree with the statement “Interaction with mathematics teacher is not possible while using this CAI(no face to face interaction).”

**Experimental Group B : Responses of the students in percentage**

**Table 4.412 Responses of Exp Gp B students in percentage for statement 46 for Final Try-out**

Points	Exp Gp B
5	15.63
4	34.38
3	6.25
2	37.50
1	9.38

15.63% of the students strongly disagree with the statement “Interaction with mathematics teacher is not possible while using this CAI(no face to face interaction).”

34.38% of the students disagree with the statement “Interaction with mathematics teacher is not possible while using this CAI(no face to face interaction).”

6.25% of the students not decided with the statement “Interaction with mathematics teacher is not possible while using this CAI(no face to face interaction).”

37.50% of the students agree with the statement “Interaction with mathematics teacher is not possible while using this CAI(no face to face interaction).”



possible while using this CAI(no face to face interaction).”

9.38% of the students strongly agree with the statement “Interaction with mathematics teacher is not possible while using this CAI(no face to face interaction).”

Graphical Representation of analysis of statement 46 in Percentage

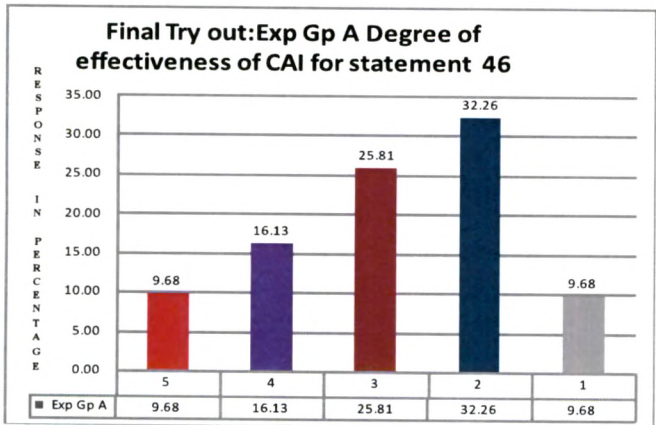


Figure 4.201 Graphical Representation of analysis of statement 46 in Percentage for Exp Gp A for Final Try-out

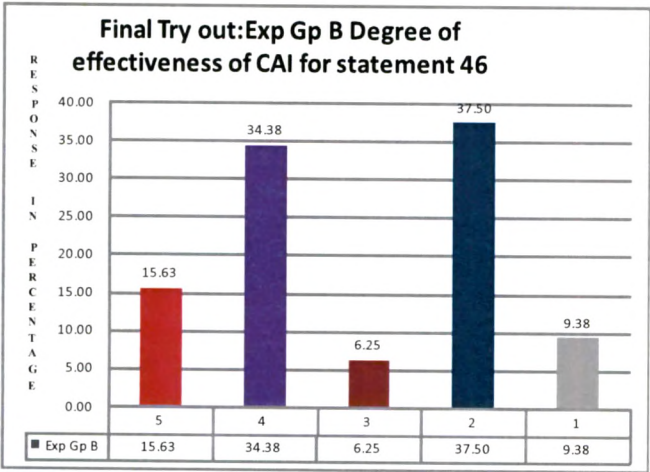


Figure 4.202 Graphical Representation of analysis of statement 46 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

- $H_0$ : Response is uniformly distributed in the 5 point scale
- $H_1$ : Response is not uniformly distributed in the 5 point scale

**Experimental Group A**

**Table 4.413 Chi Square Table for Exp Gp A for Statement 46 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	3	5.8
4	5	5.8
3	8	5.8
2	10	5.8
1	3	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 6.68966

degrees of freedom = 4

probability = 0.15323

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

**Experimental Group B**

**Table 4.414 Chi Square Table for Exp Gp B for Statement 46 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	5	6.6
4	11	6.6
3	2	6.6
2	12	6.6
1	3	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 12.9091

degrees of freedom = 4

probability = 0.01173

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement “Interaction with mathematics teacher is not possible while using this CAI (no face to face interaction)”.

**Statement 47:** To get the correct answer I had to go back to the slide/s many times for topic simple interest.

**Polarity:** Negative

**Experimental Group A : Responses of the students in percentage**

**Table 4.415 Responses of Exp Gp A students in percentage for statement 47 for Final Try-out**

Points	Exp Gp A
5	6.45
4	35.48
3	12.90
2	16.13
1	22.58

6.45% of the students strongly disagree with the statement “To get the correct answer I had to go back to the slide/s many times for topic simple interest.”

35.48% of the students disagree with the statement “To get the correct answer I had to go back to the slide/s many times for topic simple interest.”

12.90% of the students not decided with the statement “To get the correct answer I had to go back to the slide/s many times for topic simple interest.”

16.13% of the students agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic simple interest.”

22.58% of the students strongly agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic simple interest.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.416 Responses of Exp Gp B students in percentage for statement 47 for Final Try-out**

Points	Exp Gp B
5	18.75
4	46.88
3	9.38
2	21.88
1	6.25

18.75% of the students strongly disagree with the statement “To get the correct answer I had to go back to the slide/s many times for topic simple interest.”

46.88% of the students disagree with the statement “To get the correct answer I had to go back to the slide/s many times for topic simple interest.”

9.38% of the students not decided with the statement “To get the correct answer I had to go back to the slide/s many times for topic simple interest.”

21.88% of the students agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic simple interest.”

6.25 % of the students strongly agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic simple interest.”

**Graphical Representation of analysis of statement 47 in Percentage**

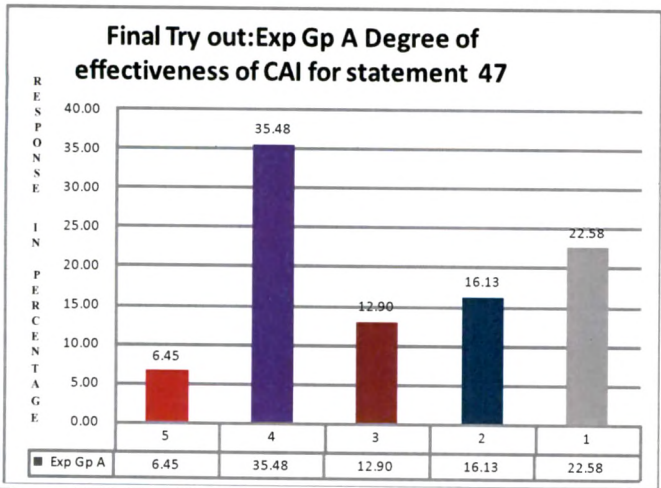


Figure 4.203 Graphical Representation of analysis of statement 47 in Percentage for Exp Gp A for Final Try-out

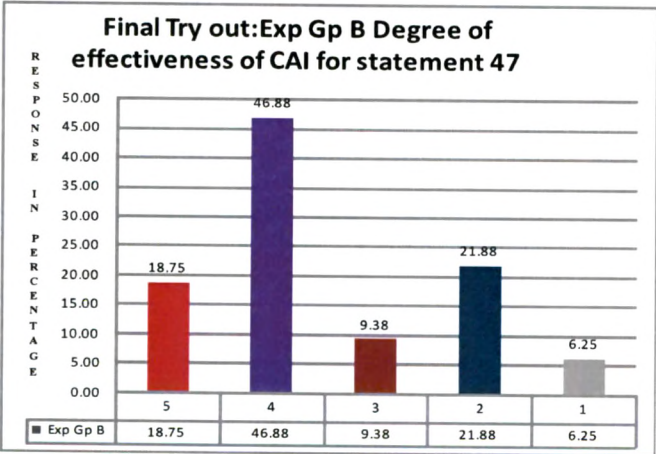


Figure 4.204 Graphical Representation of analysis of statement 47 in Percentage for Exp Gp B for Final Try-out

**Data Analysis using Chi Square**

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.417** Chi Square Table for Exp Gp A for Statement 47 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	2	5.8
4	11	5.8
3	4	5.8
2	5	5.8
1	7	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 8.06897

degrees of freedom = 4

probability = 0.08908

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

**Table 4.418** Chi Square Table for Exp Gp B for Statement 47 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	6	6.6
4	15	6.6
3	3	6.6
2	7	6.6
1	2	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 15.9394

degrees of freedom = 4

probability = 0.0031

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on disagree therefore most of the students disagree with the statement "To get the correct answer I had to go back to the slide/s many times for topic simple interest."

**Statement 48:** To get the correct answer I had to go back to the slide/s many times for topic Compound interest.

**Polarity: Negative**

**Experimental Group A : Responses of the students in percentage**

**Table 4.419 Responses of Exp Gp A students in percentage for statement 48 for Final Try-out**

Points	Exp Gp A
5	6.45
4	29.03
3	22.58
2	16.13
1	19.35

22.58% of the students strongly disagree with the statement “To get the correct answer I had to go back to the slide/s many times for topic Compound interest.”

35.48% of the students disagree with the statement “To get the correct answer I had to go back to the slide/s many times for topic Compound interest.”

29.03% of the students not decided with the statement “To get the correct answer I had to go back to the slide/s many times for topic Compound interest.”

3.23% of the students agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic Compound interest.”

3.23% of the students strongly agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic Compound interest.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.420 Responses of Exp Gp B students in percentage for statement 48 for Final Try-out**

Points	Exp Gp B
5	21.88
4	37.50
3	3.13
2	21.88
1	21.88

21.88% of the students strongly disagree with the statement “To get the correct answer I had to go back to the slide/s many times for topic Compound interest.”

37.50% of the students disagree with the statement “To get the correct answer I had to go back to the slide/s many times for topic Compound interest.”

3.13% of the students not decided with the statement “To get the correct answer I had to go back to the slide/s many times for topic Compound interest.”

21.88% of the students agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic Compound interest.”

21.88% of the students strongly agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic Compound interest.”

### Graphical Representation of analysis of statement 48 in Percentage

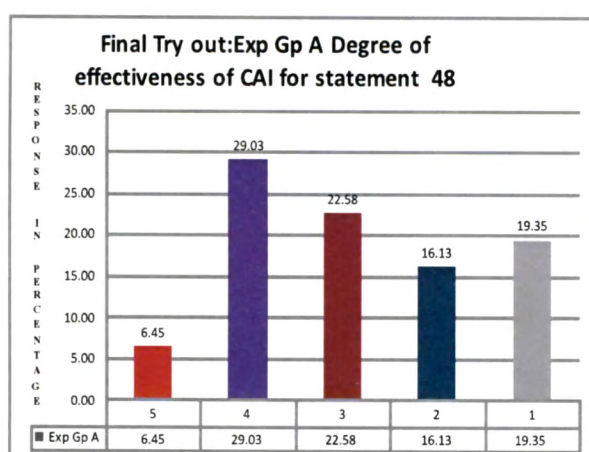


Figure 4.205 Graphical Representation of analysis of statement 48 in Percentage for Exp Gp A for Final Try-out

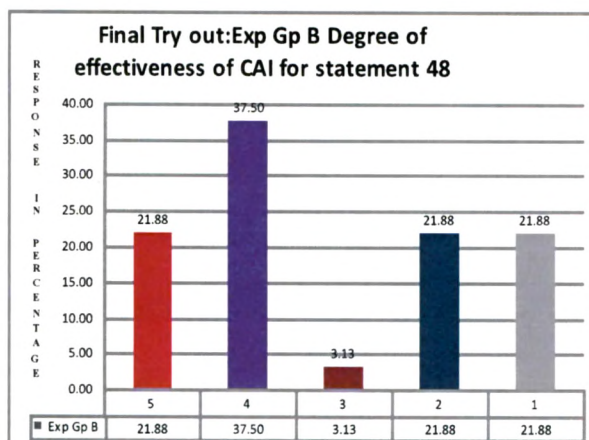


Figure 4.206 Graphical Representation of analysis of statement 48 in Percentage for Exp Gp B for Final Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale



### Experimental Group A

**Table 4.421 Chi Square Table for Exp Gp A for Statement 48 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	2	5.8
4	9	5.8
3	7	5.8
2	5	5.8
1	6	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 4.62069

degrees of freedom = 4

probability = 0.32848

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

### Experimental Group B

**Table 4.422 Chi Square Table for Exp Gp B for Statement 48 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	7	6.8
4	12	6.8
3	1	6.8
2	7	6.8
1	7	6.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 8.94118

degrees of freedom = 4

probability = 0.06259

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that response is uniformly distributed in the 5-point scale.

**Statement 49:** To get the correct answer I had to go back to the slide/s many times for topic profit and loss.

**Polarity: Negative**

**Experimental Group A : Responses of the students in percentage**

**Table 4.423 Responses of Exp Gp A students in percentage for statement 49 for Final Try-out**

Points	Exp Gp A
5	6.45
4	38.71
3	16.13
2	9.68
1	22.58

6.45% of the students strongly disagree with the statement “To get the correct answer I had to go back to the slide/s many times for topic profit and loss.”

38.71% of the students disagree with the statement “To get the correct answer I had to go back to the slide/s many times for topic profit and loss.”

16.13% of the students not decided with the statement “To get the correct answer I had to go back to the slide/s many times for topic profit and loss.”

9.68% of the students agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic profit and loss.”

22.58% of the students strongly agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic profit and loss.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.424 Responses of Exp Gp B students in percentage for statement 49 for Final Try-out**

Points	Exp Gp B
5	25.00
4	43.75
3	9.38
2	15.63
1	12.50

25.00% of the students strongly disagree with the statement “To get the correct answer I had to go back to the slide/s many times for topic profit and loss.”

43.75% of the students disagree with the statement “To get the correct answer I had to go back to the slide/s many times for topic profit and loss.”

9.38% of the students not decided with the statement “To get the correct answer I had to go back to the slide/s many times for topic profit and loss.”

15.63% of the students agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic profit and loss.”

12.50% of the students strongly agree with the statement “To get the correct answer I had to go back to the slide/s many times for topic profit and loss.”

### Graphical Representation of analysis of statement 49 in Percentage

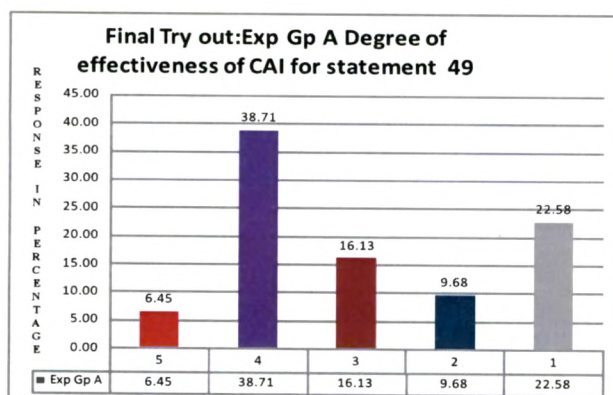


Figure 4.207 Graphical Representation of analysis of statement 49 in Percentage for Exp Gp A for Final Try-out

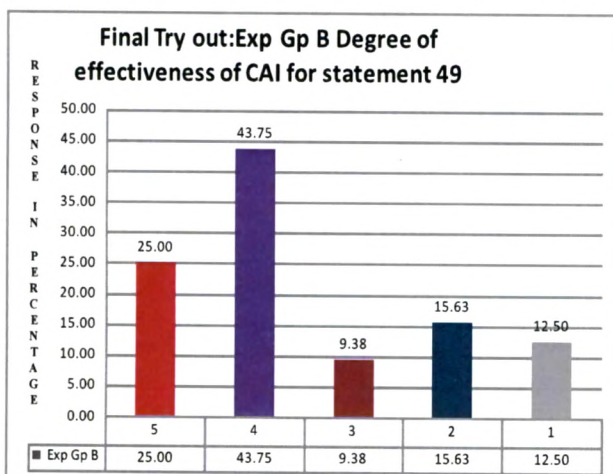


Figure 4.208 Graphical Representation of analysis of statement 49 in Percentage for Exp Gp B for Final Try-out

### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.425 Chi Square Table for Exp Gp A for Statement 49 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	2	5.8
4	12	5.8
3	5	5.8
2	3	5.8
1	7	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 10.8276

degrees of freedom = 4

probability = 0.02857

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on disagree therefore most of the students disagree with the statement "To get the correct answer I had to go back to the slide/s many times for topic profit and loss."

### Experimental Group B

Table 4.426 Chi Square Table for Exp Gp B for Statement 49 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	8	6.8
4	14	6.8
3	3	6.8
2	5	6.8
1	4	6.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 11.5882

degrees of freedom = 4

probability = 0.02069

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on disagree therefore most of the students disagree with the statement "To get the correct answer I had to go back to the slide/s many times for

topic profit and loss.”

**Statement 50** Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.

**Polarity: Positive**

**Experimental Group A : Responses of the students in percentage**

**Table 4.427 Responses of Exp Gp A students in percentage for statement 50 for Final Try-out**

Points	Exp Gp A
5	35.48
4	29.03
3	12.90
2	12.90
1	6.45

35.48% of the students strongly agree with the statement “Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.”

29.03% of the students agree with the statement “Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.”

12.90% of the students not decided with the statement “Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.”

12.90% of the students disagree with the statement “Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.”

6.45% of the students strongly disagree with the statement “Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.428 Responses of Exp Gp B students in percentage for statement 50 for Final Try-out**

Points	Exp Gp B
5	31.25
4	53.13
3	9.38
2	6.25
1	6.25

31.25% of the students strongly agree with the statement “Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.”

53.13% of the students agree with the statement “Scores obtained by me at the end of each exercise

gives me feedback about my learning in each topic through CAI.”

9.38% of the students not decided with the statement“Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.”

6.25% of the students disagree with the statement “Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.”

6.25% of the students strongly disagree with the statement “Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.”

Graphical Representation of analysis of statement 50 in Percentage

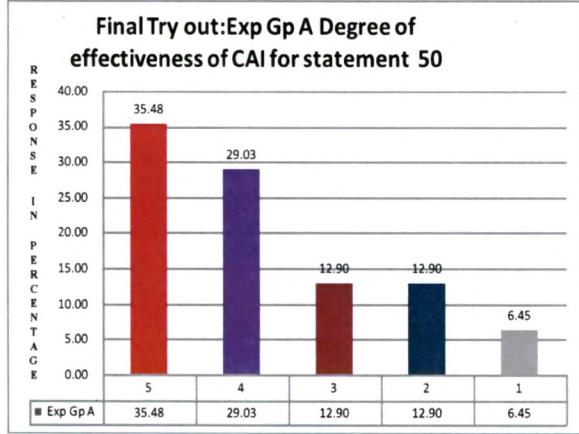


Figure 4.209 Graphical Representation of analysis of statement 50 in Percentage for Exp Gp A for Final Try-out

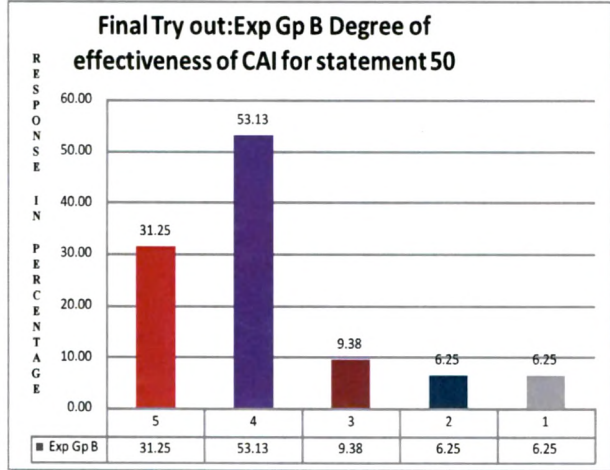


Figure 4.210 Graphical Representation of analysis of statement 50 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

- H<sub>0</sub>: Response is uniformly distributed in the 5 point scale
- H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

### Experimental Group A

Table 4.429 Chi Square Table for Exp Gp A for Statement 50 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	11	6
4	9	6
3	4	6
2	4	6
1	2	6

Expected Frequency = Sum of observed frequencies/5

chi-square = 9.66667

degrees of freedom = 4

probability = 0.04643

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement "Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI."

### Experimental Group B

Table 4.430 Chi Square Table for Exp Gp B for Statement 50 for Final Try-out

Points	Observed Frequency	Expected Frequency
5	10	6.8
4	17	6.8
3	3	6.8
2	2	6.8
1	2	6.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 25.7059

degrees of freedom = 4

probability = 0.00

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Scores obtained by me at the end of each exercise gives me feedback about my



learning in each topic through CAI.”

**Statement 51:** Discussion with mathematics teacher is needed along with CAI.”

**Polarity:** Negative

**Experimental Group A : Responses of the students in percentage**

**Table 4.431 Responses of Exp Gp A students in percentage for statement 51 for Final Try-out**

Points	Exp Gp A
5	3.23
4	12.90
3	19.35
2	22.58
1	35.48

3.23% of the students strongly disagree with the statement “Discussion with mathematics teacher is needed along with CAI.”

12.90% of the students disagree with the statement “Discussion with mathematics teacher is needed along with CAI.”

19.35% of the students not decided with the statement “Discussion with mathematics teacher is needed along with CAI.”

22.58% of the students agree with the statement “Discussion with mathematics teacher is needed along with CAI.”

35.48% of the students strongly agree with the statement “Discussion with mathematics teacher is needed along with CAI.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.432 Responses of Exp Gp B students in percentage for statement 51 for Final Try-out**

Points	Exp Gp B
5	3.13
4	15.63
3	6.25
2	21.88
1	53.13

3.13% of the students strongly disagree with the statement “Discussion with mathematics teacher is needed along with CAI.”

15.63% of the students disagree with the statement “Discussion with mathematics teacher is needed along with CAI.”

6.25% of the students not decided with the statement “Discussion with mathematics teacher is needed along with CAI.”

21.88% of the students agree with the statement “Discussion with mathematics teacher is needed along with CAI.”

53.13% of the students strongly agree with the statement “Discussion with mathematics teacher is needed along with CAI.”

Graphical Representation of analysis of statement 51 in Percentage

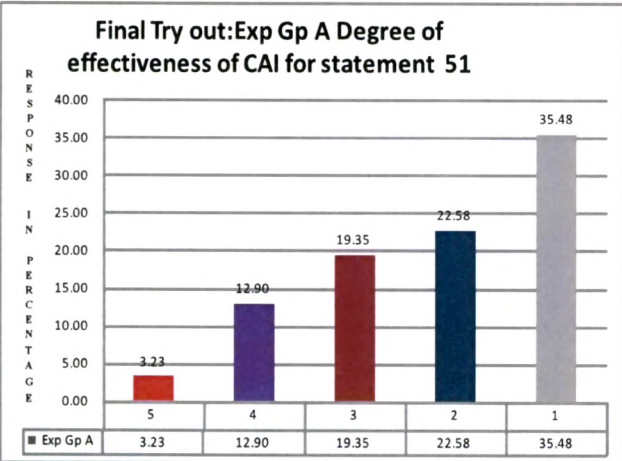


Figure 4.211 Graphical Representation of analysis of statement 51 in Percentage for Exp Gp A for Final Try-out

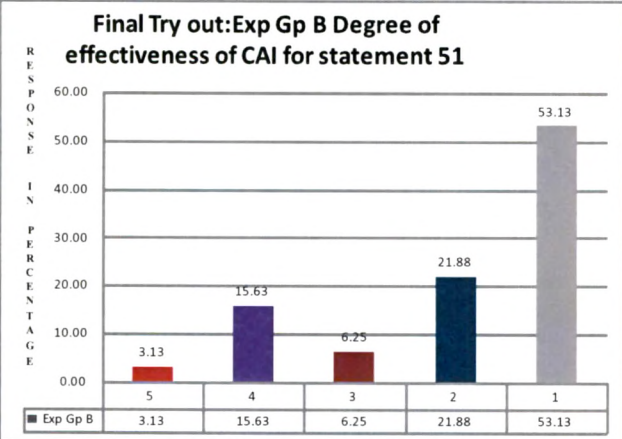


Figure 4.212 Graphical Representation of analysis of statement 51 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

**Experimental Group A**

**Table 4.433 Chi Square Table for Exp Gp A for Statement 51 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	1	5.8
4	4	5.8
3	6	5.8
2	7	5.8
1	11	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 9.44828

degrees of freedom = 4

probability = 0.05082

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is less than the table value therefore, Null hypothesis is not rejected. This revealed that reaction is uniformly distributed in the 5-point scale.

**Experimental Group B**

**Table 4.434 Chi Square Table for Exp Gp B for Statement 51 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	1	6.4
4	5	6.4
3	2	6.4
2	7	6.4
1	17	6.4

Expected Frequency = Sum of observed frequencies/5

chi-square = 25.5

degrees of freedom = 4

probability = 0.00

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on strongly agree therefore most of the students strongly agree with the statement “Discussion with mathematics teacher is needed along with CAI.”

**Statement 52:** Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.

**Polarity: Positive**

**Experimental Group A : Responses of the students in percentage**

**Table 4.435 Responses of Exp Gp A students in percentage for statement 52 for Final Try-out**

Points	Exp Gp A
5	29.03
4	38.71
3	22.58
2	3.23
1	6.45

29.03% of the students strongly agree with the statement “Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.”

38.71% of the students agree with the statement “Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.”

22.58% of the students not decided with the statement “Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.”

3.23% of the students disagree with the statement “Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.”

6.45% of the students strongly disagree with the statement “Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.436 Responses of Exp Gp B students in percentage for statement 52 for Final Try-out**

Points	Exp Gp B
5	28.13
4	46.88
3	12.50
2	3.13
1	15.63

28.13% of the students strongly agree with the statement “Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.”

46.88% of the students agree with the statement “Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.”

12.50% of the students not decided with the statement “Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.”

3.13% of the students disagree with the statement “Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.”

15.63% of the students strongly disagree with the statement “Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.”

Graphical Representation of analysis of statement 52 in Percentage

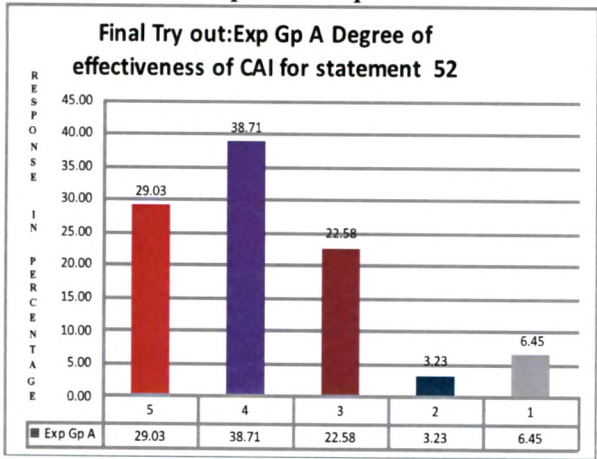


Figure 4.213 Graphical Representation of analysis of statement 52 in Percentage for Exp Gp A for Final Try-out

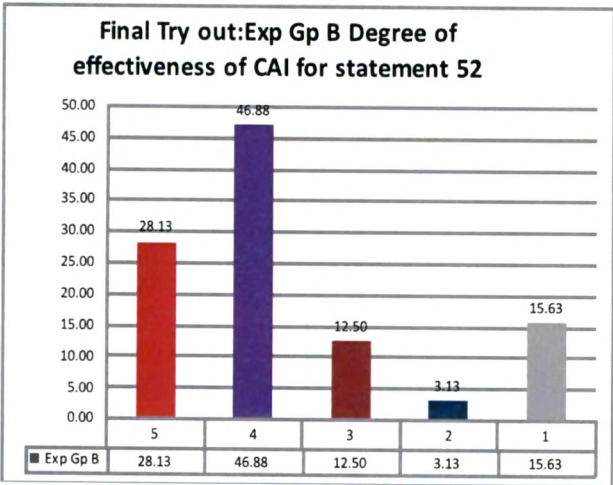


Figure 4.214 Graphical Representation of analysis of statement 52 in Percentage for Exp Gp B for Final Try-out

Data Analysis using Chi Square

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.437 Chi Square Table for Exp Gp A for Statement 52 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	9	6.2
4	12	6.2
3	7	6.2
2	1	6.2
1	2	6.2

Expected Frequency = Sum of observed frequencies/5

chi-square = 14

degrees of freedom = 4

probability = 0.0073

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic."

### Experimental Group B

**Table 4.438 Chi Square Table for Exp Gp B for Statement 52 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	9	6.8
4	15	6.8
3	4	6.8
2	1	6.8
1	5	6.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 17.1765

degrees of freedom = 4

probability = 0.00179

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the most of the students agree with the statement "Evaluation done at the end of the topic profit and loss is suitable

measure to know my understanding about that topic.”

**Statement 53:** Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.

**Polarity: Positive**

**Experimental Group A : Responses of the students in percentage**

**Table 4.439 Responses of Exp Gp A students in percentage for statement 53 for Final Try-out**

Points	Exp Gp A
5	22.58
4	38.71
3	25.81
2	3.23
1	3.23

22.58% of the students strongly agree with the statement “Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.”

38.71% of the students agree with the statement “Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.”

25.81% of the students not decided with the statement “Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.”

3.23% of the students disagree with the statement “Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.”

3.23% of the students strongly disagree with the statement “Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.440 Responses of Exp Gp B students in percentage for statement 53 for Final Try-out**

Points	Exp Gp B
5	18.75
4	50.00
3	12.50
2	3.13
1	18.75

18.75% of the students strongly agree with the statement “Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.”



50.00% of the students agree with the statement “Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.”

12.50% of the students not decided with the statement “Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.”

3.13% of the students disagree with the statement “Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.”

18.75% of the students strongly disagree with the statement “Evaluation done at the end of the topic “simple interest” is suitable measure to know my understanding about that topic.”

**Graphical Representation of analysis of statement 53 in Percentage**

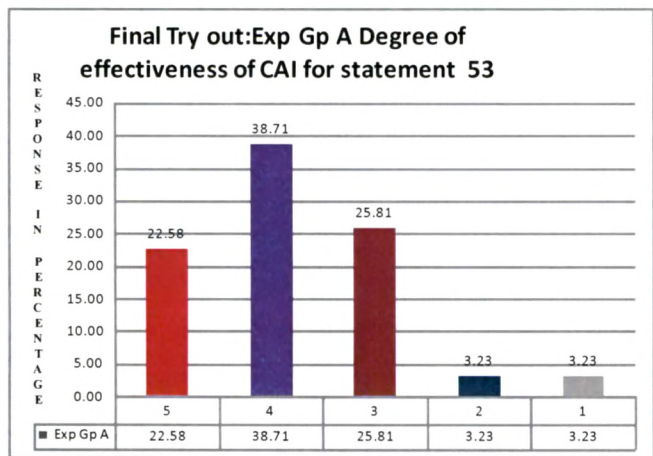


Figure 4.215 Graphical Representation of analysis of statement 53 in Percentage for Exp Gp A for Final Try-out

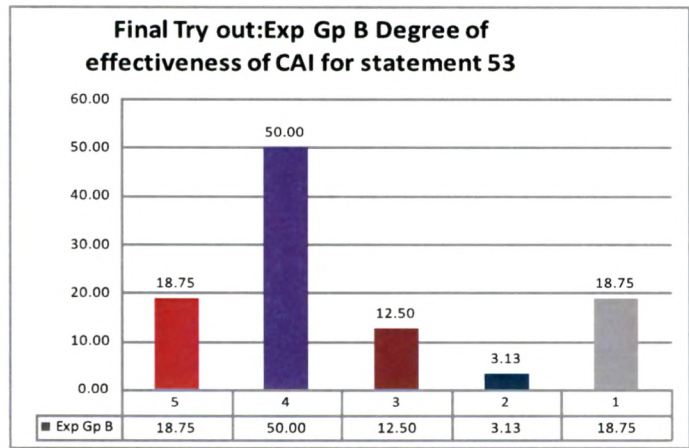


Figure 4.216 Graphical Representation of analysis of statement 53 in Percentage for Exp Gp B for Final Try-out

**Data Analysis using Chi Square**

H<sub>0</sub>: Response is uniformly distributed in the 5 point scale

H<sub>1</sub>: Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.441 Chi Square Table for Exp Gp A for Statement 53 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	7	5.8
4	12	5.8
3	8	5.8
2	1	5.8
1	1	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 15.6552

degrees of freedom = 4

probability = 0.00352

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Evaluation done at the end of the topic "simple interest" is suitable measure to know my understanding about that topic."

### Experimental Group B

**Table 4.442 Chi Square Table for Exp Gp B for Statement 53 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	6	6.6
4	16	6.6
3	4	6.6
2	1	6.6
1	6	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 19.2727

degrees of freedom = 4

probability = 0.00069

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Evaluation done at the end of the topic "simple interest" is suitable measure to

know my understanding about that topic.”

**Statement 54:** Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.

**Polarity: Positive**

**Experimental Group A : Responses of the students in percentage**

**Table 4.443 Responses of Exp Gp A students in percentage for statement 54 for Final Try-out**

Points	Exp Gp A
5	22.58
4	45.16
3	16.13
2	3.23
1	6.45

22.58% of the students strongly agree with the statement “Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.”

45.16% of the students agree with the statement “Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.”

16.13% of the students not decided with the statement “Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.”

3.23% of the students disagree with the statement “Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.”

6.45% of the students strongly disagree with the statement “Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.”

**Experimental Group B : Responses of the students in percentage**

**Table 4.444 Responses of Exp Gp B students in percentage for statement 54 for Final Try-out**

Points	Exp Gp B
5	15.63
4	37.50
3	15.63
2	3.13
1	31.25

15.63% of the students strongly agree with the statement “Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.”

37.50% of the students agree with the statement “Evaluation done at the end of the topic compound

interest is suitable measure to know my understanding about that topic.”

15.63% of the students not decided with the statement “Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.”

3.13% of the students disagree with the statement “Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.”

31.25% of the students strongly disagree with the statement “Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.”

#### Graphical Representation of analysis of statement 54 in Percentage

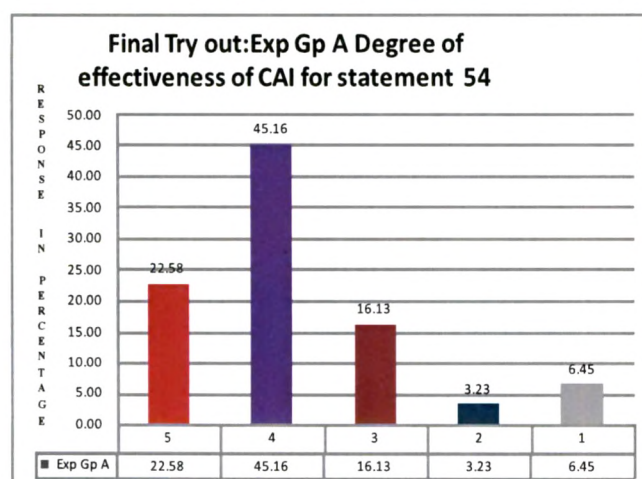


Figure 4.217 Graphical Representation of analysis of statement 54 in Percentage for Exp Gp A for Final Try-out

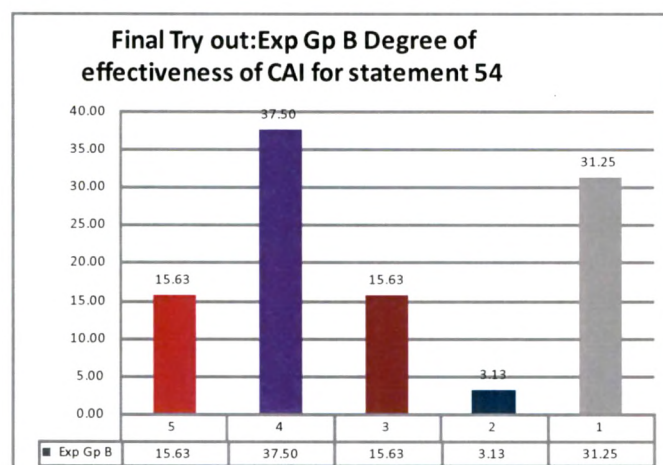


Figure 4.218 Graphical Representation of analysis of statement 54 in Percentage for Exp Gp B for Final Try-out

#### Data Analysis using Chi Square

$H_0$ : Response is uniformly distributed in the 5 point scale

$H_1$ : Response is not uniformly distributed in the 5 point scale

### Experimental Group A

**Table 4.445 Chi Square Table for Exp Gp A for Statement 54 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	7	5.8
4	14	5.8
3	5	5.8
2	1	5.8
1	2	5.8

Expected Frequency = Sum of observed frequencies/5

chi-square = 18.4138

degrees of freedom = 4

probability = 0.00102

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that reaction is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic."

### Experimental Group B

**Table 4.446 Chi Square Table for Exp Gp B for Statement 54 for Final Try-out**

Points	Observed Frequency	Expected Frequency
5	5	6.6
4	12	6.6
3	5	6.6
2	1	6.6
1	10	6.6

Expected Frequency = Sum of observed frequencies/5

chi-square = 11.697

degrees of freedom = 4

probability = 0.01975

Table value of Chi Square at 4df at .05 significance level is 9.49. Calculated value of Chi Square is more than the table value therefore, Null hypothesis is rejected. This revealed that response is not uniformly distributed in the 5-point scale. More load is on agree therefore most of the students agree with the statement "Evaluation done at the end of the topic compound interest is suitable measure to

know my understanding about that topic.”

#### 4.12 Comprehensive Analysis of Reaction Scale for Final Try-out

Data analysis of responses of Group A is presented through table 4.447 while that of Group B is presented through table 4.448.

Tabulated Value of  $\chi^2$  at 4 df at .05 level is 9.49.

**Table 4.447 Analysis of responses on Reaction Scale given by the Experimental Group A for Final Try-out**

S.No	Statement	Calculated Value of $\chi^2$ at 4 df .05 level	Significant Difference	Maximum Load
1	I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.	14.62	Yes	Positive Side
2	I like illustrations given in the slides, which actually made me learn the lesson.	51.52	Yes	Positive Side
3	Illustrations didn't help me to relate what we learned in mathematics to real life situation.	8.07	No	-
4	CAI is effective way of presentation because there is little stress in learning situation.	13.93	Yes	Neutral
5	I can learn with my own speed.	22.33	Yes	Positive
6	I can immediately test myself because there is lot of practice exercise.	23.24	Yes	Positive
7	This method is having more freedom to learn.	21.67	Yes	Positive
8	CAI didn't focus on more freedom situation.	5.31	No	
9	Learning mathematics is fun in this CAI method.	21.86	Yes	Positive
10	This method is not good in learning mathematics because my doubts are not cleared.	3.67	No	
11	In CAI I can teach myself (self-study) without the help of others.	5.31	No	
12	Matter presented in CAI is not very clear.	11.33	Yes	Positive
13	CAI is easy to understand.	14.62	Yes	Positive
14	Animations are distracting in understanding the concept.	5.92	No	

S.No	Statement	Calculated Value of $\chi^2$ at 4 df .05 level	Significant Difference	Maximum Load
15	CAI took more time to understand the concept than usual classroom teaching.	7.33	No	
16	Illustrations given in CAI are enough to understand the concept clearly.	10.67	Yes	Positive
17	Matter presented in CAI was logically arranged.	21	Yes	Positive
18	Learning through CAI was waste of time.	19.00	Yes	Positive
19	Illustrations given in CAI are related to day today life experiences.	24.00	Yes	Positive
20	Classroom teaching is more enjoyable.	17.00	Yes	Negative
21	The language used in CAI is easy and simple to understand.	19.79	Yes	Positive
22	The exercises given in each chapter is adequate.	20.19	Yes	Positive
23	CAI takes care of previous knowledge in the subject.	12.33	Yes	Positive
24	The solution to the problem is not easy to understand.	3.03	No	
25	The exercises helped in understanding the chapter in depth.	14.00	Yes	Positive
26	Solutions didn't help me whenever I was not able to solve the problem.	8.76	No	
27	Break given in CAI helped me to refresh my mind.	6.34	No	
28	I am feeling tired while going through the slide.	1.17	No	
29	Animation shown in CAI is appropriate to help me in understanding the concept.	14.62	Yes	Positive
30	Topic is not introduced properly.	14.97	Yes	Positive
31	CAI does not take care of previous knowledge (percentage) needed to understand the present concept.	10.83	Yes	Positive
32	Enough revision is not done in CAI after the topic simple interest.	10.81	Yes	Positive
33	Enough revision is not done in CAI after the topic compound interest.	5.33	No	
34	Enough revision is not done in CAI after the topic profit and loss.	6.67	No	
35	Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.	3.93	No	



S.No	Statement	Calculated Value of $\chi^2$ at 4 df .05 level	Significant Difference	Maximum Load
36	I have to read the slide many times to understand what is being said as there was no clarity.	2.89	No	
37	Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.	6.00	No	
38	Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.	11.00	Yes	Positive
39	Number of questions at the end of the slides for the topic compound interest is adequate for providing practice.	13.94	Yes	Equal P+ Equal N
40	CAI is not enough in understanding the concept very clearly.	9.00	No	
41	Independent learning is not possible through CAI.	5.31	No	
42	Evaluation is done objectively (objective questions) so no partiality is involved in scoring.	7.38	No	
43	Evaluation done at the end of the topic "simple interest" is not suitable measure to know my understanding about that topic.	9.80	Yes	Neutral
44	Instruction given in each slide of CAI is easy and clear to follow.	19.10	Yes	Positive
45	Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.	7.72	No	
46	Interaction with mathematics teacher is not possible while using this CAI (no face to face interaction).	6.69	No	
47	To get the correct answer I had to go back to the slide/s many times for topic simple interest.	8.07	No	
48	To get the correct answer I had to go back to the slide/s many times for topic Compound interest.	4.62	No	
49	To get the correct answer I had to go back to the slide/s many times for topic profit and loss.	10.83	Yes	Positive
50	Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.	9.67	Yes	Positive
51	Discussion with mathematics teacher is needed along with CAI.	9.45	No	
52	Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.	14.00	Yes	Positive
53	Evaluation done at the end of the topic "simple interest" is suitable measure to know my understanding about that topic.	15.6	Yes	Positive

S.No	Statement	Calculated Value of $\chi^2$ at 4 df .05 level	Significant Difference	Maximum Load
54	Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.	18.41	Yes	Positive

**Experimental Group B:** Data were analysed through the statistical technique  $\chi^2$ . Tabulated Value of  $\chi^2$  at 4 df at .05 level is 9.49.

**Table 4.448 Analysis of responses on Reaction Scale given by the Experimental Group B for Final Try-out**

S.No	Statement	Calculated Value of $\chi^2$ at 4 df .05 level	Significant Difference	Maximum Load
1	I enjoyed this class compared to normal classroom teaching because this method is more interesting to understand than lectures.	16.29	Yes	Positive Side
2	I like illustrations given in the slides, which actually made me learn the lesson.	6.6	No	
3	Illustrations didn't help me to relate what we learned in mathematics to real life situation.	6.85	No	
4	CAI is effective way of presentation because there is little stress in learning situation.	7.45	No	
5	I can learn with my own speed.	11.39	Yes	Positive
6	I can immediately test myself because there is lot of practice exercise.	16.54	Yes	Positive
7	This method is having more freedom to learn.	8.65		
8	CAI didn't focus on more freedom situation.	15.33	Yes	Positive
9	Learning mathematics is fun in this CAI method.	11.69	Yes	Positive
10	This method is not good in learning mathematics because my doubts are not cleared.	8.06	No	
11	In CAI I can teach myself (self-study) without the help of others.	14.72	Yes	Positive
12	Matter presented in CAI is not very clear.	6.24	No	
13	CAI is easy to understand.	13.82	Yes	Positive
14	Animations are distracting in understanding the concept.	26	Yes	Positive
15	CAI took more time to understand the concept than usual classroom teaching.	11.39	Yes	Negative
16	Illustrations given in CAI are enough to understand the concept clearly.	8.06	No	
17	Matter presented in CAI was logically arranged.	15.63	Yes	Positive
18	Learning through CAI was waste of time.	15.64	Yes	Positive
19	Illustrations given in CAI are related to day today life experiences.	16.44	Yes	Positive
20	Classroom teaching is more enjoyable.	3.52	No	
21	The language used in CAI is easy and simple to understand.	17.15	Yes	Positive
22	The exercises given in each chapter is adequate.	10.18	Yes	Positive
23	CAI takes care of previous knowledge in the subject.	17.15	Yes	Positive
24	The solution to the problem is not easy to understand.	17.43	Yes	Positive
25	The exercises helped in understanding the chapter in depth.	8.17	No	
26	Solutions didn't help me whenever I was not able to solve the problem.	11.43	Yes	Positive
27	Break given in CAI helped me to refresh my mind.	5.94	No	

S.No	Statement	Calculated Value of $\chi^2$ at 4 df .05 level	Significant Difference	Maximum Load
28	I am feeling tired while going through the slide.	14.12	Yes	Positive
29	Animation shown in CAI is appropriate to help me in understanding the concept.	2.60	No	
30	Topic is not introduced properly.	11.09	Yes	Positive
31	CAI does not take care of previous knowledge (percentage) needed to understand the present concept.	9.27	No	
32	Enough revision is not done in CAI after the topic simple interest.	11.59	Yes	Positive
33	Enough revision is not done in CAI after the topic compound interest.	5.31	No	
34	Enough revision is not done in CAI after the topic profit and loss.	5.94	No	
35	Remedial (re teaching the difficult concept which is not understood by you) teaching is not done.	16.44	Yes	Negative
36	I have to read the slide many times to understand what is being said as there was no clarity.	13.65	Yes	Positive
37	Number of questions at the end of the slides for the topic profit and loss is adequate for providing practice.	15.50	Yes	Positive
38	Number of questions at the end of the slides for the topic simple interest is adequate for providing practice.	13.52	Yes	Positive
39	Number of questions at the end of the slides for the topic compound interest is adequate for providing practice.	5.33	No	
40	CAI is not enough in understanding the concept very clearly.	3.82	No	
41	Independent learning is not possible through CAI.	28.97	Yes	Positive
42	Evaluation is done objectively (objective questions) so no partiality is involved in scoring.	14.73	Yes	Positive
43	Evaluation done at the end of the topic "simple interest" is not suitable measure to know my understanding about that topic.	6.85	No	
44	Instruction given in each slide of CAI is easy and clear to follow.	12.60	Yes	Positive
45	Evaluation done at the end of the topic profit and loss is not suitable measure to know my Understanding about that topic.	3.21	No	
46	Interaction with mathematics teacher is not possible while using this CAI (no face to face interaction).	12.91	Yes	Negative
47	To get the correct answer I had to go back to the slide/s many times for topic simple interest.	15.94	Yes	Positive
48	To get the correct answer I had to go back to the slide/s many times for topic Compound interest.	8.94	No	
49	To get the correct answer I had to go back to the slide/s many times for topic profit and loss.	11.59	Yes	Positive
50	Scores obtained by me at the end of each exercise gives me feedback about my learning in each topic through CAI.	25.71	Yes	Positive
51	Discussion with mathematics teacher is needed along with CAI.	25.5	Yes	Negative
52	Evaluation done at the end of the topic profit and loss is suitable measure to know my understanding about that topic.	17.18	Yes	Positive
53	Evaluation done at the end of the topic "simple interest" is suitable measure to know my understanding about that topic.	19.27	Yes	Positive
54	Evaluation done at the end of the topic compound interest is suitable measure to know my understanding about that topic.	11.69	Yes	Positive

#### **4.13 Findings from the Analysis of Reaction Scale for Final Try-out Experimental Group A**

Out of total *fifty four* statements bearing positive as well as negative nature, the computed chi-square values of *twenty seven* statements were found to have statistically significant higher values than the chi-square table values 9.49 at 4 degrees of freedom and at .05 level of significance which shows that there was significant difference between the observed and expected frequencies and the students were found to have positive reaction and favorable attitude towards the statements carrying such higher values.

The computed chi-square values in *twenty four* statements were not found to be significant at 4 degrees of freedom and at .05 level of significance which shows that there was no significant difference between the observed frequency and expected frequency therefore null hypothesis is not rejected. This reveals that reaction is uniformly distributed in the 5-point scale.

The computed chi-square values of remaining *two* statements were found to have statistically significant higher values than the chi-square table values 9.49 at 4 degrees of freedom and at .05 level of significance which shows that there was significant difference between the observed and expected frequencies and the students were found to have neutral attitude towards the statements carrying such higher values.

The computed chi-square values of *one* statement was found to have statistically significant higher values than the chi-square table values 9.49 at 4 degrees of freedom and at .05 level of significance which shows that there was significant difference between the observed and expected frequencies and equal number of students were found to have positive reaction as well as equal number of negative reaction towards the statement.

#### **Experimental Group B**

Out of total *fifty four* statements bearing positive as well as negative nature, the computed chi-square values of *thirty one* statements were found to have statistically significant higher values than the chi-square table values 9.49 at 4 degrees of freedom and at .05 level of significance which shows that there was significant difference between the observed and expected frequencies and the students were found to have positive reaction and favorable attitude towards the statements carrying such higher values.

The computed chi-square values in *nineteen* statements were not found to be significant at 4 degrees of freedom and at .05 level of significance which shows that there was no significant difference between the observed frequency and expected frequency therefore null hypothesis is not rejected. This reveals that reaction is uniformly distributed in the 5-point scale.

The computed chi-square values of remaining *four* statements were found to have statistically significant higher values than the chi-square table values 9.49 at 4 degrees of freedom and at .05 level of significance which shows that there was significant difference between the observed and expected frequencies and the students were found to have negative attitude towards the statements carrying such higher values.

#### **4.14 Interpretation of Results**

##### **4.14.1 Interpretation of ANOVA Result for Initial Try-out**

It was found that there was no significant difference between the mean achievement score of Experimental Group A (only CAI) and the Control Group (Conventional Method) therefore the hypothesis “There will be no significant difference in the achievement scores of group C students and group A students” is not rejected. We can conclude that students learnt equally well in conventional method and only CAI, CAI is as effective as conventional method. We can also safely say that CAI can be used as a substitution for conventional learning wherever and whenever necessary.

The findings “there was significant difference between the mean achievement score of Experimental Group B (CAI with simultaneous discussion) and the Control Group (Conventional Method)” suggest that the hypothesis “there will be no significant difference in the achievement scores of group C students and group B students” is rejected. Also mean achievement score of students in Experimental Group B (CAI with simultaneous discussion) is found more than the mean achievement score of the Control Group (Conventional Method), therefore it implies that CAI with simultaneous discussion is more effective than the conventional method. Thus, it follows that CAI should be developed in the topics wherever students find it difficult to understand in the conventional classroom teaching and should be supported with discussion wherever and whenever necessary. CAI helps the students in in-depth understanding of the topics and enhances the learning. Thus it can be concluded that CAI along with simultaneous discussion is one of the effective tools in teaching and learning, makes learning interesting and with fewer burdens.

The findings “there was significant difference between the mean achievement score of Experimental Group A (only CAI) and the Experimental Group B (CAI with simultaneous discussion)” suggests that the hypothesis “there will be no significant difference in the achievement scores of group A students and group B students” is rejected. Therefore we can conclude that students need teacher’s help along with CAI for in-depth understanding of the topic through discussion whenever and wherever required by the students while they are using CAI.

#### **4.14.2 Interpretation of ANOVA Result for Final Try-out**

It was found that there was no significant difference between the mean achievement score of Experimental Group A (only CAI) and the Control Group (Conventional Method) therefore the hypothesis “There will be no significant difference in the achievement scores of group C students and group A students” is not rejected. We can conclude that students learnt equally well in conventional method and only CAI, CAI is as effective as conventional method. We can also safely say that CAI can be used as a substitution for conventional learning.

The findings “there was significant difference between the mean achievement score of Experimental Group B (CAI with simultaneous discussion) and the Control Group (Conventional Method)” suggest that the hypothesis “there will be no significant difference in the achievement scores of group C students and group B students” is rejected. Mean achievement score of students in Experimental Group B (CAI with simultaneous discussion) is more than the mean achievement score of the Control Group (Conventional Method), therefore CAI with simultaneous discussion is more effective than the conventional method. CAI should be developed in the topics wherever students find it difficult to understand in the usual conventional classroom teaching. CAI helps the students in in-depth understanding of the topics and enhances the learning. CAI is one of the effective tools in teaching and learning, makes learning interesting and with fewer burdens.

The findings there was no significant difference between the mean achievement score of Experimental Group A (only CAI) and the Experimental Group B (CAI with simultaneous discussion) suggests that the hypothesis “there will be no significant difference in the achievement scores of group A students and group B students” is not rejected. Learning through only CAI is as effective as the CAI with simultaneous discussion. Students of the final try-outs were quite smarter than the initial try-out students so the results were different for both the try-outs. Presence or absence of teacher along with learning through CAI depends upon the entry level of students.

#### **4.14.3 Interpretation of Result of Reaction Scale**

Findings from the analysis of reaction scale for initial try-out for experimental group A indicate that out of fifty four statements the computed chi-square values of twenty six statements were found to have statistically significant higher values than the tabulated value and the students were found to have positive reaction and favorable attitude towards the statements carrying such higher values. That is, for more than 50% of the statements they responded positively.

Findings from the analysis of reaction scale for initial try-out for experimental group B indicate that out of total fifty four statements the computed chi-square values of twenty five statements were found to have statistically significant higher values than the tabulated value and the students were found to have positive reaction and favorable attitude towards the statements carrying such higher values. That is, for exactly 50% of the statements they responded positively.

Findings from the analysis of reaction scale for final try-out for experimental group A indicate that out of fifty four statements the computed chi-square values of twenty seven statements were found to have statistically significant higher values than the tabulated value and the students were found to have positive reaction and favorable attitude towards the statements carrying such higher values. That is, for more than 50% of the statements they responded positively.

Findings from the analysis of reaction scale for final try-out for experimental group B indicate that out of fifty four statements the computed chi-square values of thirty one statements were found to have statistically significant higher values than the tabulated value and the students were found to have positive reaction and favorable attitude towards the statements carrying such higher values. That is, for more than 50% of the statements they responded positively.

From the above paragraphs we can conclude that students liked learning mathematics through CAI and investigator observed that the students liked the concept of CAI and enjoyed while learning. They also requested investigator to develop CAI in some of the topics of mathematics which they found difficult to learn. We can conclude that CAI is one of the effective method to learn mathematics.

#### **4.15 Discussion**

After analysing and interpreting the obtained data in both the initial and final try-out, the investigator found that there is a significant gain in terms of achievement of the students who learnt mathematics through CAI with simultaneous discussion. Responses in the reaction scale was positive, students liked both the modes of teaching that is only CAI and CAI with simultaneous



discussion. Majority of students enjoyed learning through CAI and even suggested to prepare CAI in other topics too. Students were actively involved in learning process. Contents were presented in variety of ways so they enjoyed learning. Visual images helped the students to understand content with ease. Variety of exercises helped students to be actively involved in the learning process. These facts are elaborated in the following paragraphs. The findings of the studies conducted in mathematics by the following researchers Singh, Ahluwalia, and Verma (1991), Rose Antony Stella, V. (1992), Singh (1992), Vansia (2011), Vaisopha (1999), Rosales (2005), Pilli (2008), Jackson and Dave (2011), Bayturan and Kesan (2012) also revealed that there was significant difference between the learning of mathematics through CAI and conventional teaching. Therefore we can conclude that CAI is one of the effective methods in learning mathematics. Thus CAI can be used along with the usual conventional class room teaching to make teaching very effective, interesting and develop a deeper understanding of the subject. CAI helps students to understand different concepts thoroughly. There is a need to develop CAI in different topics of mathematics for class VIII mathematics textbook and also for all levels of mathematics at primary school level. More researches should be conducted to know the effectiveness of CAI in different topics of mathematics and at different levels.

Students of schools selected for initial try-out and final try-out had many differences between them like entry level knowledge, level of understanding, facilities available in the school, nature of students, inclination towards mathematics, grasping power, attachment towards their teacher, boldness etc. Final try-out students had more positive orientation towards the above stated matter than initial try-out students.

The school selected for final try-out had good computer facility than initial try-out and if at all there was any problem it was taken care of immediately. The Principal of final try-out school asked several questions to the investigator like full programme schedule, content to be taught, every day programme, brief description about developed CAI, and result about initial try-out. She insisted that week end test should be taken for all the selected groups and result should be reported to the class teacher then and there. She also arranged a meeting with the supervisor, mathematics teachers and class teacher of the selected groups. Meetings were arranged every week end to discuss about the progress made by the students. Investigator activity and students activity was continuously monitored. School was well managed, organised and everything went on according to pre plan.

Planning, implementation and monitoring was done perfectly. This fact is reflected in students also who were found to be bright, intelligent, active, disciplined and well mannered.

Whereas in the initial try-out the scenario was very different in the sense that investigator was not asked several questions and full freedom was given to the investigator to conduct the experiment. Principal was open towards the new method and absolutely no monitoring was done throughout the experiment. Investigator arranged meeting with the class teacher, mathematics teacher and computer teacher about the time table, content to be taught, purpose of the programme, full programme schedule and about the material developed. Most of the students were naughty, had low level of understanding but were very active. Students discussed with the investigator freely and expressed their feelings without fear. They gave many suggestions to improve CAI and even suggested to include some plays in CAI. Students wrote some plays to include in CAI and they drew some cartoon for the play. Investigator was very much impressed by the gesture of students. Most of the students possessed creativity and expressed their feelings freely.

Investigator also observed that knowledge of the mathematics teacher and their dedication in teaching made lot of difference in students understanding level, love of subject and perception about classroom teaching. In initial try-out students enjoyed CAI and showed enthusiasm throughout the programme. Investigator made some changes in the CAI like inclusion of video, some corrections in the slide as suggested by the students of initial try-out. Because of this change made in CAI enthusiasm of students was sustained throughout the programme in final try-out.

One area of difficulty that the investigator faced was students started surfing other sites and playing games when unmonitored especially this behaviour was exhibited by initial try-out students. Investigator was vigilant throughout the programme. This behaviour can be easily controlled by inculcating self-discipline in students. CAI should not be used for all subjects simultaneously because sitting near the computer for long time is not good for the students and may result in stress to eyes.

In both the try-outs students learnt through the developed CAI only for thirty periods and only certain topics were covered so the result cannot be generalized for all the topics of mathematics at this level. In order to generalize the result, CAI should be developed in all the topics of class VIII mathematics and students should learn mathematics through CAI throughout the year.

#### **4.16 Conclusion**

Knowledge of mathematics plays an important role in student's preparation for all competitive exams and job prospects. The findings suggest that CAI motivates the students to learn mathematics, removes fear of mathematics and provides a clear presentation of the subject based on the needs of the students.

In both the tryouts it was found that CAI was as effective as conventional method therefore it can be concluded that CAI can be used as substitution for conventional method wherever and whenever necessary. In both the tryouts it was found that CAI with simultaneous discussion was effective than the conventional method therefore it can be concluded that CAI should be developed in mathematics at primary school level in the topics students find it difficult to learn in the classroom teaching and can be used along with the conventional method. In Initial Tryout CAI with simultaneous discussion was effective than the only CAI and in Final Tryout CAI with simultaneous discussion was as effective as only CAI. The students in the Final Tryout was intelligent and computer savvy than the Initial Tryouts therefore it can be concluded that the need for presence of teacher depends upon the entry level of students.

It can be concluded that CAI along with simultaneous discussion increases the achievement of the students; their understanding of the subject is also increased, and therefore will give good result. Thus CAI can be used along with the conventional classroom teaching to make teaching very effective, interesting and develop a deeper understanding of the subject. There is a need to develop CAI in mathematics for all topics at primary school level.

The overall reaction of the students towards the CAI was found positive. Majority of the students perceived that learning through CAI was quite interesting and motivated them to learn further. The fact that students can learn mathematics themselves without the help of others developed a sense of self-esteem and self-confidence amongst the learners.

#### **4.17 Implications for the Present Study**

Students use computers for many purpose especially playing games. This inclination of students towards computers can be used for constructive purpose. They can be used to teach school subjects, especially mathematics, where most of the students are weak and also dislike the subject. CAI can be developed in mathematics and some games using the concept of mathematics can be included to make learning more interesting and to sustain enthusiasm throughout learning. Learning becomes an enjoyable experience as compared to blackboard teaching which could get rather boring. Students

become active learners rather than passive learners as in the case of usual conventional learning. Psychological theories can be extensively used, more visual images can be included using computer experts and large scale materials can be developed. Many educators, psychologists, computer experts can jointly develop such materials which can help students to sustain interest throughout learning process especially in an abstract subject like mathematics.

#### **4.18 Suggestions for Further Scope of the Study**

The present study may bring new area to be studied by the future researchers. The content which was not covered by the present study can be taken up for further study. CAI can be developed in other subjects too. Most of the schools have computer facility and this facility can be used to learn other subjects. CAI should be developed in other topics of class VIII mathematics textbook. CAI should be developed in other subjects of class VIII mathematics textbook. CAI should be developed for higher secondary mathematics text book. CAI should be developed with the help of new emerging software or computer language. A study should be conducted with variables other than those that were not covered in the present study. CAI should be developed with facility of on line discussion with the students. An in-depth and comprehensive study should be conducted using qualitative and quantitative techniques, more data should be collected in all possible data collection techniques and accordingly data analysis should be performed to draw conclusions. Spoken tutorials can be developed using Camp studio software and effectiveness of the developed programme can be found out.