Chapter 4

ANALYSIS AND INTERPRETATION OF DATA

The scored data has no meaning unless it is analyzed and interpreted by suitable scientific methods. Analysis of data means studying the material in order to determine inherent fact. It involves the breaking up of the complex factors into simple parts and putting them in new arrangements for the purpose of interpretations.

For every researcher, it is crucially important to know that not only precision in the collection of data or selection of tools can guarantee the accomplishment of objectives, but adequate knowledge in the application of statistical analysis is equally important. Data analysis is the act of transforming data with the aim of extracting useful information and facilitating conclusion. Data analysis is the process of systematically applying statistical and or logical techniques to describe and illustrate, condense, recap and evaluate data.

In the present endeavor, the investigator has made an attempt to analyze and interpret the data of the present study by using different statistical techniques.

4.1: REGRESSION

Regression analysis in general sense means the estimation or prediction of the unknown value of one variable from the known value of the other value. Regression analysis is a mathematical measure of average relationship between two or more variables in terms of original units of data. Regression analyses there are two types of variables. The variable whose value is influenced or is to be predicted is called dependent variable and the variable which influences the values are is used for prediction is called independent variable. In regression analysis independent variable is also known as regresor or predictor or explanatory while the dependent variable is also known as regressed or explained variable. When the regression analysis is confined to the study of only two variables at a time it is known as simple regression. But quite often the values of the particular phenomenon may be affected by a multiplicity of factors. The regression analysis for studying more than two variables at a time is known as multiple regression.

$$Y = \alpha + \beta X + \mu \text{(error term)}$$

Where,

Y = Dependent variable

X = Explanatory variable/Independent variable

α = Constant term

β = Coefficient term/ slope of the equation

Hypothesis No:1 There will be no significant impact of learning style on the academic achievement of the secondary school students.

Table No.4.1: The below table showing the modal summary for hypothesis there will be no significant impact of learning style on the academic achievement of the secondary school students.

Table No.: 4.1:   Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.834	.696	.695	15.514

Predictors: (Constant), total

The table 4.1 it can be interpreted that the value of r is .834which shows that there is very high correlation between the learning style and the academic achievement of secondary school students. The value of r square is 69 which shows that 69 percent variation in academic achievement is explained by learning style.

Table No.4.2: ANNOVA Summary of hypothesis there will be no significant impact of learning style on the academic achievement of the secondary school students.

Table No.: 4.2: ANNOVA

Model		Sum of Squares	Df	Mean Square	F	Significance
1	Regression	133841.282	1	133841.282	556.122	Significant at .05 level
	Residual	58482.538	243	240.669		
	Total	192323.820	244			

a. Predictors: (Constant), total score

b. Dependent Variable: academic achievement

The above table 4.2 depicts that the calculated value of f is 556.122 which is greater than the table value at 0.05 level of significance which means that the learning style

has impact on the academic achievement of secondary school students. Hence the hypothesis stating that there will be no significant impact of learning style on the academic achievement of secondary school students is refuted.

Table No.: 4.3: Coefficients Summary of hypothesis there will be no significant impact of learning style on the academic achievement of the secondary school students.

Model		Unstandardized Coefficients		Standardized Coefficients	T	Significance.
		B	Std. Error	Beta		
1	(Constant)	191.247	8.102		23.606	.000
	Total score	1.220	.052	.834	23.582	.000

Dependent Variable: academic achievement

From the table 4.3 it can be interpreted that the value of p is significant which means that the value less than 0.05 which shows that there is a significant impact of learning style on the academic achievement of secondary school students. Hence the hypothesis stating that there will be no significant impact of learning style on the academic achievement of secondary school students is rejected.

Hypothesis No.:2 There will no significant impact of learning style on the academic achievement of the secondary students with reference to their.

2.1. Enactive reproducing learning style.

2.2. Enactive Constructive learning style.

2.3. Figural reproducing   learning style.

2.4. Figural Constructive learning style.

2.5. Verbal reproducing learning style.

2.6. Verbal Constructive learning style**.**

Table 4.4: Model summary of hypothesis there is no significant impact of learning style on the academic achievement of secondary school students with reference to enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles.

Table No.:4.4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.841	.707	.700	15.374

a. Predictors: (Constant), enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive

From the table 4.4 it can be stated that the value of r is .841which shows that there is high correlation between the learning style and the academic achievement of secondary school students. The value of r square is .70 which shows that 70 percent variation in academic achievement is explained by learning style.

Table No.4.5: **ANNOVA summary of hypothesis there will be no significant impact of learning style on the academic achievement of secondary school students with reference to enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles.**

Table No. :4.5: ANNOVA

	Model	Sum of Squares	Df	Mean Square	F	Significance.
1	Regression	136067.323	6	22677.887	95.942	Significant at
	Residual	56256.497	238	236.372		0.05 level
	Total	192323.820	244			

a. Predictors: (Constant) enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive

b. Dependent Variable: academic achievement

The above table 4.5 shows the calculated value of f is 95.942 which is greater than the table value at 0.05 level of significance which means that the learning style has impact on the academic achievement of secondary school students. Hence the

hypothesis stating that there will be no significant impact of learning style on the academic achievement of secondary school students with reference to ER, EC, FR, FC, VR, VC learning styles is refuted

Table: 4.6: Coefficients summary of **hypothesis there will be no significant impact of learning style on the academic achievement of secondary school students with reference to enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles.**

Table: 4.6: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	192.870	8.223		23.456	.000
	ER	.741	.337	.106	2.202	.029
	EC	1.568	.334	.239	4.696	.000
	FR	.984	.283	.163	3.475	.001
	FC	1.471	.316	.230	4.659	.000
	VR	1.738	.322	.254	5.403	.000
	VC	.763	.335	.108	2.276	.024

a. Dependent Variable: academic achievement

From the above table 4.6 it can be inferred that the calculated value of p of various learning styles viz ER, EC, FR, FC, VR, VC is .000, .029, .000, .001, .000, .000, .024 which is less than the value of .05 which reveals that there is a significant impact of these learning styles on the academic achievement of secondary school students. Hence the hypothesis stating that there will be no significant impact of learning styles on the academic achievement of secondary school students with reference to enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles is refuted.

Hypothesis: 3 There will no significant impact of learning style on the academic achievement of the secondary school students with reference to their:

3.1. Enactive learning style

3.2. Figural learning style

3.3. Verbal learning style

3.4 Reproducing learning style

3.5 Constructive learning style

Table: 4.7: Model summary of hypothesis there will no significant impact of learning style on the academic achievement of the secondary school students with reference to their enactive, figural, verbal, reproducing and constructive learning styles.

Table: 4.7 :Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.833	.693	.687	15.711

a. Predictors: (Constant), constructive, reproducing, verbal, enactive and figural

The table 4.7 shows that the value of r is .833 which means that there is very high correlation between the learning style and the academic achievement of secondary school male students The value of r square is .69 which shows that 69 percent variation in academic achievement is explained by learning style.

Table: 4.8: ANOVA summary of hypothesis there will no significant impact of learning style on the academic achievement of the secondary school students with reference to their enactive, figural, verbal, reproducing and constructive learning styles.

Table : 4.8:   ANNOVA

	Model	Sum of Squares	Df	Mean Square	F	Significance.
1	Regression	133326.604	5	26665.321	108.022	.000
	Residual	58997.217	239	246.850		
	Total	192323.820	244			

Predictors: (Constant), constructive, reproducing, verbal, enactive, figural

The above table 4.8 shows that the calculated value of f is 108.022 which is greater than the table value at 0.05 level of significance which means that the learning style has impact on the academic achievement of secondary school male students. Hence the hypothesis stating that there will be no significant impact of learning style on the academic achievement of secondary school students with reference to enactive, figural, verbal, reproducing and constructive learning styles is refuted.

Table No.:4.9: **The below given table displays the summary of Coefficients for the hypothesis that there will be no significant impact of learning style on the academic achievement of the secondary school students with reference to their enactive, figural, verbal, reproducing and constructive learning styles.**

Table No.: 4.9: **Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Significance.
		B	Std. Error	Beta		
1	(Constant)	192.458	8.376		22.976	.000
	Enactive	.764	.336	.107	2.404	.023
	Figural	.985	.390	.163	3.484	.001
	Verbal	.741	.366	.106	2.202	.029
	Reproducing	1.012	.358	.387	2.829	.005
	Constructive	1.156	.346	.443	3.340	.001

a. Dependent Variable: Academic achievement

From the table 4.9 it can be inferred that the calculated value of p of various learning styles viz enactive, figural, verbal, reproducing and constructive is .023, .001, .029, .005, .001 is less than the value of .05 which shows the impact of these learning styles is on the academic achievement of secondary school male students . Hence the hypothesis stating that there will be no significant impact of learning styles on the academic achievement of secondary school male students with reference to enactive, figural, verbal, reproducing and constructive learning styles is refuted.

Hypothesis: 4 There will be no significant impact of learning style on the academic achievement of the secondary school male students

Table No: 4.10: Model summary of hypothesis there will be no significant impact of learning style on the academic achievement of the secondary school male students

Table No.: 4.10: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.845	.714	.711	14.13933

a. Predictors: (Constant), total

From the above table 4.10 it can be interpreted that the value of r is .845 which shows that there is very high correlation between the learning style and the academic achievement of secondary school male students. The value of r square is .71 which shows that 71 percent variation in academic achievement is explained by learning style.

Table No: 4.11: ANNOVA summary of hypothesis there will be no significant impact of learning style on the academic achievement of the secondary school male students

Table: 4.11:ANNOVA

	Model	Sum of Squares	Df	Mean Square	F	Significance.
1	Regression	58255.728	1	58255.728	291.394	
	Residual	23390.709	117	199.921		Significant at 0.05
	Total	81646.437	118			

a. Predictors: (Constant), total

b. Dependent Variable: academic achievement

From the above table 4.11 calculated value of f is 291.394 which is greater than the table value at 0.05 level of significance which means that the learning style has impact on the academic achievement of secondary school students. Hence the hypothesis stating that there will be no significant impact of learning style on the academic achievement of secondary school male students is refuted.

Table No: 4.12: Coefficients summary of hypothesis there will be no significant impact of learning style on the academic achievement of the secondary school male students

Table No. 4.12:Coefficients

	Model	Unstandardized Coefficients		Standardized Coefficients	T	Significance
		B	Std. Error	Beta		
1	Constant	212.733	9.571		22.227	.000
	total1	1.083	.063	.845	17.070	.000

a. Dependent Variable: academic achievement

From the table 4.12 it can be interpreted that the value of p is significant which means that the value is less than .05 which reveals that there is a significant impact of learning style on the academic achievement of secondary school male students. Therefore   the hypothesis stating that there will be no significant impact of learning style on the academic achievement of secondary school male students is refuted.

Hypothesis: 5 There will no significant impact of learning style on the academic achievement of the secondary school male students with reference to their.

> H 5.1.Enactive reproducing learning style.
>
> H5.2. Enactive Constructive learning style.
>
> H5.3. Figural reproducing   learning style.
>
> H5.4. Figural Constructive learning style.
>
> H5.5. Verbal reproducing learning style.
>
> H5.6. Verbal Constructive learning style.

Table No.:4.13: Model summary of hypothesis there will no significant impact of learning style on the academic achievement of the secondary school male students with reference to their enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles.

Table No.: 4.13:Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.857	.734	.719	13.93290

a. Predictors: (Constant), enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive

From the table 4.13 it can be interpreted that the value of r is .857 which shows that there is a very high correlation between the learning styles such as ER, EC, FR, FC, VR, VC and the academic achievement of secondary school male students. The value of r square is .73 which shows that 73 percent variation in academic achievement is explained by learning style.

Table No.:4.14: ANNOVA summary of hypothesis there will no significant impact of learning style on the academic achievement of the secondary school male students with reference to their enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles.

Table NO.: 4.14 :ANNOVA

	Model	Sum of Squares	Df	Mean Square	F	Significance.
1	Regression	59904.344	6	9984.057	51.431	.000
	Residual	21742.093	112	194.126		
	Total	81646.437	118			

a. Predictors: (Constant), enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive

b. Dependent Variable: Academic Achievement

The above table 4.14 shows the calculated value of f is 51.43 which is greater than the table value at 0.05 level of significance which means that the learning style has impact on the academic achievement of secondary school students. Hence the hypothesis stating that there will be no significant impact of learning style on the academic achievement of secondary school male students with reference to ER, EC, FR, FC, VR, VC learning styles is refuted.

Table No.:4.15: Coefficients summary of hypothesis there will no significant impact of learning style on the academic achievement of the secondary school male students with reference to their enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles.

Table No. : 4.15:Coefficients

	Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	**Std. Error**	**Beta**	**T**	**Sig.**
1	(Constant)	210.058	9.693		21.672	.000
	ER	1.165	.448	.177	2.603	.010
	EC	.924	.422	.164	2.187	.031
	FR	1.363	.358	.240	3.808	.000
	FC	1.212	.456	.197	2.656	.009
	VR	.925	.394	.164	2.189	.031
	VC	1.343	.432	.210	3.111	.002

a. Dependent Variable: academic achievement

From the table 4.15 it can be inferred that the calculated value of p of various learning styles viz ER, EC , FR, FC, VR, VC is .010, .031, .000, .009, .031, .002 are significant which means that there is a significant impact of these learning styles on the academic achievement of secondary school male students. Hence the hypothesis stating that there will be no significant impact of learning styles on the academic achievement of secondary school male students with reference to enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles is refuted.

Hypothesis: 6 There will no significant impact of learning style on the academic achievement of the secondary school male students with reference to their

H6.1. Enactive learning style

H6.2. Figural learning style

H6.3. Verbal learning style

H6.4 Reproducing learning style

H6.5 Constructive learning style

Table No.:4.16 Model summary of hypothesis there will no significant impact of learning style on the academic achievement of the secondary school male students with reference to their enactive, figural, verbal, reproducing and constructive learning styles

Table No.: 4.16:Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.847	.717	.705	14.29088

a. Predictors: (Constant) enactive, figural, verbal, reproducing and constructive

From the above table 4.16 it can be interpreted that the value of r is .847 which shows that there is very high correlation between the learning style and the academic achievement of secondary school male students. The value of r square is .71 which shows that 71 percent variation in academic achievement is explained by learning style.

Table No.:4.17 ANNOVA summary of hypothesis there will no significant impact of learning style on the academic achievement of the secondary school male students with reference to their enactive, figural, verbal, reproducing and constructive learning styles

Table No.: 4.17:   ANNOVA

	Model	Sum of Squares	Df	Mean Square	F	Significance.
1	Regression	58568.544	5	11713.709	57.356	.000
	Residual	23077.893	113	204.229		
	Total	81646.437	118			

a. Predictors: (Constant), constructive, reproducing, verbal, enactive, figural

b. Dependent Variable: academic achievement

The above table 4.17 shows the calculated value of f is 57.35 which is greater than the table value at 0.05 level of significance which means that the learning style has impact on the academic achievement of secondary school male students. Hence the hypothesis stating that there will be no significant impact of learning style on the academic achievement of secondary school male students with reference to Enactive, Figural, verbal, Reproducing Constructive, learning style is refuted.

Table No.:4.18: Coefficients summary of hypothesis there will no significant impact of learning style on the academic achievement of the secondary school male students with reference to their enactive, figural, verbal, reproducing and constructive learning styles

Table No.: 4.18: Coefficients

	Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	216.936	9.819		22.093	.000
	Enactive	1.471	.469	.231	4.659	.000
	Figural	.984	.474	.163	3.475	.001
	Verbal	1.738	.403	.254	5.403	.000
	Reproducing	.976	.404	.404	2.417	.017
	Constructive	.944	.401	.408	2.352	.020

a. Dependent Variable: academic achievement

From the table 4.18 it can be inferred that the calculated value of p of various learning styles viz enactive, figural, verbal, reproducing and constructive is .000, .001, .000, .017, .020 which is less than the value of .05 which reveals that there is a significant impact of these learning styles on the academic achievement of secondary school male students. Hence the hypothesis stating that there will be no significant impact of learning styles on the academic achievement of secondary school male students with reference to enactive, figural, verbal, reproducing and constructive learning styles is refuted.

Hypothesis:7 There will be no significant impact of learning style on the academic achievement of the secondary school female students

Table No.:4.19: Model Summary of hypothesis there will be no significant impact of learning style on the academic achievement of the secondary school female students

Table No.:4.19: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.790	.624	.621	18.35072

From the above table 4.19 it can be interpreted that the value of r is .790 which shows that there is very high correlation between the learning style and the academic achievement of secondary school female students. The value of r square is .62 which shows that 62 percent variation in academic achievement is explained by learning style.

Table No.:4.20: ANNOVA Summary of hypothesis there will be no significant impact of learning style on the academic achievement of the secondary school female student

	Model	Sum of Squares	Df	Mean Square	F	Significance.
1	Regression	69403.846	1	69403.846	206.100	.000
	Residual	41756.860	124	336.749		
	Total	111160.706	125			

The above table 4.20 shows the calculated value of f is 206.10 which is greater than the table value at 0.05 level of significance which means that the learning style has impact on the academic achievement of secondary school female students. Hence the hypothesis stating that there will be no significant impact of learning style on the academic achievement of secondary school female students is refuted

Table No.:4.21: Coefficients Summary of hypothesis there will be no significant impact of learning style on the academic achievement of the secondary school female students

Table No.:4. 21: Coefficients

	Model	Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Significance
1	(Constant)	151.051	16.557		9.123	.000
	Total	1.469	.102	.790	14.356	.000

From the table 4.21 it can be inferred that the calculated value of p is.00 which is less than the table value at .05 which reveals that there is a significant impact of the learning style on the academic achievement of secondary school female students. Hence the hypothesis stating that there will be no significant impact of learning style on the academic achievement of secondary school female students is refuted.

Hypothesis: 8 There will no significant impact of learning style on the academic achievement of the secondary school female students with reference to their.

H8.1. Enactive reproducing learning style.

H 8.2.EnactiveConstructive learning style.

H8.3. Figural reproducing learning style.

H8.4. Figural Constructive learning style.

H8.5.Verbal reproducing learning style.

H8.6. Verbal Constructive learning style

Table No.4.22: Model summary of hypothesis there will no significant impact of learning style on the academic achievement of the secondary school female students with reference to their enactive reproducing, enactive constructive , figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles.

Table No.: 4.22:Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.810	.656	.639	17.92394

a. Predictors: (Constant), enactive constructive, enactive reproducing, verbal constructive, verbal reproducing, figural constructive, figural reproducing

From the table 4.22 it can be interpreted that the value of r is .810 which shows that there is very high correlation between the learning styles such as ER, EC, FR,FC,VR,VC and the academic achievement of secondary school female students. The value of r square is .65 which shows that 65 percent variation in academic achievement is explained by learning style.

Table No.4.23: ANNOVA summary of hypothesis there will no significant impact of learning style on the academic achievement of the secondary school female students with reference to their enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning style.

Table No.:4.23:ANNOVA

	Model	Sum of Squares	Df	Mean Square	F	Significance
1	Regression	72929.879	6	12154.980	37.834	Significant at 0.05 level
	Residual	38230.827	119	321.267		
	Total	111160.706	125			

a. Predictors: (Constant), enactive constructive, enactive reproducing, verbal constructive, verbal reproducing, figural constructive, figural reproducing

b. Dependent Variable: academic achievement

The above table 4.23 shows the calculated value of f is 37.83 which is greater than the table value at 0.05 level of significance which means that the learning style has impact on the academic achievement of secondary school students. Hence the hypothesis stating that there will be no significant impact of learning style on the academic achievement of secondary school female students with reference to ER, EC, FR, FC, VR,VC learning styles is refuted.

Table No.4.24: Coefficients summary of hypothesis there will no significant impact of learning style on the academic achievement of the secondary school female students with reference to their enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles

Table No.4.24: Coefficients

	Model	Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Significance
1	(Constant)	153.114	17.089		8.960	.000
	ER	.978	.566	.171	3.117	.002
	EC	2.531	.619	.284	4.092	.000
	FR	1.238	.498	.198	3.978	.000
	FC	2.002	.494	.291	4.055	.000
	VR	2.841	.580	.347	4.895	.000
	VC	1.154	.584	.176	3.431	.001

a. Dependent Variable: academic achievement

From the above table 4.24 it can be interpreted that the calculated value of p of various learning styles viz ER,EC,FR,FC,VR,VC is .000, .002, .000, .000, .000, .001

which is less than 0.05 which reveals that there is a significant impact of these learning styles on the academic achievement of female secondary school students. Hence the hypothesis stating that there will be no significant impact of learning styles on the academic achievement of secondary school female students with reference to enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles is refuted.

Hypothesis: 9 There will no significant impact of learning style on the academic achievement of the secondary school female students with reference to their

H9.1. Enactive learning style

H9.2. Figural learning style

H9.3. Verbal learning style

H9.4 Reproducing learning style

H9.5 Constructive learning style

Table No.:4.25: Model summary of hypothesis there will no significant impact of learning style on the academic achievement of the secondary school female students with reference to their enactive, figural, verbal, reproducing and constructive learning styles.

Table No.: 4.25: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.795	.632	.617	18.46387

a. Predictors: (Constant), constructive, reproducing, verbal, enactive, figural

The table 4.25 it can be interpreted that the value of r is .795 which shows that there is very high correlation between the learning styles such as enactive, figural, verbal, reproducing, constructive and the academic achievement of secondary school students. The value of r square is .63 which shows that 63 percent variation in academic achievement is explained by learning style.

Table No.:4.26: ANNOVA summary of hypothesis there will no significant impact of learning style on the academic achievement of the secondary school female students with reference to their enactive, figural, verbal, reproducing and constructive learning styles.

Table No.: 4.26:   ANNOVA

	Model	Sum of Squares	Df	Mean Square	F	Significance.
1	Regression	70250.945	5	14050.189	41.213	Significant at 0.05 level
	Residual	40909.761	120	340.915		
	Total	111160.706	125			

a. Predictors: (Constant), constructive, reproducing, verbal, enactive, figural

b. Dependent Variable: academic achievement

The above table 4.26 calculated value of f is 41.213 which is greater than the table value at 0.05 level of significance which means that the learning style viz enactive, figural, verbal, reproducing and constructive learning styles has impact on the academic achievement of secondary school female students. Hence the hypothesis stating that there will be no significant impact of learning style on the academic achievement of secondary school female students with reference to enactive, figural, verbal, reproducing, constructive learning styles is refuted.

Table No.:4.27: Coefficients summary of hypothesis there will no significant impact of learning style on the academic achievement of the secondary school female students with reference to their enactive, figural, verbal, reproducing and constructive learning styles.

Table No.: 4.27:Coefficients

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Significance.
		B	Std. Error	Beta		
1	(Constant)	143.197	18.039		7.938	.000
	Enactive	1.174	.772	.180	3.679	.000
	Figural	.977	.796	.173	3.108	.002
	Verbal	1.739	.801	.254	5.403	.000
	Reproducing	.783	.767	.108	2.416	.023
	Constructive	1.800	.758	.545	2.374	.019

a. Dependent Variable: academic achievement

From the table 4.27 it can be inferred that the calculated value of p of various learning styles viz. enactive, figural, verbal, reproducing, and constructive is .000, .002, .000, .023, .019. These values are less than .05 level of which reveals that there is a significant impact of these learning styles on the academic achievement of female secondary school students. Hence the hypothesis stating that there will be no significant impact of learning styles on the academic achievement of secondary school female students with reference to enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles is refuted.

Hypothesis: 10 There will be no significant impact of learning style on the academic achievement of the rural secondary school students

Table No.:4.28: Model summary of hypothesis there will be no significant impact of learning style on the academic achievement of the rural secondary school students

Table No.: 4.28: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.913	.834	.833	10.719

a. Predictors: (Constant), total

The table 4.28 it can be interpreted that the value of r is .913 which shows that there is very high correlation between the learning style and the academic achievement of rural secondary school students. The value of r square is .83 which shows that 83 percent variation in academic achievement is explained by learning style.

Table No.:4.29: ANNOVA summary of hypothesis there will be no significant impact of learning style on the academic achievement of the rural secondary school students

Table No.:4.29:   ANNOVA

	Model	Sum of Squares	Df	Mean Square	F	Significance
1	Regression	68859.297	1	68859.297	599.322	Significant at .05 level
	Residual	13672.537	119	114.895		
	Total	82531.835	120			

a. Predictors: (Constant), total
b. Dependent Variable: academic achievement

The above table 4.29 shows the calculated value of f is 599.322 which is greater than the table value at 0.05 level of significance which means that the learning style has impact on the academic achievement of rural secondary school students. Hence the hypothesis stating that there will be no significant impact of learning style on the academic achievement of rural secondary school students is refuted.

Table No.:4.30: Coefficients summary of hypothesis there will be no significant impact of learning style on the academic achievement of the rural secondary school students

Table No.: 4.30:Coefficients

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Significance
		B	**Std. Error**	**Beta**	**t**	**Significance**
1	(Constant)	200.193	7.579		26.412	.000
	Total	1.174	.048	.913	24.481	.000

a. Dependent Variable: academic achievement

From the table 4.10.3 it can be inferred that the calculated value of p is less than .05 which reveals that there is a significant impact of learning style on the academic achievement of rural secondary school students. Hence the hypothesis stating that there will be no significant impact of learning style on the academic achievement of rural secondary school students is refuted.

Hypothesis No.:11There will no significant impact of learning style on the academic achievement of the rural secondary school students with reference to their.

H11.1. Enactive reproducing learning style.

H11.2. Enactive Constructive learning style.

H11.3. Figural reproducing learning style.

H11.4. Figural Constructive learning style.

H11.5.Verbal reproducing learning style.

H11.6. Verbal Constructive learning style.

Table No.4.31: Model summary of hypothesis there will no significant impact of learning style on the academic achievement of the rural secondary school students with reference to their enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles.

Table No.:4.31:Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.922	.851	.843	10.392

a. Predictors: (Constant), enactive constructive, enactive reproducing, verbal constructive, verbal reproducing, figural constructive, figural reproducing

From the table 4.31 it can be interpreted that the value of r is .922 which shows that there is very high correlation between the learning styles viz ER, EC, FR, FC, VR, VC and the academic achievement of rural secondary school students. The value of r square is .85 which shows that 85 percent variation in academic achievement is explained by learning style.

Table No.4.32: ANNOVA summary of hypothesis there will no significant impact of learning style on the academic achievement of the rural secondary school students with reference to their enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles

Table No.:4.32:ANNOVA

	Model	Sum of Squares	Df	Mean Square	F	Significance.
1	Regression	70221.159	6	11703.526	108.378	.000
	Residual	12310.676	114	107.988		
	Total	82531.835	120			

a. Predictors: (Constant), enactive constructive, enactive reproducing, verbal constructive, verbal reproducing, figural constructive, figural reproducing
a. dependent Variable: academic achievement

The above table 4.32 shows the calculated value of f is 108.378 which is greater than the table value at 0.05 level of significance which means that the learning styles such as ER, EC, FR, FC, VR, VC has impact on the academic achievement of rural secondary school students. Hence the hypothesis stating that there will be no significant impact of learning style on the academic achievement of rural secondary school students with reference to enactive reproducing, enactive constructive, figural reproducing ,figural constructive, verbal reproducing and verbal constructive learning styles is refuted.

Table No.:4.33: Coefficients summary of hypothesis there will no significant impact of learning style on the academic achievement of the rural secondary school students with reference to their enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles

Table No. :4.33:   Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Significance.
	B	Std. Error	Beta		
1 (Constant)	199.169	7.595		26.223	.000
ER	1.155	.326	.177	3.543	.001
CR	1.560	.340	.262	4.590	.000
FR	1.011	.316	.170	3.195	.002
FC	.975	.314	.173	3.107	.002
VR	1.227	.308	.197	3.979	.000
VC	1.175	.319	.180	3.679	.000

a. Dependent Variable: academic achievement

From the table 4.33 it can be interpreted that the calculated value of p of various learning styles viz ER, EC, FR, FC,VR, VC is .001, .00, .002, .002, .00, .00 which is less than the value of .05 which reveals that there is a significant impact of these learning styles on the academic achievement of rural secondary school students. Hence the hypothesis stating that there will be no significant impact of learning styles on the academic achievement of rural secondary school students with reference to enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles is refuted.

Hypothesis: 12 There will no significant impact of learning style on the academic achievement of the rural secondary school students with reference to their

H12.1. Enactive learning style

H12.2. Figural learning style

H12.3. Verbal learning style

H12.4 Reproducing learning style

H12.5 Constructive learning style

Table No.:4.34: Model summary of hypothesis there will no significant impact of learning style on the academic achievement of the rural secondary school students with reference to their enactive, figural, verbal, reproducing and constructive learning styles

Table No.: 4.34:Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.917	.842	.835	10.659

a. Predictors: (Constant), constructive, reproducing, verbal, enactive, figural

From the table 4.34 it can be interpreted that the value of r is .917 which shows that there is very high correlation between the learning styles viz. enactive, figural, verbal, reproducing and constructive on the academic achievement of rural secondary school students. The value of r square is .84 which shows that 84 percent variation in academic achievement is explained by these learning styles.

Table No.:4.35: Model summary of hypothesis there will no significant impact of learning style on the academic achievement of the rural secondary school students with reference to their enactive, figural, verbal, reproducing and constructive learning styles

Table No.: 4.35:ANNOVA

	Model	Sum of Squares	Df	Mean Square	F	Significance
1	Regression	69466.617	5	13893.323	122.289	Significant at 0.05 level
	Residual	13065.218	115	113.611		
	Total	82531.835	120			

a. Predictors: (Constant), constructive, reproducing, verbal, enactive, figural
b. Dependent Variable: academic achievement

The above table 4.35 shows that the calculated value of f is 122.289 which is greater than the table value at 0.05 level of significance which means that these learning style viz enactive, figural, verbal, reproducing and constructive has impact on the academic achievement of secondary school students. Hence the hypothesis stating that there will be no significant impact of learning style on the academic achievement of rural secondary school students with reference to enactive, figural, verbal, reproducing and constructive learning styles is refuted.

Table No.:4.36: Coefficients summary of hypothesis there will no significant impact of learning style on the academic achievement of the rural secondary school students with reference to their enactive, figural, verbal, reproducing and constructive learning styles

Table No.: 4.36:Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Significance.
	B	Std. Error	Beta		
1 (Constant)	202.204	7.732		26.153	.000
Enactive	1.153	.337	.176	3.553	.001
Figural	1.734	.362	.255	5.403	.000
Verbal	1.011	.290	.170	3.195	.002
Reproducing	1.142	.291	.470	3.929	.000
Constructive	1.079	.306	.464	3.526	.001

a. Dependent Variable: academic achievement

From the table 4.36 it can be stated that the calculated value of p of various learning styles viz enactive, figural, verbal, reproducing and constructive is .001, .000, .002, .000, .001. .However these values are significant which means that the values are less than 0.05 which reveals that there is a significant impact of these learning styles on the academic achievement of rural secondary school students. Hence the hypothesis stating that there will be no significant impact of learning styles on the academic achievement with reference to enactive, figural, verbal, reproducing and constructive on the academic achievement of rural secondary school students is refuted.

Hypothesis: 13 There will be no significant impact of learning style on the academic achievement of the urban secondary school students

Table No.:4.37: Model summary of hypothesis there will be no significant impact of learning style on the academic achievement of the urban secondary school students

Table No.:4.37:   Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.739	.546	.542	21.011

a. Predictors: (Constant), total

The table 4.13.1 it can be interpreted that the value of r is .739 which shows that there is very high correlation between the learning styles on the academic achievement of urban secondary school students. The value of r square is .54 which shows that 54 percent variation in academic achievement is explained by these learning styles.

Table No. : 4.38: ANNOVA summary of hypothesis there will be no significant impact of learning style on the academic achievement of the urban secondary school students

Table No.: 4.38:   ANNOVA

	Model	Sum of Squares	Df	Mean Square	F	Significance.
1	Regression	64668.348	1	64668.348	146.488	.000
	Residual	53857.845	122	441.458		
	Total	118526.194	123			

a. Predictors: (Constant), total

b. Dependent Variable: academic achievement

The above table 4.38 shows that the calculated value of f is 146.488 which is greater than the table value at 0.01 level of significance which means that these learning style has impact on the academic achievement of urban secondary school students. Hence the hypothesis stating that there will be no significant impact of learning style on the academic achievement of urban secondary school students is refuted.

Table No.: 4.39: Coefficients summary of hypothesis there will be no significant impact of learning style on the academic achievement of the urban secondary school students

Table No.:4.39:   Coefficients

	Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	181.161	16.407		11.042	.000
	Total	1.280	.106	.739	12.103	.000

a. Dependent Variable: academic achievement

From the above table 4.39 it can be interpreted that the calculated value of p of is less than .05 which reveals that there is a significant impact of learning style on the academic achievement of urban secondary school students. Hence the hypothesis stating that there will be no significant impact of learning styles on the academic achievement of urban secondary school students is refuted.

Hypothesis No.:14 There will no significant impact of learning style on the academic achievement of the urban secondary school students with reference to their.

H14.1. Enactive reproducing learning style.

H14.2. Enactive Constructive learning style.

H4.3. Figural reproducing   learning style.

H14.4. Figural Constructive learning style.

H14.5.Verbal reproducing learning style.

H14.6. Verbal Constructive learning style.

Table No.:4.40: Model Summary of hypothesis there will no significant impact of learning style on the academic achievement of the   urban secondary school students with reference to their enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles.

Table No.: 4.40:Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.752	.565	.543	20.989

a. Predictors: (Constant), enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive

From the above table 4.40 it can be interpreted that the value of r is .752 which shows that there is very high correlation between learning styles viz ER, EC, VR, VC, FR, FC learning styles on the academic achievement of urban secondary school students. The value of r square is .56 which shows that 56 percent variation in academic achievement is explained by these learning styles.

Table No.:4.41: ANNOVA Summary of hypothesis there will no significant impact of learning style on the academic achievement of the urban secondary school students with reference to their enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles.

Table No.:4.41:ANNOVA

	Model	Sum of Squares	Df	Mean Square	F	Significance.
1	Regression	66981.857	6	11163.643	25.340	Significant at 0.05 level
	Residual	51544.337	117	440.550		
	Total	118526.194	123			

a. Predictors: (Constant), enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive

b. Dependent Variable: academic achievement

The above table 4.41 shows the calculated value of f is 25.340 which is greater than the table value at 0.05 level of significance which means that the learning style ER, EC, FR,FC, VR, VC has impact on the academic achievement of urban secondary school students. Hence the hypothesis stating that there will be no significant impact of learning style on the academic achievement of urban secondary school students with reference to enactive reproducing, enactive constructive, figural reproducing ,figural constructive, verbal reproducing and verbal constructive learning styles is refuted.

Table No.:4.42:Coefficents Summary of hypothesis there will no significant impact of learning style on the academic achievement of the urban secondary school students with reference to their enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning styles.

Table No.:4.42:Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	183.567	16.678		11.006	.000
	ER	.334	.678	.234	.4.697	.000
	EC	1.527	.650	.204	2.349	.020
	FR	1.202	.504	.183	2.385	.019
	FC	2.017	.602	.267	3.349	.001
	VR	1.969	.635	.255	3.099	.002
	VC	1.174	.680	.180	3.679	.000

a. Dependent Variable: academic achievement

From the table 4.42 it can be interpreted that the calculated value of p of various learning styles viz ER, EC, FR, FC, VR, VC is .000, .020, .019, .001, .002, .000. which is less than the value of .05 which shows that these learning style has impact on the academic achievement of urban secondary school students. Hence the hypothesis stating that there will be no significant impact of learning styles on the academic achievement of urban secondary school students with reference to enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive learning style is refuted.

Hypothesis:15 There will no significant impact of learning style on the academic achievement of the urban secondary school students with reference to their

H15.1. Enactive learning style

H15.2. Figural learning style

H15.3. Verbal learning style

H15.4 Reproducing learning style

H15.5 Constructive learning style

Table No.:4.43: Model summary of hypothesis there will no significant impact of learning style on the academic achievement of the urban secondary school students with reference to their enactive, figural, verbal, reproducing and constructive learning styles.

Table No.:4.43:Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.746	.557	.538	21.106

a. Predictors: (Constant), enactive, figural, verbal, reproducing and constructive

The table 4.43 it can be interpreted that the value of r is .74 which shows that there is very high correlation between the learning styles viz enactive, figural, verbal ,reproducing and constructive on the academic achievement of urban secondary school students. The value of r square is .55 which shows that 55 percent variation in academic achievement is explained by these learning styles.

Table No.:4.44: ANNOVA summary of hypothesis there will no significant impact of learning style on the academic achievement of the urban secondary school students with reference to their enactive, figural, verbal, reproducing and constructive learning styles.

Table No.: 4.44:ANNOVA

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	65961.575	5	13192.315	29.615	.000
	Residual	52564.619	118	445.463		
	Total	118526.194	123			

a. Predictors: (Constant), enactive, figural, verbal, reproducing and constructive

b. Dependent Variable: academic achievement

The above table 4.44 shows the calculated value of f is 29.615 which is greater than the table value at 0.05 level of significance which means that these learning style has impact on the academic achievement of urban secondary school students. Hence the hypothesis stating that there will be no significant impact of learning style on the academic achievement of urban secondary school students with reference to enactive, figural, verbal, reproducing and constructive learning styles is refuted.

Table No.:4.45: Coefficients summary of hypothesis there will no significant impact of learning style on the academic achievement of the urban secondary school students with reference to their enactive, figural, verbal, reproducing and constructive learning styles.

Table No.: 4.45:   Coefficients

	Model	Unstandardized Coefficients		Standardized Coefficients	T	Significance
		B	Std. Error	Beta		
1	(Constant)	182.068	16.739		10.877	.000
	Enactive	1.567	.947	.239	4.441	.000
	Figural	1.471	.944	.232	4.658	.000
	Verbal	1.554	.328	.173	3.544	.001
	Reproducing	.742	.965	.106	2.202	.029
	Constructive	.762	.883	.108	2.276	.024

a. Dependent Variable: academic achievement

From the table 4.45 it can be inferred that the calculated value of p of various learning styles viz enactive, figural, verbal, reproducing and constructive the value is .000, .000, .001, .029, .024.All these values are significant which means that they are less than the value of .05 which means that there is a significant impact of these learning styles on the academic achievement of urban secondary school students.. Hence the hypothesis stating that there will be no significant impact of learning styles on the academic achievement with reference to enactive, figural, verbal, reproducing and constructive on the academic achievement of urban secondary school students is refuted.