CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATIONS

4.1 Introduction

The current research was associated withthe general purpose ofexamining theinter-relationship among emotional intelloigence, social intelligence, teaching style and professional commitment of secondary level school teachers in West Bengal. In the previous chapter methodology was discussed and in this chapter data were analysed using different inferential statistics like ANOVA, Mediation and Moderation. Further, the gender gap and teaching experience gap in emotional intelligence and social intellience were examined. A study on emotional intelligence and social intelligence in relation to teaching style and professional commitment were also investigated.

4.2 Objective 1: To study the influence of gender, teaching experience and their interaction on emotional intelligence of teachers

$H_0$1: There is no significant influence of gender, teaching experiences and their interaction on emotional intelligence of teachers

In this study first objective was to study the influence of gender, teaching experience and their interaction on emotional intelligence of teachers on the basis of first objective the following null hypothesis $H_0$1 can be formulated that was _there is no significant influence of gender, teaching experiences and their interaction on emotional intelligence of teachers‘. This null hypothesis deals three variables: gender, teaching experiences and emotional intelligence. Here, Gender and teaching experiences were categorical variable at the same time emotional intelligence was a continuous variable. Gender was a categorical with two independent levels namely, the male teachers and the female teachers. Teaching experience was a categorical with three independent levels namely, novice teachers, experienced teachers and expert teachers. Further emotional intelligence consists with five components that were self-perception, self-regulation, self-drive, empathy and social motive. Therefore, in order to find the statistical significance of the difference‘ in the mean scores of gender, teaching experience and emotional intelligence, the null hypothesis (i.e. $H_0$1) was tested using two way ANOVA. Prior to performing the two ways ANOVA (2-tailed), the assumptions associated with this statistical technique were checked.

Firstly, there were no significant outliers in terms of teachers emotional intelligence, as assessed by inspection of the box-plots (see Figure 4.1) of the two categorical variables Gender with two groups and teaching experiences with three groups separately. Secondly, from the descriptive statistics (see Table 4.2 & Table 4.3) of teachers' emotional intelligence, the value of kurtosis and skewness (i.e., skewness< $\left|2.0\right|$ and kurtosis< $\left|9.0\right|$ (Schmider, Ziegler, Danay, Beyer, & Buhner, 2010) across two categorical variables namely, gender (with two groups: male teachers and female teachers) and teaching experiences (with three groups: novice teachers, experienced teachers, expert teachers), were approximately normally distributed, separately. The normality of emotional intelligence across gender (see Figure 4.3) and across teaching experience like novice, experienced and expert teachers (see Figure 4.4) was further supported by the Q-Q plots. The normality of emotional intelligence was checked through the histograms (see Figure 4.5) and experience-wise (see Figure 4.6) emotional intelligence.Further, teachers' emotional intelligence scores for each level of gender and teaching experience were normally distributed, as assessed by Shapiro-Wilk test (1965) (see Table 4.1). Thirdly, the results of the Levene's test (1960) for equality of variances [W (5,626)=11.419, p<0.001] depicted that the variances of the scores of teachers emotional intelligence did not significantly differ across gender and teaching experiences. Therefore, the assumption regarding the homogeneity of variances was also satisfied by each criterion variable.

Table 4.1

Results of Normality tests for emotional intelligence across teachers' gender and teaching experience separately

	Categorical variables	**Groups**	**Kolmogorov-Smirnov**			**Shapiro-Wilk**		
			Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
Emotional Intelligence	**Gender**	**Male**	0.057	260	0.053	0.989	260	0.121
		Female	0.072	372	0.067	0.988	372	0.072
	Teaching experience	**Novice**	0.054	196	0.198	0.994	196	0.770
		Experienced	0.097	209	0.128	0.984	209	0.051
		Expert	0.073	227	0.067	0.993	227	0.525

Figure 4.1

Box-plots of emotional intelligence across male and female teachers

Figure 4.2

Box-plots of emotional intelligence across novice, experienced and expert teachers

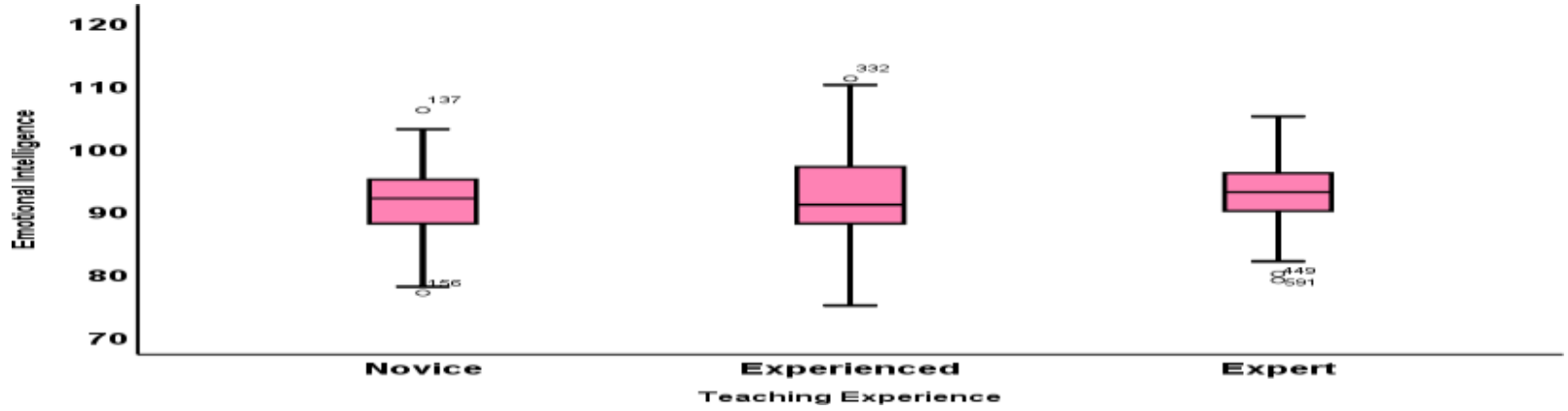


Figure 4.3

Q-Q plots of emotional intelligence for male (left) and female (right) teachers

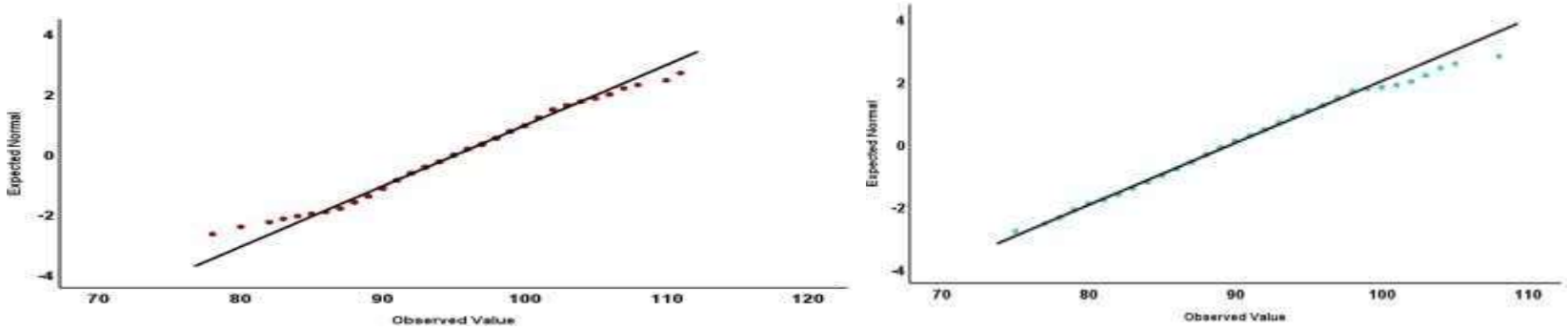


Figure 4.4

Q-Q plots of emotional intelligence for novice (extreme left), experienced (middle) and expert (extreme right) teachers

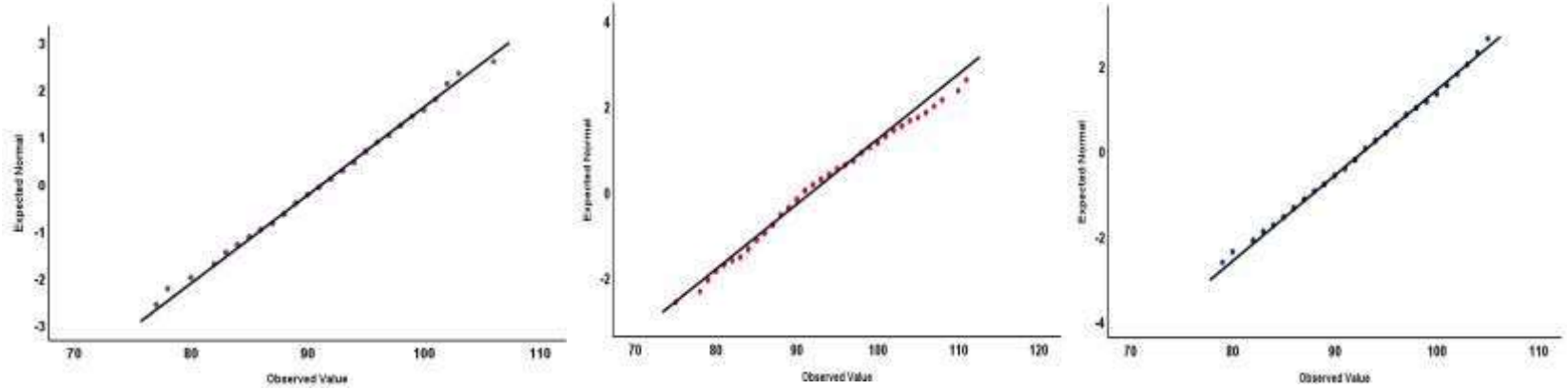


Figure 4.5

Histograms for emotional intelligence for male (left) and female (right) teachers

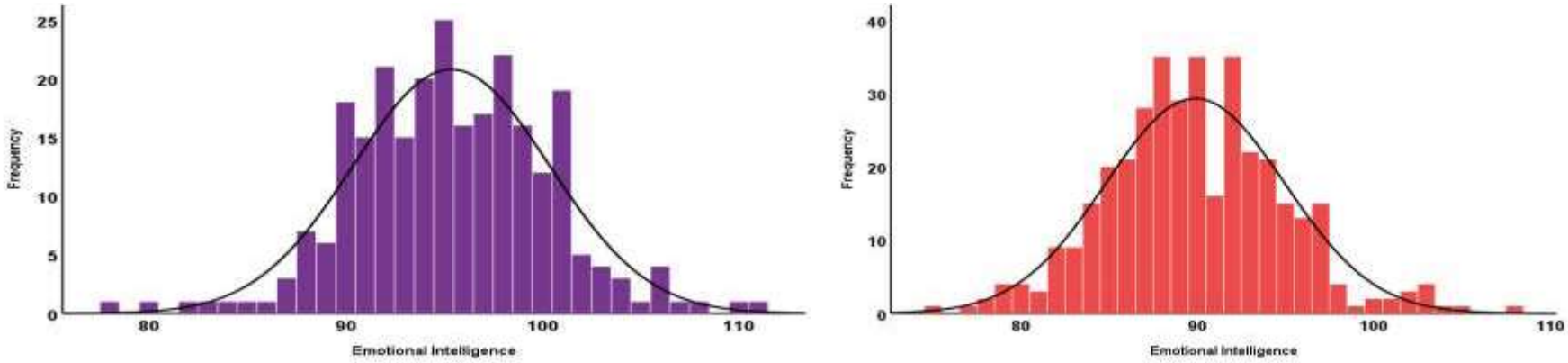
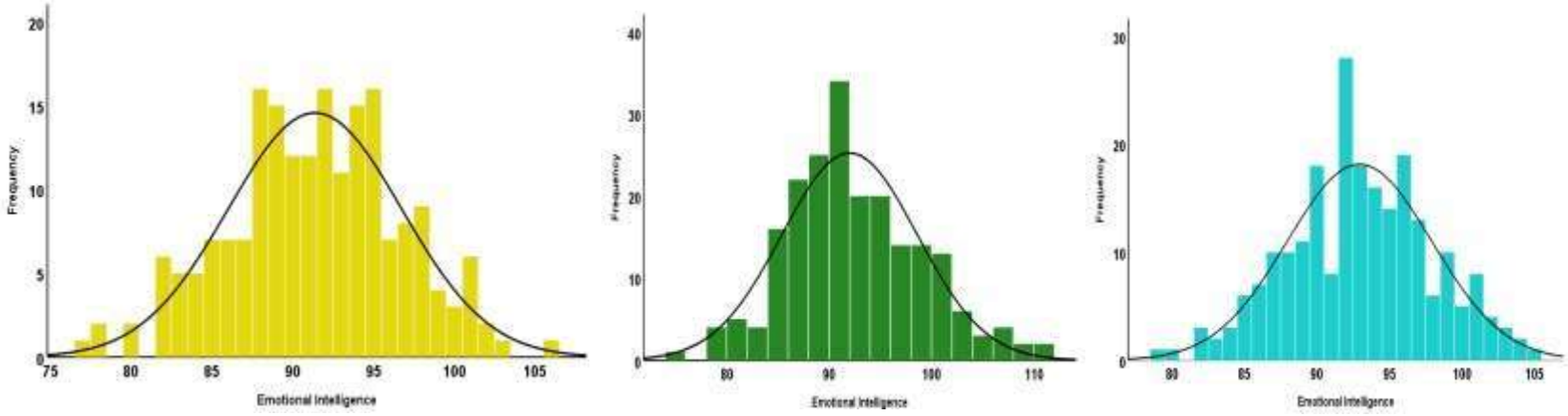


Figure 4.6

Histograms for emotional intelligence for novice (extreme left), experienced (middle) and expert (extreme right) teachers



Thus, the data for teachers' emotional intelligence satisfied all the assumptions of 2-ways ANOVA and thereby qualified for applying the same.

Hypothesis 1 dealt with two categorical variablesgender, teaching experiences and one continuous variable that were emotional intelligence. There two levels of gender namely male and female on the other way noviceteachers, experienced teachers and expert teachers were the three teaching experiences to which teachers belong. Thus, the data were analyzed with the help of two ways ANOVA or 2 * 3 factorial designs ANOVA using statistical package for the social sciences (SPSS). The outputs of SPSS are as given in tables 4.3, 4.4 and 4.5.

Table 4.2

Descriptive statistics associated with emotional intelligence across gender and teaching experiences

EI Variables	Groups	Mean		Skewness		Kurtosis		SD
	Statistic		. Error	Statistic	Std. Error	Statistic	Std. Error	
Gender	**Female**	95.38	.309	-.024	.151	.694	.301	4.988
	Male	89.88	.262	.257	.126	.535	.252	5.065
Teaching	**Novice**	91.38	.383	-.103	.174	-.168	.346	5.368
Experience	**Experienced** 92.000		.456	.376	.168	.025	.335	6.605
	Expert	92.93	.331	-.063	.162	-.203	.322	4.993

Table 4.3

Descriptive Statistics

Descriptive Statistics

Dependent Variable: Emotional Intelligence

Gender	Teaching experienced	Mean	Std. Deviation	N
Female	**Novice**	95.029	3.68327	114
	Experienced	94.536	6.20695	122
	Expert	98.2667	2.89514	136
	Total	95.3808	4.98852	372
Male	**Novice**	87.1758	3.65329	82
	Experienced	89.1818	5.87343	87
	Expert	91.6209	4.50343	91
	Total	89.8844	5.06508	260
Total	**Novice**	91.3827	5.36766	196
	Experienced	92.0000	6.60492	209
	Expert	92.9383	4.99253	227
	Total	92.1456	5.71186	632

Table 4.4

Test of between- subjects' effects

Tests of Between-Subjects Effects

Dependent Variable: Emotional intelligence

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	6354.784[a]	5	1270.957	55.904	.000	0.309
Intercept	4581995.986	1	4581995.986	201543.356	.000	0.997

Gender	5845.984	1	5845.984	257.141	.000	0.291
TE	1323.259	2	661.629	29.102	.000	0.085
Gender * TE	157.372	2	78.686	3.461	.032	0.011
Error	14231.824	626	22.735			
Total	5386776.000	632				
Corrected Total	20586.608	631				

a. R Squared = .309 (Adjusted R Squared = .303)

Table 4.5

Post Hoc Test

Emotional Intelligence

Duncan[a,b,c]

		Subset	
Teaching Experiences	**N**	**1**	**2**
Novice	196	91.3827	
Experienced	209	92.0000	
Expert	227		92.9383
Sig.		.185	1.000

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square (Error) = 22.735.

a. Uses Harmonic Mean Sample Size = 209.907.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = .05

The results of two ways ANOVA should be interpreted as given below:

The first objective was to study the influence of gender, teaching experiences and their interaction on emotional intelligenceof teachers. There were two levels of gender namely male and female teachers; while teachers belonged to novice teachers, experienced teachersand expertteachers. Thus, the data were analysed with the help of two ways ANOVA or 2 * 3 factorial designs ANOVA; and the results are given in table 4.6

Table 4.6

*Summary of 2 * 3 factorial design ANOVA of emotional intelligence of teachers*

Source	Sum of Squares	Df	Mean Sum of Squares	F	Sig.
Gender (A)	5845.98	1	5845.98	257.14	P<0.01
Teaching experiences (B)	1323.26	2	661.63	29.10	P<0.01
A * B	157.37	2	78.69	3.46	P<0.05
Error	14231.82	626	22.76		
Total	5386776.00	632			

a) Influence of gender on emotional intelligence:

The table 4.3 shows that mean scores of emotional intelligence of male and female teachers differs. Further the mean scores of emotional intelligence of female teachers was 95.94 was higher than that of male teachers that was 89.33. Therefore, whether the male teachers and female teachers emotional intelligence differs significantly or not will be tested through two way ANOVA.From the table 4.6, it is evident that the F-value for gender is 257.14 which is significant at 0.01 level with df =1, 626. It shows that mean scores of emotional intelligence of female teachers differ significantly from those male teachers. So there was a significant influence of gender on emotional intelligence of teachers. Thus, null hypotheses that there is no significant influence of gender on emotional intelligence of teachers were rejected. Further, Further the mean scores of emotional intelligence of female teachers was 95.94 was higher than that of male teachers

that was 89.33. Therefore, it can be said that the female teachers emotional intelligence significantly more as compared to the male teachers.

b) Influence of teaching experiences on emotional intelligence

The table 4.3 shows that mean scores of emotional intelligence across teaching experiences differs. Further, the mean scores of emotional intelligence of expert teachers was 94.94 was higher than that of the mean score of experienced teachers was 91.86 and novice teachers that was 91.10. Therefore, whether the novice, experienced and expert teachers emotional intelligence differs significantly or not will be tested through two ways ANOVA.The table 4.6 shows that the F-value for teaching experiences is 29.10 which is significant at 0.01 level with df= 2, 626. It shows that the mean scores of emotional intelligence of novice, experienced and expert teachers differ significantly. Thus, the null hypothesis that there is no significant influence of teaching experience on emotional intelligence of teachers is rejected. Further, the mean scores of emotional intelligence of expert teachers was 94.94 was higher than that of the mean score of experienced teachers was 91.86 and novice teachers that was 91.10.

Therefore, it can be said that the expert teachers emotional intelligence significantly more as compared to the experienced and novice teachers.In order to know what kind of experienced teachers significantly higher emotional intelligence, the data were further analyzed with the help of Duncan multiple range test and the results are given in table 4.7.

Table 4.7

Teaching Experience wise mean, N and significance of difference among mean scores of emotional intelligence of teachers

Teaching Experience	M	N	Experienced	Expert
Novice	91.38	196	*	**
Experienced	92.00	209		*
Expert	92.94	227		

*significant at 0.05 level, **significant at 0.01 level, ***significant at 0.001 level

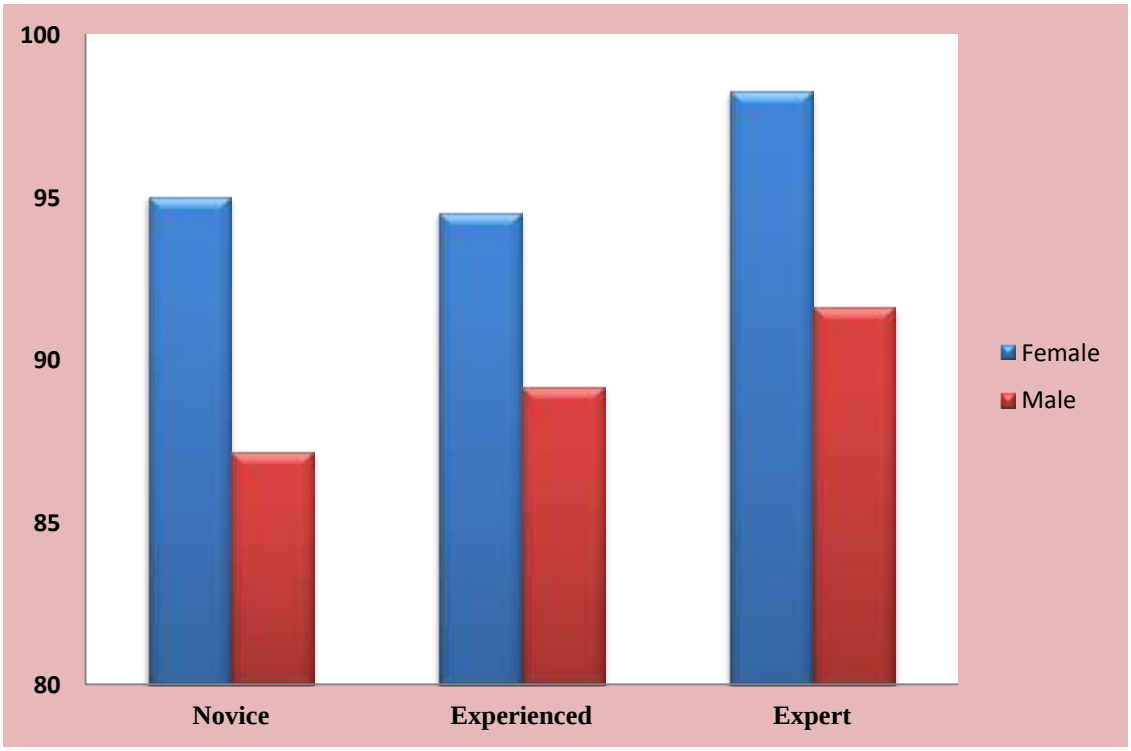
Results from the table 4.7 it can be said that emotional intelligence of novice, experienced and expert teachers differ significantly.The mean score of emotional intelligence of experienced teachers is 92.00 which are significantly higher than that of Novice teachers whose mean score of emotional intelligence was 91.38. Therefore, it can be said that experienced teachers were found to have significantly more emotional intelligence than the Novice teachers.The mean score of emotional intelligence of expert teachers is 92.94 which are significantly higher than that of experienced teachers whose mean score of emotional intelligence is 92.00. Therefore, it can be said that expert teachers were found to have significantly more emotional intelligence than the experienced teachers.The mean score of emotional intelligence of expert teachers is 92.94 which are significantly higher than that of Novice teachers whose mean score of emotional intelligence is 91.38. Therefore, it can be said that expert teachers were found to have significantly more emotional intelligence than the Novice teachers.On the whole, it can be said that emotional intelligence of experienced teachers is significantly higher than that of novice teachers, but significantly lower than that of expert teachers.

c) Influence of interaction between gender and teaching experience on emotional intelligence of teachers

The figure 4.8 shows that mean scores of emotional intelligence across gender and teaching experiences differs. Further the mean scores of emotional intelligence of expert female teachers was 98.27 (see table 4.3) was higher than that of the mean score ofexpert male teachers was 91.62. However, the mean scores of emotional intelligence of experienced female teachers was 94.54 was higher than that of the mean score of experienced male teachers was 89.18. Besides, the mean scores of emotional intelligence of novice female teachers was 95.03 was higher than that of the mean score of novice male teachers was 87.18. Therefore, whether the female and male novice, experienced and expert teachers emotional intelligence differs significantly or not will be tested through two ways ANOVA.

Figure 4.7

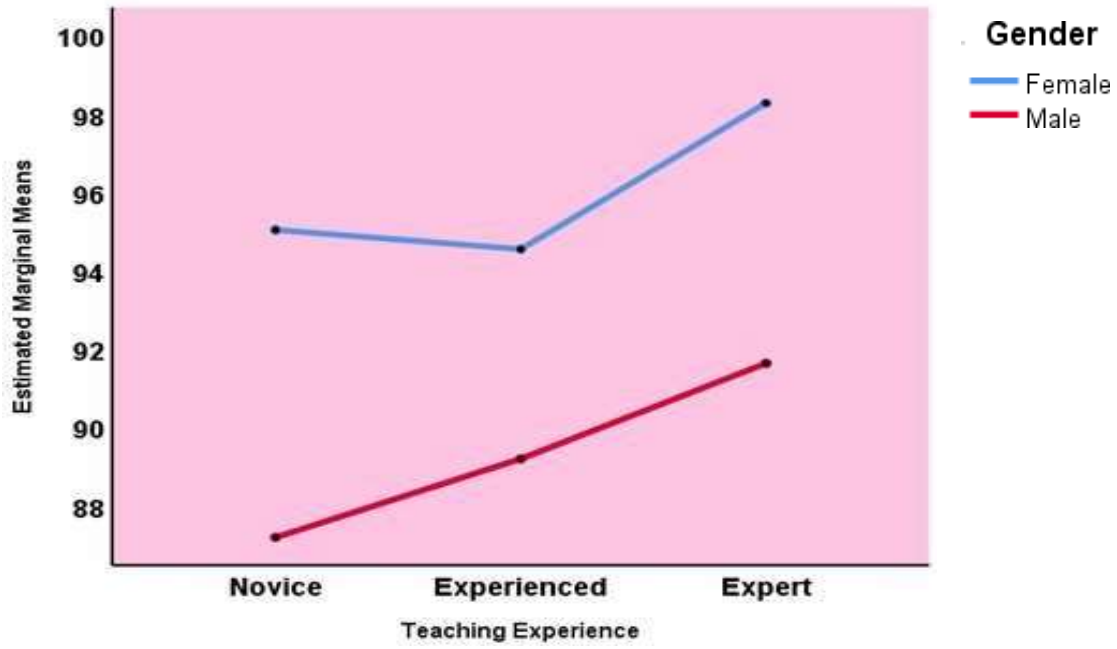
Descriptive statistics of emotional intelligence across gender and teaching experiences



The F-value for interaction between gender and teaching experience is 3.46 which is significant at 0.05 level with df = 2, 626 (vide table 4.6). It shows that mean scores of emotional intelligence of male and female teachers across novice, experienced and expert teachers differ significantly. It means there was a significant influence of interaction between gender and teaching experiences on emotional intelligence of teachers. Thus null hypothesis i.e. there is no significant influence of interaction between gender and teaching experience on emotional intelligence of teachers is rejected.In order to know the trend of influence of interaction between gender and teaching experiences, graph 4.8 has been depicted.

Figure 4.8

Trend of influence of interaction between gender and teaching experiences on emotional intelligence of teachers estimate marginal mean of emotional intelligence



From graph 4.8 it can be seen that the trend of male and female teachers emotional intelligence in relation to teaching experiences. In case of female teachers, emotional intelligence declined from novice to experienced teachers but there is a sharp increase in emotional intelligence from experienced to expert teachers. On the other hand, in case of male teachers there is a sharp increase in emotional intelligence from novice to expert teachers.

4.3 Objective 2: To study the influence of gender, teaching experience and their interaction on social intelligence of teachers

$H_0$2: There is no significant influence of gender, teaching experiences and their interaction on social intelligence of teachers.

In this study second objective (i.e. objective 2) was to study the influence of gender, teaching experience and their interaction on social intelligence of teachers on thebasis

of first objective the following null hypothesis $H_0 2$ can be formulated that was _there is no significant influence of gender, teaching experiences and their interaction on social intelligence of teachers‘. This null hypothesis deals three variables: gender teaching experiences and social intelligence. Here Gender and teaching experiences were categorical variable at the same time social intelligence was a continuous variable. Gender was a categorical with two independent levels namely, the male teachers and the female teachers.

Teaching experience was a categorical with three independent levels namely, novice teachers, experienced teachers and expert teachers. Further social intelligence consists with five components that were social awareness, social adaptability, social cooperativeness, social expressivity, interpersonal relationship. During data collection process, no respondent was measured more than once. The observations for all the respondents were independent of each other. Therefore, in order to find the statistical significance of _the difference‘ in the mean scores of gender, teaching experience and social intelligence, the null hypothesis (i.e. $H_0 2$) was tested using two way ANOVA. Prior to performing the two ways ANOVA (2-tailed), the assumptions associated with this statistical technique were checked.

Firstly, there were no significant outliers in terms of teachers social intelligence, as assessed by inspection of the box-plots of the two categorical variables Gender (see Figure 4.9) with two groups (male teachers and female teachers) and teaching experiences (see Figure 4.10) with three groups (novice teachers, experienced teachers, expert teachers), separately. Secondly, from the descriptive statistics (see Table 4.9 and Table 4.10) of teachers' social intelligence, the value of kurtosis and skewness (i.e., skewness$<\left|2.0\right|$ and kurtosis$<\left|9.0\right|$ (Schmider, Ziegler, Danay, Beyer, & Buhner, 2010) across two categorical variables namely, gender (with two groups: male teachers and female teachers) and teaching experiences (with three groups: novice teachers, experienced teachers, expert teachers), were approximately normally distributed, separately. The normality of social intelligence across gender (see Figure 4.13) and across teaching experience like novice, experienced and expert teachers (see Figure 4.14) was further supported by the Q-Q plots (see Figure 4.11 and Figure 4.12).

The normality of social intelligence was checked through the histograms associated with teachers' gender-wise like male teachers and female teachers (see Figure 4.13) and experience-wise like novice teachers, experienced teachers and expert teachers (see Figure 4.14) social intelligence.Further, teachers' social intelligence scores for each level of gender and teaching experience were normally distributed, as assessed by Shapiro-Wilk test (1965) (see Table 4.8). Thirdly, the results of the Levene's test (1960) for equality of variances [W (5,626) =4.547, p<0.001] depicted that the variances of the scores of teachers social intelligence did not significantly differ across gender and teaching experiences. Therefore, the assumption regarding the homogeneity of variances was also satisfied by each criterion variable.

Table 4.8

Results of Normality tests for social intelligence across teachers gender and teaching experience separately

	Categorical variables	**Groups**	**Kolmogorov-Smirnov**			**Shapiro-Wilk**		
			Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
Social Intelligence	**Gender**	**Male**	0.055	260	0.051	0.992	260	0.170
		Female	0.062	372	0.052	0.988	372	0.145
	Teaching experience	**Novice**	0.048	196	0.200	0.995	196	0.770
		Experienced	0.087	209	0.061	0.986	209	0.631
		Expert	0.051	227	0.053	0.994	227	0.525

Figure 4.9

Box-plots of social intelligence across male and female teachers

Figure 4.10

Box-plots of social intelligence across novice, experienced and expert teachers

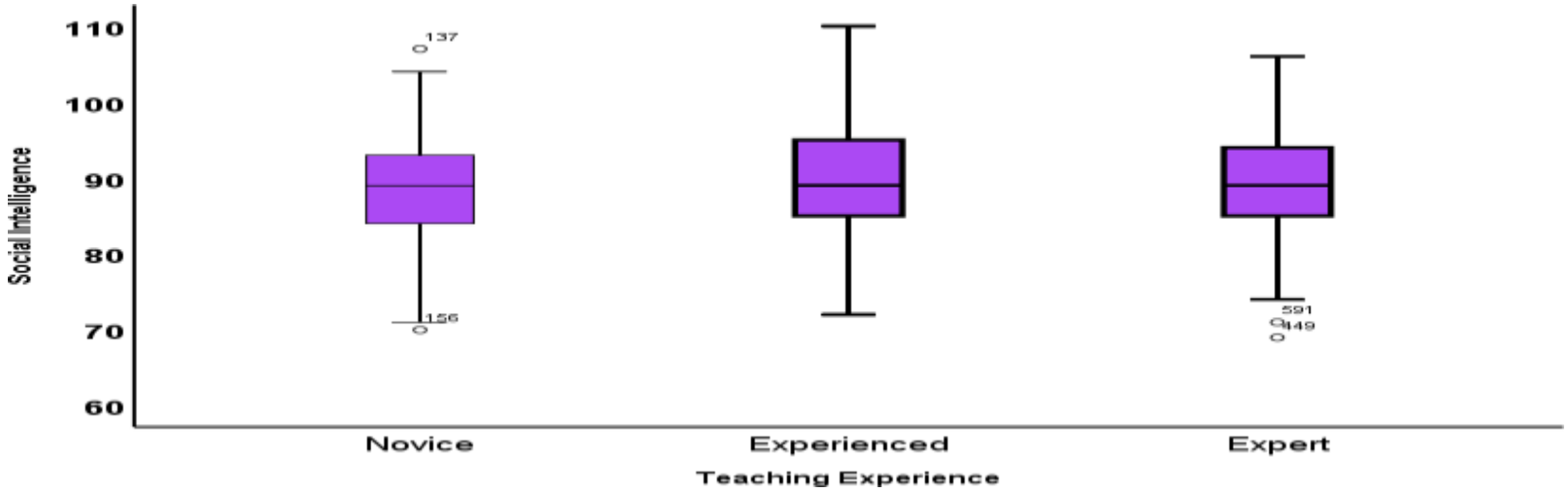


Figure 4.11

Q-Q plots of emotional intelligence for male (left) and female (right) teachers

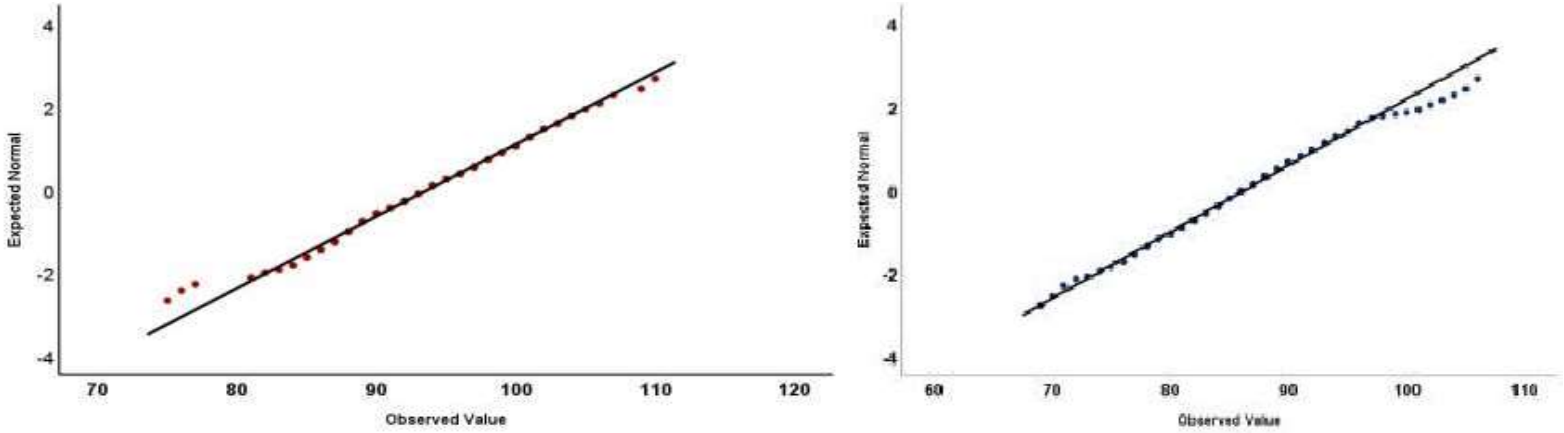


Figure 4.12

Q-Q plots of emotional intelligence for novice (extreme left), experienced (middle) and expert (extreme right) teachers

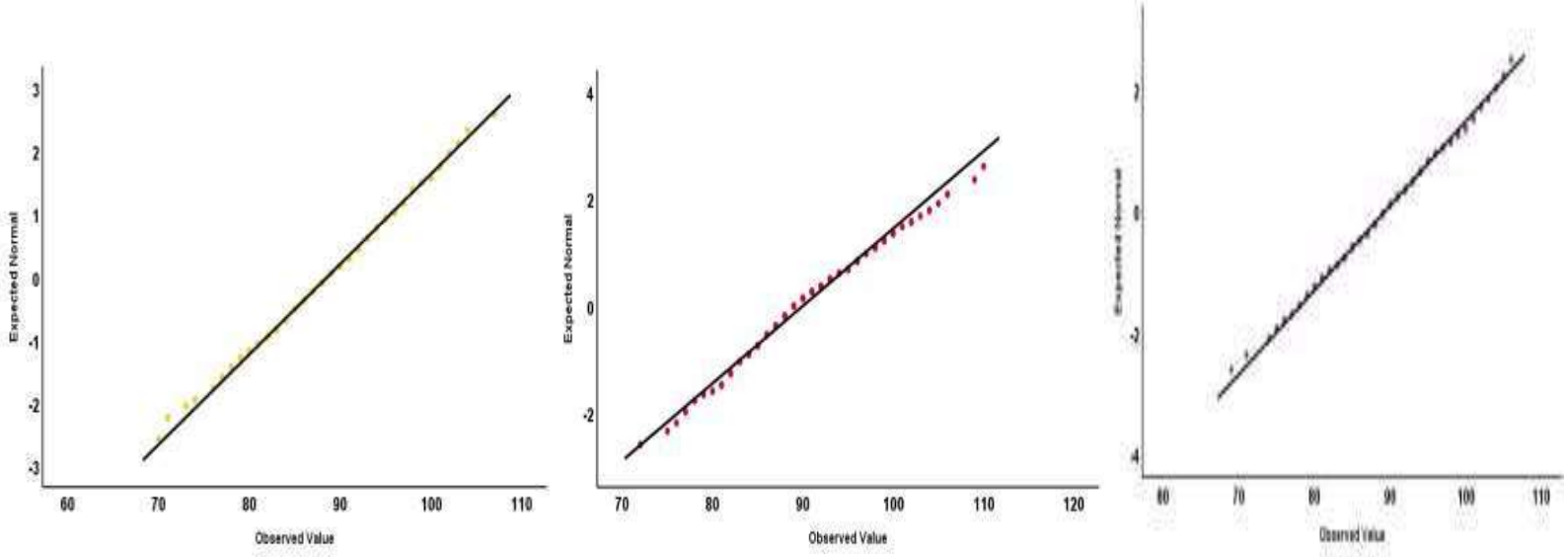


Figure 4.13

Histograms for emotional intelligence for male (left) and female (right) teachers

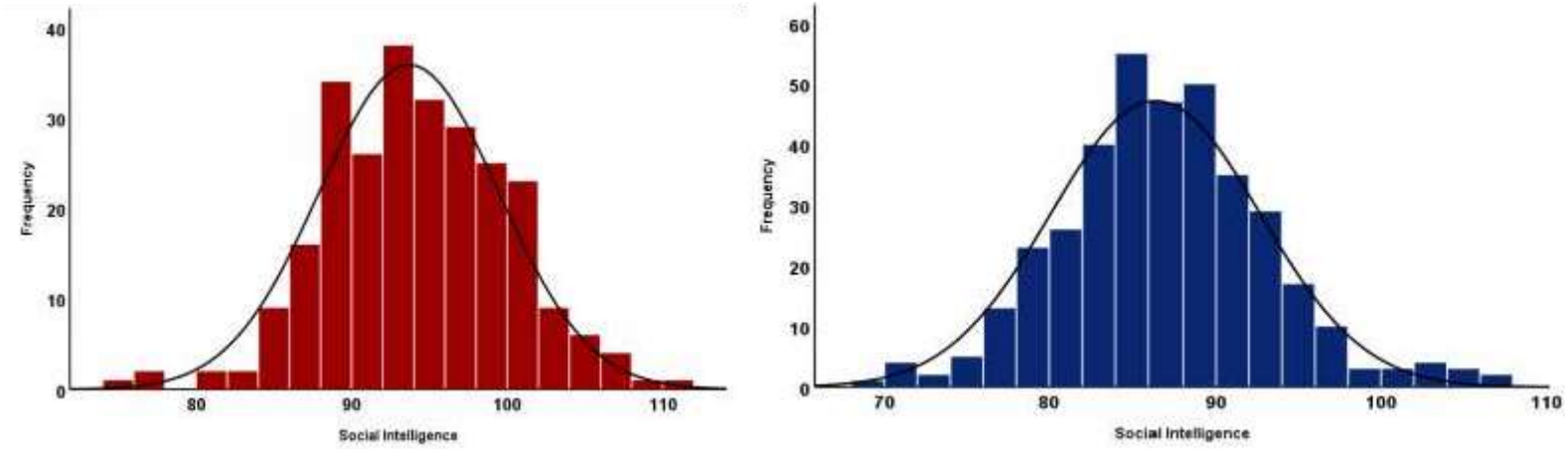
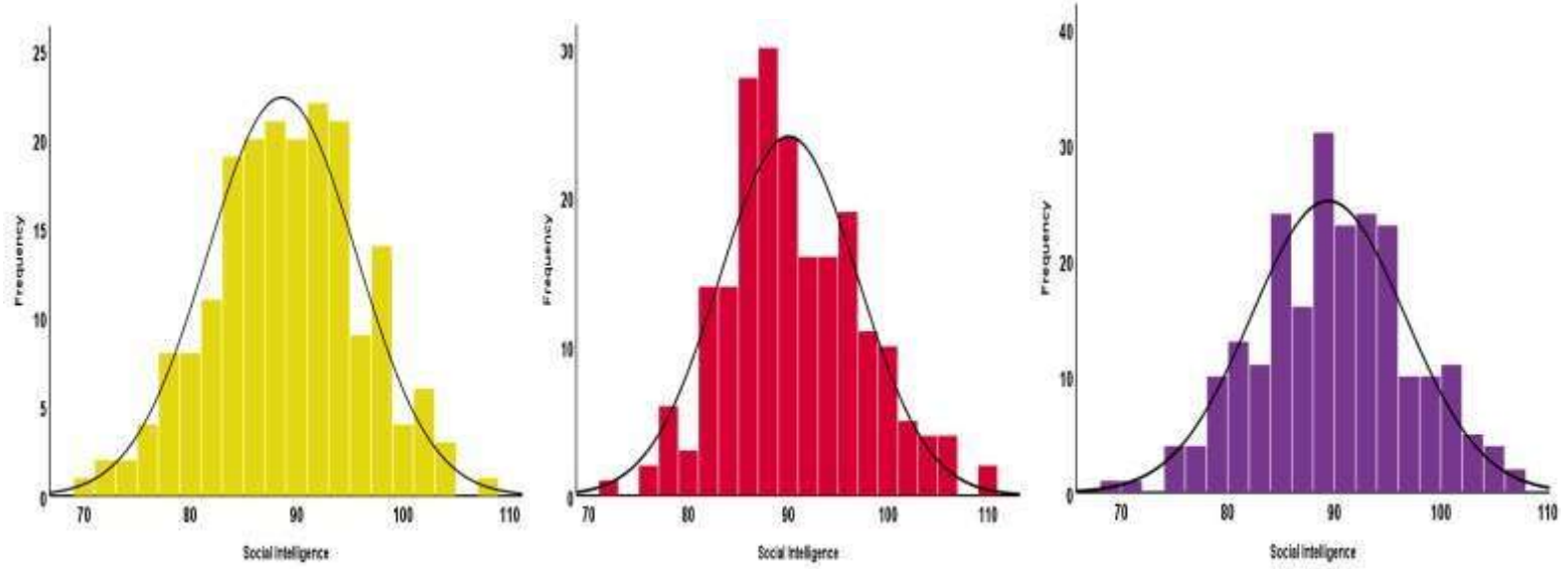


Figure 4.14

Histograms for emotional intelligence for novice (extreme left), experienced (middle) and expert (extreme right) teachers



Thus, the data for teachers' social intelligence satisfied all the assumptions of 2-ways ANOVA and thereby qualified for applying the same.

4.3.1 Influence of gender, teaching experience and their interaction on social intelligence of teachers

In this study there are two variable namely, gender and teaching experiences. There two levels of gender namely male and female on the other way novice teachers, experienced teachers and higher experienced teachers were the three teaching experiences to which teachers belong. Thus, the data were analyzed with the help of two ways ANOVA or 2 * 3 factorial designs ANOVA using statistical package for the social sciences (SPSS). The outputs of SPSS are as given in tables 4.11 and 4.12.

Table 4.9

Descriptive statistics associated with social intelligence across gender and teaching experiences

Emotional Intelligence	Categorical variables	Groups	Mean	Std. Error	Skewness Statistic	Skewness Std. Error	Kurtosis Statistic	Kurtosis Std. Error	Standard deviation
	Gender	**Female**	93.689	0.358	-.048	0.151	.247	.301	5.78434
		Male	86.376	0.325	.249	0.126	.585	.252	6.28593
	Teaching	**Novice**	88.612	0.500	-.113	0.174	-.153	.346	7.00349
	experienc	**Experie**	90.057	0.479	.345	0.168	-.016	.335	6.93005
		Ncede Expert	89.432	0.478	-.060	0.162	-.220	322	7.20794

Table 4.10

Descriptive Statistics

Descriptive Statistics

Dependent Variable: Social intelligence

Teaching experiences	Gender	Mean	Std. Deviation	N
Novice	Female	93.3143	4.86810	114
	Male	83.1868	4.83026	82
	Total	88.6122	7.00349	196
Experienced	Female	92.6545	6.59919	122
	Male	87.1717	6.12462	87
	Total	90.0574	6.93005	209
Expert	Female	97.0889	4.26839	136
	Male	87.5385	6.50084	91
	Total	89.4317	7.20794	227
Total	Female	93.6885	5.78434	372
	Male	86.3763	6.28593	260
	Total	89.3845	7.06631	632

Table 4.11

Test of between- subjects" effects

Tests of Between-Subjects Effects

Dependent Variable: Social intelligence

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	10069.287[a]	5	2013.857	58.805	.000	0.320
Intercept	4340338.643	1	4340338.643	126738.330	.000	0.995

TE	1369.756	2	684.878	19.999	.000	0.060
Gender	9389.624	1	9389.624	274.178	.000	0.305
TE * Gender	631.595	2	315.798	9.221	.000	0.029
Error	21438.281	626	34.246			
Total	5080927.000	632				
Corrected Total	31507.568	631				

a. R Squared = .320 (Adjusted R Squared = .314)

Table 4.12

Post Hoc Test

Social Intelligence

Duncan[a,b,c]

		Subset	
Teaching experiences	**N**	**1**	**2**
Novice	196	88.6122	
Expert	227	89.4317	89.4317
Experienced	209		90.0574
Sig.		.152	.274

Means for groups in homogeneous subsets are displayed.Based on observed means.

The error term is Mean Square(Error) = 34.246.

a. Uses Harmonic Mean Sample Size = 209.907.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I errorlevels are not guaranteed.

c. Alpha = .05.

The results of two ways ANOVA should be interpreted as given below:

The objective was to study the influence of gender, teaching experiences and their interaction on social intelligence of teachers. There were two levels of gender namely male and female teachers; while teachers belonged to novice teachers, experienced teachers and expert teachers. Thus, the data were analysed with the help of two ways ANOVA or 2 * 3 factorial designs ANOVA; and the results are given in table 4.1

Table 4.13

Summary of 2 * 3 factorial design ANOVA of social intelligence of teachers

Tests of Between-Subjects Effects Dependent Variable: SI

Source	Type III Sum of Square	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	10069.287[a]	5	2013.857	58.805	.000	0.320
Intercept	4340338.643	1	4340338.643	126738.330	.000	0.995
TE	1369.756	2	684.878	19.999	.000	0.060
Gender	9389.624	1	9389.624	274.18	.000	0.305
TE * Gender	631.595	2	315.798	9.221	.000	0.029
Error	21438.281	626	34.246			
Total	5080927.000	632				
Corrected Total	31507.568	631				

a. R Squared = 0.320 (Adjusted R Squared = .314)

From the table 4.13, it is evident that the F-value for gender is 274.18 which is significant at 0.01 level with df= 1/626. It shows that the mean scores of social intelligence of male and female teachers differ significantly. Thus, the null hypothesis is rejected.

4.3.1.1 *Influence of gender on social intelligence of teachers*

The table shows that mean scores of social intelligence of male and female teachers differs. Further, the mean scores of social intelligence of female teachers was 93.69 was higher than that of male teachers that was 86.37 (see Table 4.9). Therefore, whether the male teachers and female teachers emotional intelligence differs significantly or not will be tested through two way ANOVA.The table shows that the F-value for gender is 274.18 (see table 4.13)which is significant at 0.01 level with df= 1/626. It shows that the mean scores of social intelligence of male and female teachers differ significantly. Thus, the null hypothesis is rejected. Further, the mean scores of social intelligence of female teachers was 93.69 was significantly higher than that of male teachers that was 86.37. Therefore, it can be said that the female teachers social intelligence significantly more as compared to the male teachers.

4.3.1.2 *Influence of teaching experiences on social intelligence of teachers*

The table shows that mean scores of social intelligence across teaching experiences differs significantly. Thus the null hypothesis that is there is no significant influence of teaching experience on social intelligence of teachers is rejected. Further the mean scores of social intelligence experienced teachers were 90.06higher than expert teachers (89.43)and novice teachers that were 88.62. Therefore, whether the novice, experienced and expert teachers social intelligence differs significantly or not will be tested through two ways ANOVA.

The table shows that the F-value for teaching experiences is 19.10 which is significant at 0.01 level with df= 2/626. It shows that the mean scores of social intelligence of novice, experienced and expert teachers differ significantly. Thus, the null hypothesis is rejected. Further the mean scores of social intelligence of teachers is rejected. Further the mean scores of social intelligence experienced teachers were

90.06higher than expert teachers (89.43) and novice teachers that were 88.62 .Therefore, it can be said that the experienced teachers social intelligence significantly more as compared to the expert and novice teachers. In order to know what kind of experienced teachers' significantly higher social intelligence, the data were further analyzed with the help of Duncan multiple range test and the results are given in table 4.14

Table 4.14

Teaching Experience wise mean, N and significance of difference among mean scores of social intelligence of teachers

Teaching Experience	**M**	**N**	**Experienced**	**Expert**
Novice	88.61	196	**	**
Experienced	90.06	209		*
Expert	89.43	227		

*significant at 0.05 level, **significant at 0.01 level, ***significant at 0.001 level

The F-value for interaction between gender and teaching experience is 9.22 which is significant at 0.01 level with df = 2, 626. It shows that mean scores of social intelligence of male and female teachers across novice, experienced and expert teachers differ significantly. It means there was a significant influence of interaction between gender and teaching experiences on social intelligence of teachers. Thus null hypothesis i.e. there is no significant influence of interaction between gender and teaching experience on social intelligence of teachers is rejected.

4.3.1.3 Influence of interaction between gender and teaching experience on social intelligence of teachers

Figure 4.15

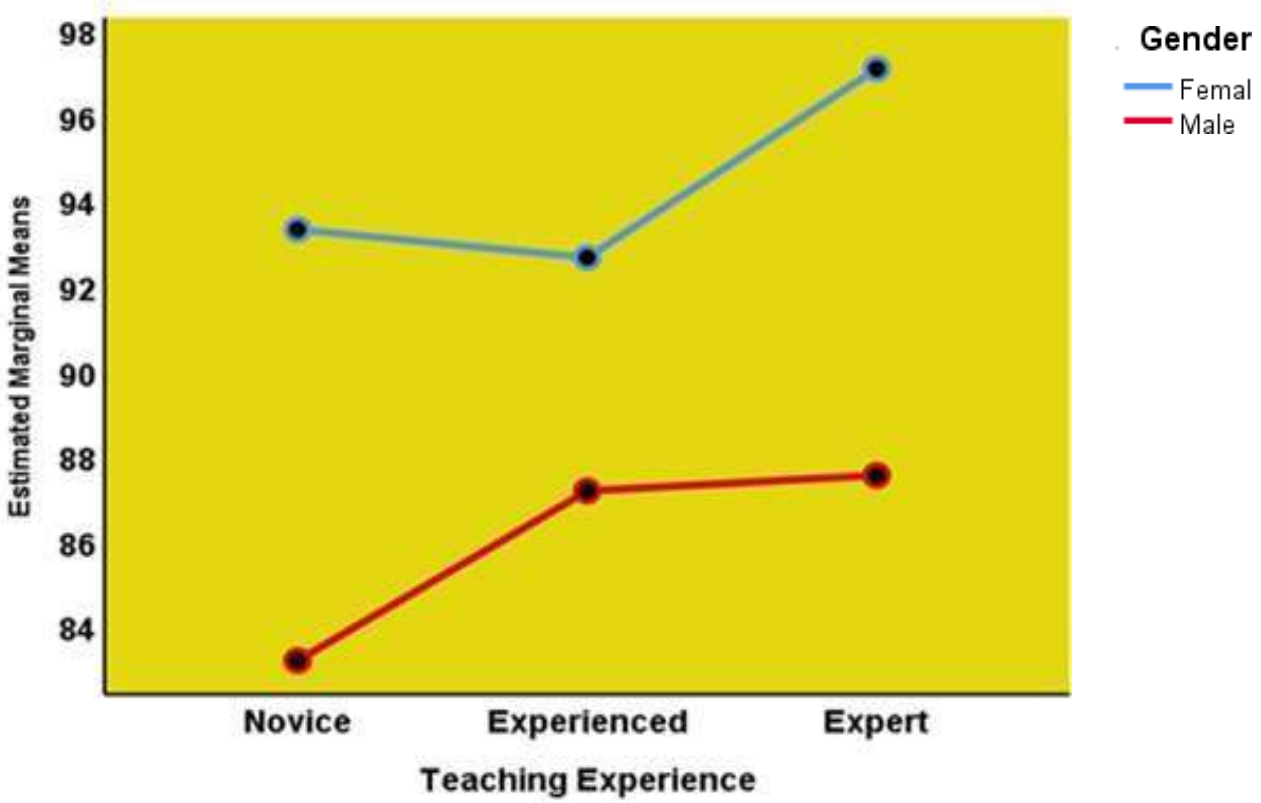
Descriptive statistics of social intelligence across gender and teaching experiences

The table 4.19 shows that mean scores of social intelligence across gender and teaching experiences differs. The male and female novice, experienced and expert teachers social intelligence differs significantly or not will be tested through two ways ANOVA.

Social intelligence of Novice, Experienced and Expert teachers differ significantly (see table 4.13). It can be said that Expert teachers were found to have significantly more Social intelligence than the Novice teachers.On the whole, it can be said that Social intelligence of Expert teachers is significantly higher than that of Novice teachers, but significantly lower than that of experienced teachers.In order to know the trend of influence of interaction between gender and teaching experiences, figure 4.16 has been depicted.

Figure 4.16

Trend of influence of interaction between gender and teaching experiences on social intelligence of teachers estimate marginal mean of social intelligence



This graph shows the trend of male and female teachers' social intelligence in relation to teaching experiences. In case of female teachers social intelligence declined from novice to experienced teachers but there is a sharp increase in social intelligence from experienced to expert teachers. On the other hand, in case of male teachers there is a sharp increase in social intelligence from novice to experienced teachers at the same time there was little bit increase of social intelligence from experienced to expert teachers.

4.4 Mediation effect of mediation effect of emotional intelligence and social intelligence on the relationship between gender and teaching style of teachers

Objective 3: To study the mediation effect of emotional intelligence and social intelligence on the relationship between gender and teaching style of teachers

$H_0$3: There is no significant mediation effect of emotional intelligence and social intelligence on the relationship between gender and teaching style of teachers

According to the research objective 3, the following null hypothesis was formulated: $H_0$3: ‗There is no significant mediation effect of emotional intelligence and social intelligence on the relationship between gender and teaching style of teachers'. This null hypothesis dealt with four variables, gender as the predictor variable, emotional intelligence (EI) and social intelligence (SI) as moderator variables, teaching style as outcome variable. The mediation hypothesis ($H_0$3) was tested following parallel mediation analysis using model 4 in PROCESS macro for SPSS (developed by Prof. Andrew F. Hayes; Hayes, 2013). PROCESS is based on regression-based path-analytic framework and estimates the indirect effect and bias-corrected confidence intervals.

It is very important to generalize the sample model to the entire population during conducting mediation analysis because it is an important criterion. Then it is very needed to meet several statistical assumptions of multiple regression analysis. If the data are violating the assumptions, then it will be insignificant for generalizing the conclusions to the main target population because the results might be wrong. Firstly, no potential outlier was identified from the Boxplot (see figure 4.19) of the residual of the regression model. Further, the absence of outlier was confirmed from the values of Cook's distance (Cook, 1977) that ranged from 0.00 to 0.07 and never exceeded the threshold value of 1.00 (Cook & Weisberg, 1982). Besides, the maximum value of the Mahalanobis (Mahalanobis, 1930) statistic (i.e. MMax=6.19) did not exceeded the critical value (i.e. 7.81 with df= 3 at 0.05 level) and thus, indicated the absence of any multivariate outlier in the residual.Secondly, there was an acceptable range of Durbin-Watson statistic that

was 1.00 to 3.00 (Field, 2013) and the results of this study also 2.05 falls under that acceptable range. So, there was no question of "Autocorrelation" with the data. This was the supported through residual plot (Figure 4.19). Residual points were not too much scattered around the fit line that is called the homoscedasticity of the residual (Figure 4.19). Further, Breusch-Pagan and Koenker test was performed using a macro developed by Ahmad Daryanto (Daryanto, 2020). Both tests i.e. Breusch-Pagan test (Lagrange Multiplier (LM) = 0.673, p= 0.836) and Koenker test (LM= 0.618, p= 0.751) were not significant and thus, ensured that the assumption of homoscedasticity has not been interrupted.

Thirdly Normality of residual was examined with the help of visual inspection of the Q-Q plot, Histogram (Figure 4.18) and Q-Q plot (Figure 4.18) of the unstandardized residual. Visual inspections of the normal probability curve were also checked though Statistical normality tests. Kolmogrov-Smirnov test (statistic= 0.056, p= 0.314) and the Shapiro-Wilk test (W= 0.854, p= 0.259) showed the statistically insignificant results normality of the unstandardized residual was finalized (Field, 2009).Fourth, linear regression was conducted between dependent variable (teaching style) in relation to independent variables. Each plot showed the value of R^2_{Linear}>0.3 (Neter, Kutner, Nachtsheim, & Wasserman, 1996), separately (see Figure 4.17).

Figure 4.17

Simple Scatter plot of teaching style against emotional intelligence and social intelligence

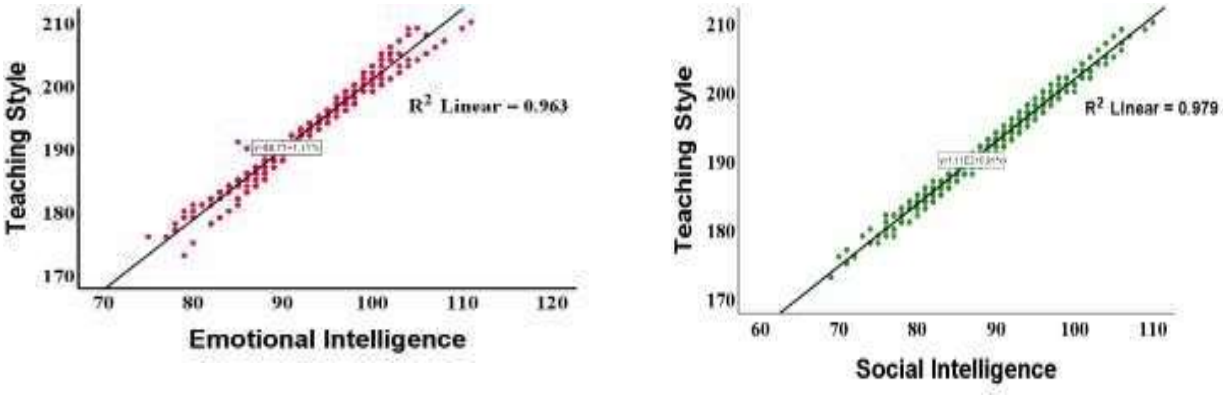


Figure 4.18

Histogram (extreme left) Normal Q-Q plots (middle)

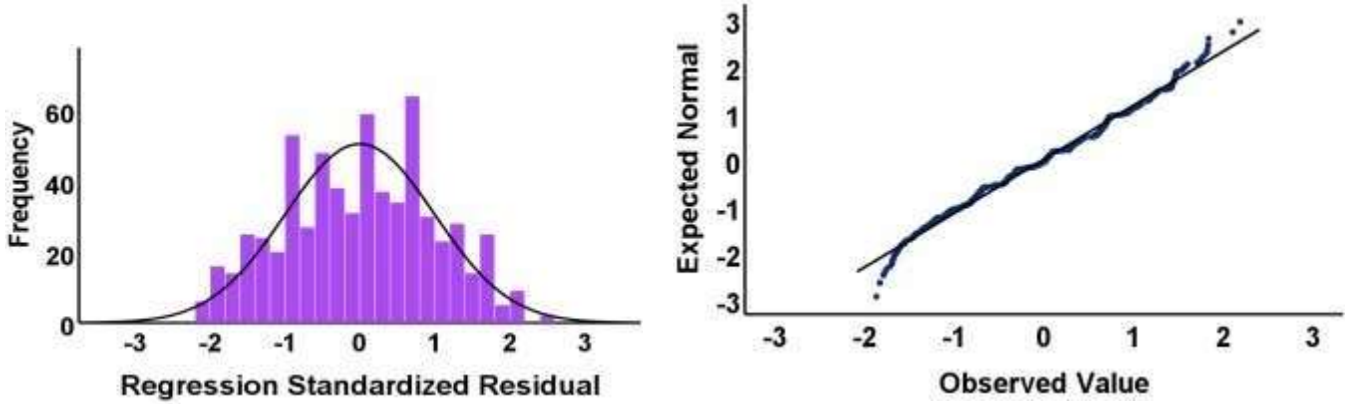


Figure 4.19

The Residual Plot of the dependent variable (Teaching Style) (left) and box plot of the residual (right)

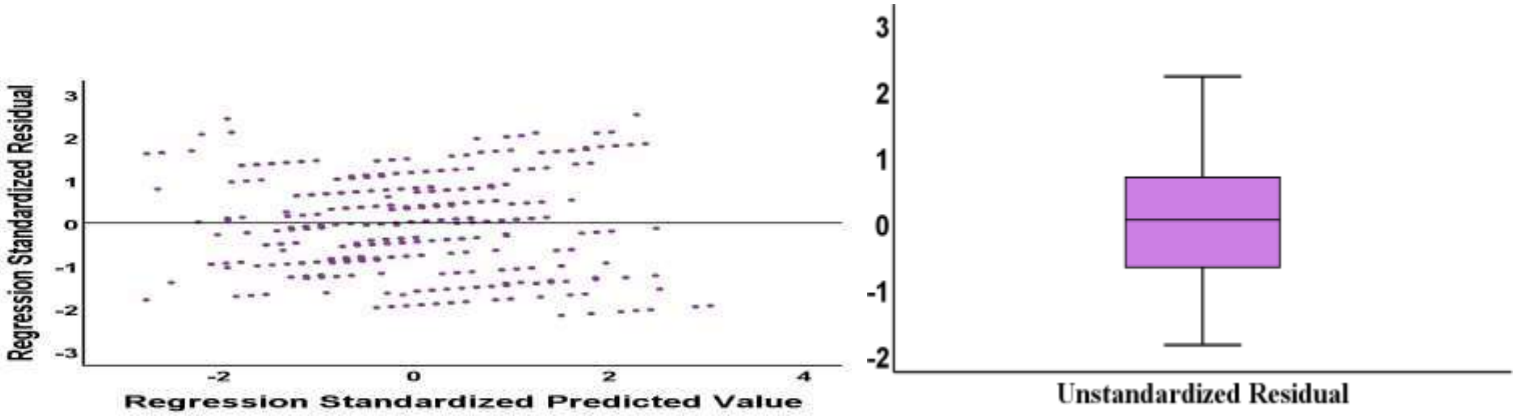


Table 4.15

Correlation Matrix for bivariate correlations (Pearson correlation) among the variables

	Emotional Intelligence	Social intelligence	Professional Commitment	Teaching Style
Emotional intelligence	----			
Social intelligence	0.521**	----		
Professional commitment	0.615**	0.546**	----	
Teaching style	0.517**	0.571**	0.517**	----

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

Table 4.16

Collinearity diagnostics of the Parallel Mediation Model with reference to Variance Inflation Factor (VIF) and Tolerance

	Collinearity Statistics	
Predictor variables in the Model	**Tolerance**	**VIF**
Emotional Intelligence	0.037	27.013
Social intelligence	0.035	28.294
Gender	0.723	1.384

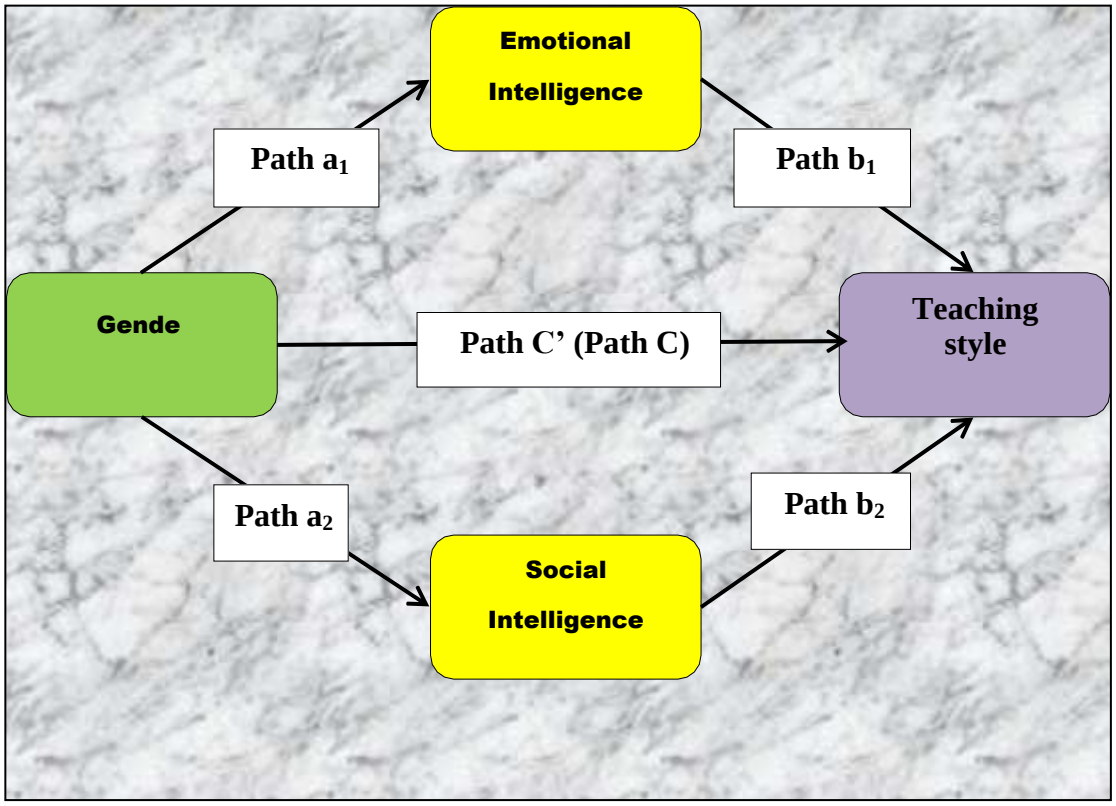
So, the data fulfilled all the statistical assumptions needed for mediation analysis hence it ensured any kind of statistical bias. Thus, the findings and conclusions from the mediation analysis may be generalized in the target population.

The parallel mediation analysis was run by selecting the emotional intelligence and social intelligence as two mediators indirectly.Hypothesized theoretical path model (see Figure 1 conceptual) were examined and evaluated (see Figure 4.20) two mediation relationship. The major focus was to examine whether the indirect effect of emotional intelligence and social intelligence on teaching style operates significantly to identify the route(s) of the flow of the indirect effect(s) and also to estimate the total, direct, and the indirect effect(s) along with their statistical significance. Bias-corrected Bootstrapping resampling methods were used for evaluating the statistical significance of the direct, indirect and total effects. It was needed to perform the bootstrapping resampling procedures (on 5,000 Bootstrap sub-samples) that produced 95% bias-corrected confidence intervals (Preacher et al., 2007 and Hayes 2013).The

total, direct and indirect effects were considered statistically significant at α=.05 when the corresponding bias-corrected confidence intervals of the effects did not include zero (Field, 2013). Nonparametric resampling procedurelike bootstrapping method was selected deliberately and it does not violate assumptions of normality (Koopmanet al., 2015). Further, Mediation with significant direct effect and significant indirect effects refers to "Partial mediation" the mediation with a non-significant direct effect and significant indirect effect refers to ‗full mediation'(Preacher and Hayes, 2008).

Figure 4.20

Hypothesized path model of the mediation effect for the emotional intelligence and social intelligence on the relationship between gender and teaching style



Note. a_1 is effect of gender on emotional intelligence; b_1 is effect of emotional intelligence on teaching styles; $c^{/}$ is direct effect of gender on teaching style; c is the total effect of gender on teaching stylein absence of any mediator, a_1b_1 is the indirect effect via the Mediator variable emotional intelligence, and a_2b_2 is the indirect effect via the Mediator variable social intelligence

The results of the parallel mediation analysis showed that the *Total effect model* is significant: R^2= 0.232, F (1, 630) = 190.265, p<0.001 (see Table A). The results also showed that gender positively predictsteachers teaching styles (C= 6.877, p<0.001, 95% CIs: [6.425, 7.329]) Further, results from the two*Mediator variable models* showed that genderpositively influencedteachers emotional intelligence (a_1= 5.496, p<0.001, 95% CIs: [5.109, 5.883] and R^2= 0.225, *F(1,630)*= 182.460, *p<.001*),
and teachers social intelligence (a_2= 7.312, p<0.001, 95% CIs: [6.904, 7.720] and R^2= 0.260, *F(1,630)*= 221.006, *p<.001*) (see Table A). In turn, teachers emotional intelligencepositively influencedteachers teaching style (b_1= 0.311, p<0.001, 95% CIs: [0.250, 0.373]); andsocial intelligence positively influencedteachers teaching style(b_2= 0.669, p<0.001, 95% CIs: [0.618, 0.720]) (see Table 4.17).

Further, analyzing the indirect effects from the *Indirect effect model*, results revealed that emotional intelligence significantly mediated the relationship between gender and teaching style: a_1*b_1= 1.712, 95% BootLLCI= 1.395, 95% BootULCI=
2.029 and social intelligence significantly mediated the relationship between gender and teaching style: a_2*b_2= 4.891, 95% BootLLCI= 4.597, 95% BootULCI= 5.185] (Hayes, 2013)(see Table 4.17) were also statistically significant. Therefore, emotionalintelligence and social intelligence significantly mediated the relationship between gender and teaching style. The total indirect effect exerted was also statisticallysignificant: (Total indirect effect= 6.603, 95% BootLLCI=6.125, 95% BootULCI= 7.081]; see Table A) which is 96.016% of the total effect.

The mediators were statistical significant although it has the indirect effects, it is required to calculate the effect size to find the practical significance of those effects. It was very important to measure kappa-squared (κ^2) to describe the effect sizeof the indirect effects, where $\kappa^2 \geq 0.01$ means small effect, $\kappa^2 \geq .09$ denoted medium effect, and $\kappa^2 \geq .25$ implies a large effect (Preacher and Kelley, 2011). Apart from this there was an argument that κ^2 is not an appropriate measure of effect size of mediationWen and Fan (2015).Besides, other effect size measures like $R^2_{4.5,}$ $R^2_{4.6}$, and $R^2_{4.7}$ (MacKinnon, 2008; Preacher and Kelley, 2011) are not preferred owing to the possibility of negative and non-intuitive values for R^2 (Fairchild et al., 2009) and κ^2 (Preacher and Kelley, 2011) is inappropriate as it is nonmonotonic with respect to *ab* (Wen and Fan, 2015). Wen and Fan (2015) argued that traditional mediation effect size measure P_M (ratio of the indirect effect to the total effect) should be preferred for

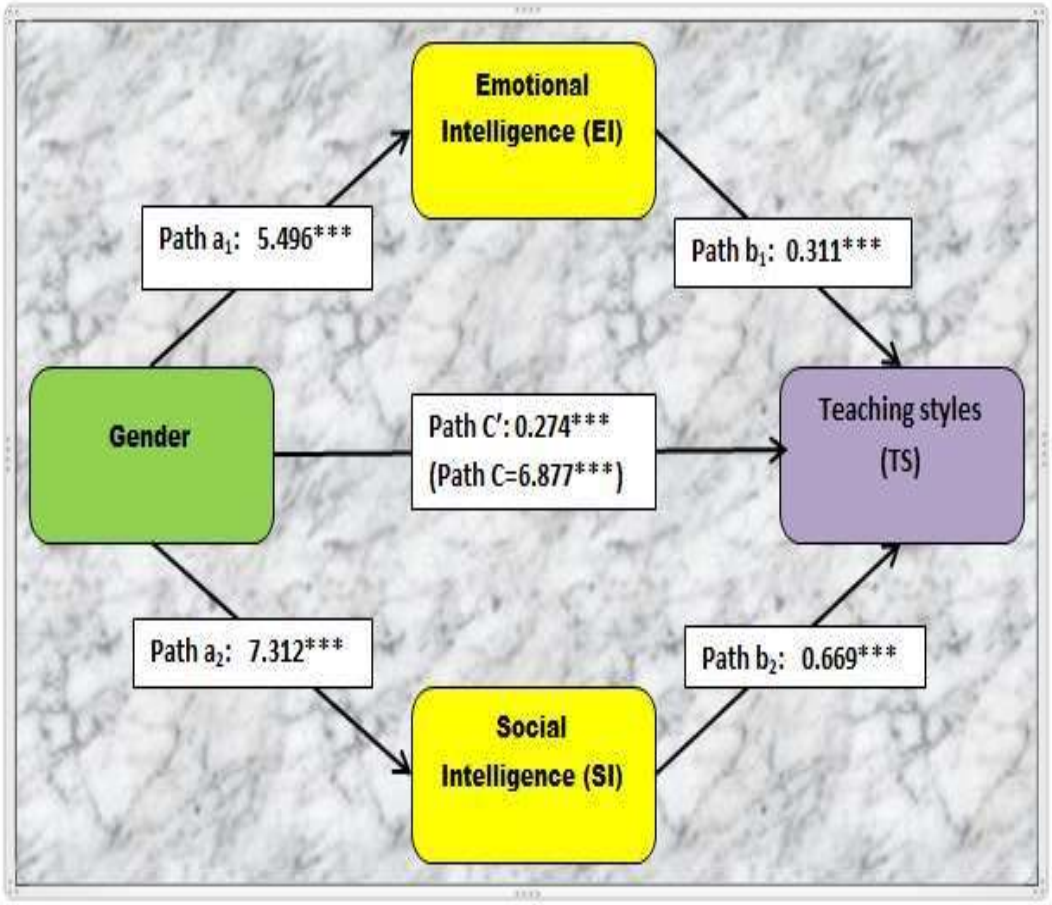
model rather thatthe mediation models where the indirect and direct effects bear opposite signs(Preacher and Kelley, 2011).

The P_M for the two mediators, emotional intelligence and social intelligence were found that 0.249 and 0.711 respectively (see Table 4.17).Individual paths in the mediated effect, correlations and standardized path measures are generally unbiased and accurate (Fairchild et al., 2009).However, still one limitation of the standardized effect-size measures is either restricted or excessive variability in Y, and also X if the fully standardized measure is used (Miočević, O'Rourke, MacKinnon, & Brown, 2018) which further highlights the instability of the ratio and proportion mediated (MacKinnon, Warsi & Dwyer, 1995; MacKinnon, 2008). So, it can be said that there was not any established guidelines standardized indirect effects in Mediation analysis in relation to the small, medium, and large groups. Although it was found that irrespective of the mediating effects of two variables that was emotional intelligence and social intelligence the *Direct effect model that* was gender stilly positively significant to the teaching style ($c^{/}$=0.274, p<0.001, 95% CIs: [0.113, 0.435]) (see Table 4.17).

So, it was found that direct effect of gender on teaching style was lessened but still it was significant. Therefore, it can be said that emotional intelligence partially mediated the relationship between gender and teaching style. The percentage of mediation effect shared by the two mediators was 24.90% for emotional intelligence and 71.12% for social intelligence of teachers (see Table 4.17). Further the proportion of the total effect of gender on teaching styles that operates indirectly through emotional intelligence through 24.90% and 71.12% through social intelligence. So, these findings provided the evidence that the gender gap in teaching style was caused by gender gap in emotional intelligence and gender gap in social intelligence (Figure 4.21).

Figure 4.21

Structural model of the total, direct and indirect effects for the emotional intelligence and social intelligence on the relationship between gender and teaching style



Note. *p < .05, **p < .01, ***p < .001

Note. a_1 is effect of gender on emotional intelligence; b_1 is effect of emotional intelligence on teaching styles; $c^{/}$ is direct effect of gender on teaching style; c is the total effect of gender on teaching stylein absence of any mediator, a_1b_1 is the indirect effect via the Mediator variableemotional intelligence, and a_2b_2 is the indirect effect via the Mediator variable social intelligence

Table 4.17

Results of Mediation analysis for Hypothesis 3

	B	SE	t	95%[LLCI, ULCI]
Total effect model: Gender(IV)→Teaching style(DV) (R^2=0.232, F(1,630)= 190.265, p<.001)				
Constant	202.225	0.763	265.016***	[200.73, 203.72]
Gender	6.877	0.499	13.794***	[6.425, 7.329]
Mediator variable model 1: Emotional Intelligence →Teaching style(DV) (R^2= 0.225, F(1,630)= 182.460, p<.001)				
Constant	100.877	0.677	149.069***	[99.55, 102.21]
Gender	5.496	0.407	13.508***	[5.109, 5.883]
Mediator variable model 2: Social Intelligence →Teaching style(DV) (R^2= 0.260, F(1,630)= 221.006, p<.001)				
Constant	101.001	0.818	123.472***	[99.39, 102.61]
Gender	7.312	0.492	14.866***	[6.904, 7.720]
Dependent variable model: Teaching Style (R^2= 0.982, F(1,630)= 11606.643 , p<.001)				
Constant	103.251	0.840	122.931***	[101.602, 104.901]
Gender	0.274	0.082	3.335**	[.113, .435]
Emotional Intelligence	0.311	0.031	9.956***	[.250, .373]
Social Intelligence	0.669	0.026	25.853***	[.618, .720]
Direct effect model *Gender(IV)→Teaching style(DV)*	0.274	0.0821	3.3347***	[.113, .435]

Indirect effect model

	Effect (B)	SE	95% [LLCI, ULCI]	Nature of Mediation	P_M	% of Mediation
Indirect effect of Gender on Teaching style (Mediator= Emotional intelligence)	1.712	0.200	[1.395, 2.029]	Partial Mediation	0.249	24.895
Indirect effect of Gender on Teaching style (Mediator= Social intelligence)	4.891	0.412	[4.597, 5.185]	Partial Mediation	0.711	71.121
Total indirect effect of Gender on Teaching Style	6.603	0.446	[6.125, 7.081]	--------	0.96	96.016

Note (for Table 4.17). Unstandardized regression coefficients are reported. Bootstrap sample size = 5000, N= 632, LL: lower limit, UL: upper limit, CI: confidence interval, P_M :Ratio of indirect effect to the total effect of gender on teaching style, *p<.05, **p<.01, ***p<.001

4.5 Mediation effect of emotional intelligence and social intelligence on the relationship between gender and professional commitment of teachers

Objective 4: To study the mediation effect of emotional intelligence and social intelligence on the relationship between gender and professional commitment of teachers

$H_0$4: There is no significant mediation effect of emotional intelligence and social intelligence on the relationship between gender and professional commitment of teachers

According to the research objective 4, the following null hypothesis was formulated: $H_0$4: There is no significant mediation effect of emotional intelligence and social intelligence on the relationship between gender and professional commitment of teachers'. This null hypothesis dealt with four variables, gender as the predictor variable, emotional intelligence (EI) and social intelligence (SI) asmediatorvariables, professional commitment as outcome variable. The mediation hypothesis ($H_0$4) wastested following parallel mediation analysis using model 4 in PROCESS macro for SPSS (developed by Prof. Andrew F. Hayes; Hayes, 2013). PROCESS is based on regression- based path-analytic framework and estimates the indirect effect and bias-corrected confidence intervals.

It is very important to generalize the sample model to the entire population during conducting mediation analysis because it is an important criterion. Then it is very needed to meet several statistical assumptions of multiple regression analysis. If the data are violating the assumptions, then it will be insignificant for generalizing the conclusions to the main target population because the results might be wrong.

Firstly, no potential outlier was identified from the Boxplot (see figure 4.24) of the residual of the regression model. Further, the absence of outlier was confirmed from the values of Cook's distance (Cook, 1977) that ranged from 0.00 to 0.42 and never exceeded the threshold value of 1.00 (Cook & Weisberg, 1982). Besides, the maximum value of the Mahalanobis (Mahalanobis, 1930) statistic (i.e. M_{Max}=5.531) did not exceeded the critical value (i.e. 7.822 with df= 3 at 0.05 level) and thus, indicated the absence of any multivariate outlier in the residual.

Secondly, there was an acceptable range of Durbin-Watson statistic that was 1.00 to 3.00 (Field, 2013) and the results of this study also 1.587 falls under that acceptable range. So, there was no question of 'Autocorrelation' with the data. This was the supported through residual plot (Figure 4.24). Residual points were not too much scattered around the fit line that is called the homoscedasticity of the residual (Figure 4.24). Further, Breusch-Pagan and Koenker test was performed using a macro developed by Ahmad Daryanto (Daryanto, 2020). Both tests i.e. Breusch-Pagan test (Lagrange Multiplier (LM) = .547, p= .716) and Koenker test (LM= .458, p= .651) were not significant and thus, ensured that the assumption of homoscedasticity has not been interrupted.

Thirdly Normality of residual was examined with the help of visual inspection of the Q-Q plot, Histogram (Figure 4.23) of the unstandardized residual. Visual inspections of the normal probability curve were also checked though Statistical normality tests. Kolmogrov-Smirnov test (statistic= .093, p= .721) and the Shapiro-Wilk test (W= .914, p=.457) showed the statistically insignificant results normality of the unstandardized residual was finalized (Field, 2009). Fourth, linear regression was conducted between dependent variable (professional commitment) in relation to independent variables. Each plot showed the value of R^2_{Linear}>0.3 (Neter, Kutner, Nachtsheim, & Wasserman, 1996), separately (see Figure 4.22).

Figure 4.22

Simple Scatter plot of professional commitment against emotional intelligence and social intelligence

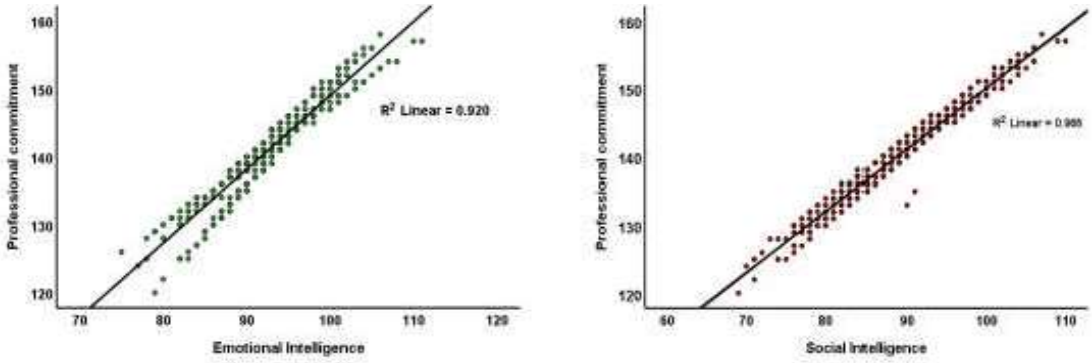


Figure 4.23

Histogram (extreme left) Normal Q-Q plots (middle)

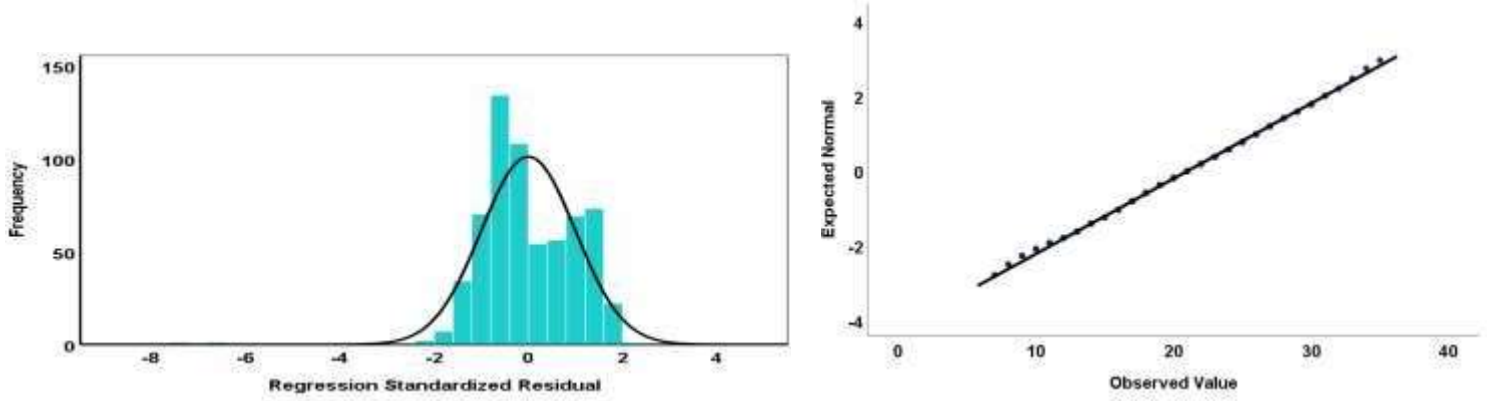


Figure 4.24

The Residual Plot of the dependent variable (Teaching Style) (left) and box plot of the residual (extreme right)

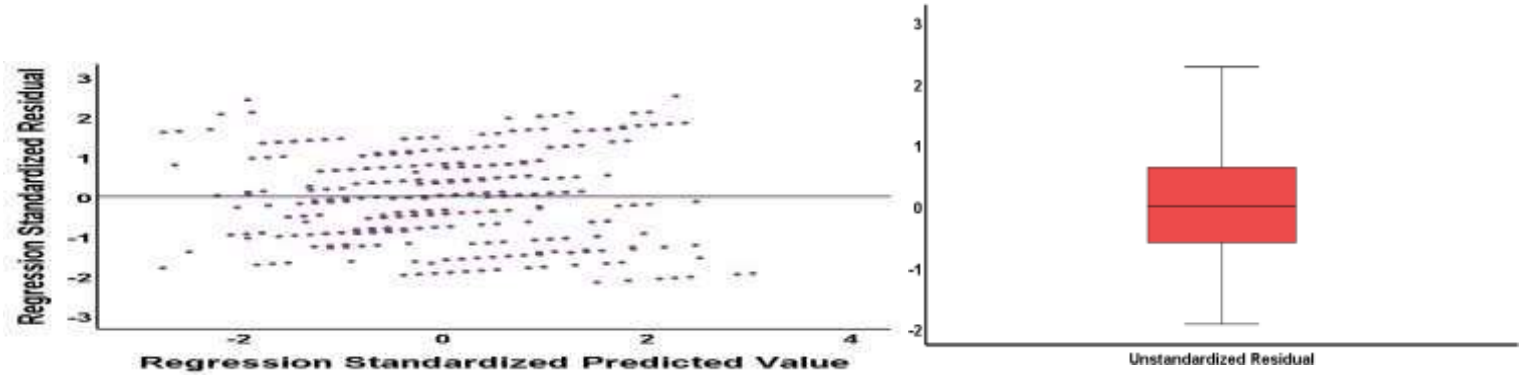


Table 4.18

Correlation Matrix for bivariate correlations (Pearson correlation) among the variables

	Emotional Intelligence	Social intelligence	Professional Commitment	Teaching Style
Emotional intelligence	----			
Social intelligence	0.521**	----		
Professional commitment	0.615**	0.546**	----	
Teaching style	0.517**	0.571**	0.517**	----

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

Table 4.19

Collinearity diagnostics of the Parallel Mediation Model with reference to VarianceInflation Factor (VIF) and Tolerance

	Collinearity Statistics	
Predictor variables in the Model	**Tolerance**	**VIF**
Emotional Intelligence	0.033	3.03
Social intelligence	0.037	2.702
Gender	0.723	1.383

Fifth, the correlation matrix (Table 4.18) of the variables depicted no high value of bivariate correlation coefficients (0.521) among the IVs. This shows that the IVs are not highly correlated to each other indicating the absence of multicollinearity among the IVs. Finally, from Table 4.19, it can be seen that the VIF value for emotional intelligence was 3.03 and 2.70 for social intelligence did not crossed the maximum level VIF<10 (Myers, 1990) and tolerence value for emotional intelligence was 0.033 and 0.037 for social intelligence did not crossed the maximum level Tolerance>0.2 (Menard, 1995) for all the IVs. Hence, the absence of multicollinearity in the dataset is ensured. So, the data fulfilled all the statistical assumptions needed for mediation analysis hence it ensured any kind of statistical bias. Thus, the findings and conclusions from the mediation analysis may be generalized in the target population.

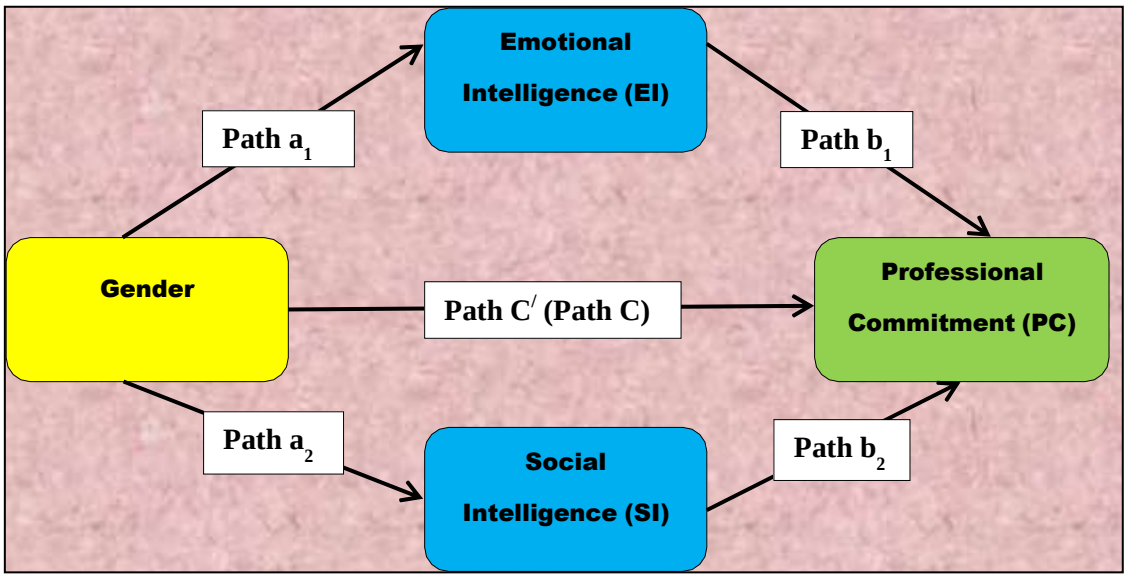
The parallel mediation analysis was run by selecting the emotional intelligence and social intelligence as two mediators indirectly. Hypothesized theoretical path model

(see Figure 4.25 conceptual) were examined and evaluated (see Figure 4.26) two mediation relationship. The major focus was to examine whether the indirect effect of emotional intelligence and social intelligence on professional commitment operates significantly to identify the route(s) of the flow of the indirect effect(s) and also to estimate the total, direct, and the indirect effect(s) along with their statistical significance. Bias-corrected Bootstrapping resampling methods were used for evaluating the statistical significance of the direct, indirect and total effects.

It was needed to perform the bootstrapping resampling procedures (on 5,000 Bootstrap sub-samples) that produced 95% bias-corrected confidence intervals (Preacher et al., 2007 and Hayes 2013). The total, direct and indirect effects were considered statistically significant at α=.05 when the corresponding bias-corrected confidence intervals of the effects did not include zero (Field, 2013). Nonparametric resampling procedure like bootstrapping method was selected deliberately and it does not violate assumptions of normality (Koopman et al., 2015). Further, Mediation with significant direct effect and significant indirect effects refers to _Partial mediation'the mediation with a non-significant direct effect and significant indirect effect refers to 'full mediation' (Preacher and Hayes, 2008).

Figure 4.25

Hypothesized path model of the mediation effect for the emotional intelligence and social intelligence on the relationship between gender and professional commitment



Note. a_1 is effect of gender on emotional intelligence; b_1 is effect of emotional intelligence on professional commitment; $c^{/}$ is direct effect of gender on professional commitment; c is the total effect of gender on professional commitment in absence of any mediator, a_1b_1 is the indirect effect via the Mediator variable emotional intelligence, and a_2b_2 is the indirect effect via the Mediator variable social intelligence

The results of the parallel mediation analysis showed that the *Total effect model* is significant: R^2= 0.290, F (1, 630) = 257.074, p<0.001 (see Table 4.20). The results also showed that gender positively predicts teachers professional commitment(c = 8.322, p<0.001, 95% CIs: [7.628, 9.016]) Further, results from the two *Mediator variable models* showed that gender positivelyinfluenced teachers emotional intelligence (a_1= 5.496, p<0.001, 95% CIs: [5.179, 5.813] and R^2=.225, *F(1,630)*= 182.460, *p<.001*), and teachers social intelligence (a_2= 7.312, p<0.001, 95% CIs: [6.900, 7.724] and R^2=.260, *F(1,630)*= 221.006, *p<.001*)(see Table A). In turn, teachers emotional intelligence positively influenced teachers professional commitment (b_1= 0.114, p<0.05, 95% CIs: [0.033, 0.195]); and socialintelligence positively influenced teachers professional commitment (b_2= 0.968, p<0.001, 95% CIs: [0.901, 1.036]) (see Table 4.20).

Further, analyzing the indirect effects from the *Indirect effect model*, results revealed that emotional intelligence significantly mediated the relationship between gender and professional commitment: a_1*b_1= 0.626, 95% BootLLCI= 0.502, 95% BootULCI= 0.750] and social intelligence significantly mediated the relationship between gender and professional commitment: a_2*b_2= 7.078, 95% BootLLCI= 6.660, 95% BootULCI= 7.496] (Hayes, 2013)(see Table 4.20) were also statistically significant. Therefore, emotional intelligence and social intelligence significantly mediated the relationship between gender and professional commitment. The total indirect effect exerted was also statistically significant: (Total indirect effect= 7.704, 95% BootLLCI=7.310, 95% BootULCI= 8.098]; see Table 4.20) which is 92.574% of the total effect.

The mediators were statistical significant although it has the indirect effects, it is required to calculate the effect size to find the practical significance of those effects. It was very important to measure kappa-squared (κ^2) to describe the effect size of the indirect effects, where $\kappa^2 \geq 0.01$ means small effect, $\kappa^2 \geq .09$ denoted medium

and $\kappa^2 \geq .25$ implies a large effect (Preacher and Kelley, 2011). Apart from this there was an argument that κ^2 is not an appropriate measure of effect size of mediationWen and Fan (2015).Besides, other effect size measures like $R^2_{4.5,}$ $R^2_{4.6}$, and $R^2_{4.7}$ (MacKinnon, 2008; Preacher and Kelley, 2011) are not preferred owing to the possibility of negative and non-intuitive values for R^2 (Fairchild et al., 2009) and κ^2 (Preacher and Kelley, 2011) is inappropriate as it is nonmonotonic with respect to *ab*(Wen and Fan, 2015). Wen and Fan (2015) argued that traditional mediation effect size measure P_M (ratio of the indirect effect to the total effect) should be preferred for mediation model rather thatthe mediation models where the indirect and direct effects bear opposite signs (Preacher and Kelley, 2011).

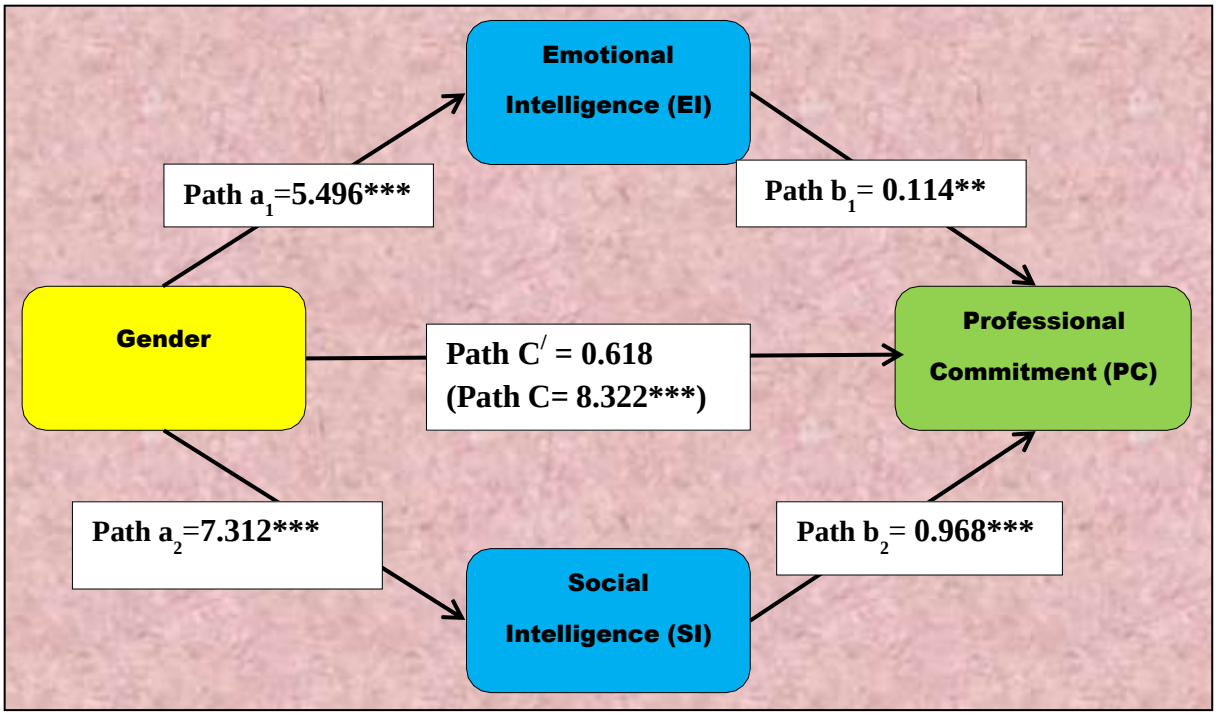
The P_M for the two mediators emotional intelligence and social intelligence were found that 0.075 and 0.851 respectively (see Table 4.20).Individual paths in the mediated effect, correlations and standardized path measures are generally unbiased and accurate (Fairchild et al., 2009).However, still one limitation of the standardized effect-size measures is either restricted or excessive variability in Y, and also X if the fully standardized measure is used (Miočević, O'Rourke, MacKinnon, & Brown, 2018) which further highlights the instability of the ratio and proportion mediated (MacKinnon, Warsi& Dwyer, 1995; MacKinnon, 2008). So, it can be said that there was not any established guidelinesstandardized indirect effects in Mediation analysis in relation to the small, medium, and large groups. Although it was found that irrespective of the mediating effects of two variables that was emotional intelligence and social intelligence the *Direct effect model that* was gender stilly positively significant to the professional commitment($c^{/}$=0.968, p<0.001, 95% CIs: [0.900, 1.036]) (see Table 4.20).

So, it was found that direct effect of gender on professional commitmentwas lessened but still it was significant. Therefore, it can be said that emotional intelligence partially mediated the relationship between gender and teaching style.The percentage of mediation effect shared by the two mediators was 7.522% for emotional intelligence and 85.052% for social intelligence of teachers (see Table 4.20). Further the proportion of the total effect of gender on professional commitment that operates indirectly through emotional intelligence through 7.522% and 85.052% through social intelligence. So, these findings provided the evidence that the gender gap in

professional commitmentwas accounted for gender gap in emotional intelligence and gender in social intelligence (Figure 4.26).

Figure 4.26

Structural model of the total, direct and indirect effects for the emotional intelligence and social intelligence on the relationship between gender and teaching style



Note. *p < .05, **p < .01, ***p < .001

Note. a_1 is effect of gender on emotional intelligence; b_1 is effect of emotional intelligence on teaching styles; $c^{/}$ is direct effect of gender on teaching style; c is the total effect of gender on professional commitmentin absence of any mediator, a_1b_1 is the indirect effect via the Mediator variable emotional intelligence, and a_2b_2 is the indirect effect via the Mediator variable social intelligence

Table 4.20

Results of Mediation analysis for Hypothesis 4

	B	SE	t	95%[LLCI, ULCI]
Total effect model: Gender (IV)→Professional Commitment (DV)				
R^2=.290, F(1,630)=257.074, p<.001				
Constant	151.724	0.733	206.881***	[150.284, 153.165]
Gender	8.322	0.519	18.871***	[7.628, 9.016]
Mediator variable model 1: Emotional intelligence→Professional Commitment(DV)				
R^2=.225, F(1,630)= 182.460, p<.001				
Constant	100.877	0.677	149.069***	[99.548, 102.206]
Gender	5.496	0.407	13.508***	[5.179, 5.813]
Mediator variable model 2: Social intelligence→Professional Commitment (DV)				
R^2=.260, F(1,630)= 221.006, p<.001				
Constant	101.001	0.818	123.472***	[99.394, 102.607]
Gender	7.312	0.492	14.866***	[6.900, 7.724]
Dependent variable model: Professional Commitment				
R^2= .968, F(1,630)= 6402.396 , p<.001				
Constant	65.440	1.122	58.312***	[63.236, 67.643]
Gender	0.618	0.110	5.633***	[.340, .896]
Emotional intelligence	0.114	0.042	2.725**	[.033, .195]
Social intelligence	0.968	0.035	28.001***	[.901, 1.036]
Direct effect model	0.618	0.110	5.633	[.340, .896]
Indirect effect model				

	Effect (B)	SE	95% [LLCI, ULCI]	Nature of Mediation	P_M	% of Mediation
Indirect effect of Gender on Professional Commitment (Mediator= Emotional intelligence)	0.626	0.657	[0.502, 0.750]	Partial mediation	0.075	7.522
Indirect effect of Gender on Professional Commitment (Mediator= Social intelligence)	7.078	0.898	[-8.933, -5.463]	Partial Mediation	0.851	85.052
Total indirect effect of Gender on Professional Commitment	7.704	0.430	[5.157, 10.251]	--------	0.926	92.574

Note (for Table 4.20). Unstandardized regression coefficients are reported. Bootstrap sample size = 5000, N= 632, LL: lower limit, UL: upper limit, CI: confidence interval, P_M :Ratio of indirect effect to the total effect of gender on teaching style, *p<.05, **p<.01, ***p<.001

4.6 Mediation effect of emotional intelligence and social intelligence on the relationship between teaching experience and teaching style of teachers

Objective 5: To study the mediation effect of emotional intelligence and social intelligence on the relationship between teaching experience and teaching style of teachers

$H_0$5: There is no significant mediation effect of emotional intelligence and social intelligence on the relationship between teaching experience and teaching style of teachers

According to the research objective 5, the following null hypothesis was formulated: $H_0$5: There is no significant mediation effect of emotional intelligence and social intelligence on the relationship between teaching experience and teaching style of teachers'. This null hypothesis dealt with four variables, teaching experience as the predictor variable, emotional intelligence (EI) and social intelligence (SI) asmediator variables, teaching styleas outcome variable. The mediation hypothesis ($H_0$5) was tested following parallel mediation analysis using model 4 in PROCESS macro for SPSS (developed by Prof. Andrew F. Hayes; Hayes, 2013). PROCESS is based on regression-based path-analytic framework and estimates the indirect effect and bias-corrected confidence intervals.

It is very important to generalize the sample model to the entire population during conducting mediation analysis because it is an important criterion. Then it is very needed to meet several statistical assumptions of multiple regression analysis. If the data are violating the assumptions, then it will be insignificant for generalizing the conclusions to the main target population because the results might be wrong. Firstly, no potential outlier was identified from the Boxplot (see figure 4.29) of the residual of the regression model. Further, the absence of outlier was confirmed from the values of Cook's distance (Cook, 1977) that ranged from 0.00 to 0.40 and never exceeded the threshold value of 1.00 (Cook & Weisberg, 1982). Besides, the maximum value of the Mahalanobis (Mahalanobis, 1930) statistic (i.e. M_{Max}=3.471) did not exceeded the critical value (i.e.

7.822 with df= 3 at 0.05 level) and thus, indicated the absence of any multivariate outlier in the residual.

Secondly, there was an acceptable range of Durbin-Watson statistic that was 1.00 to 3.00 (Field, 2013) and theresults of this study also 1.519 falls under that acceptable range. So, there was no question of 'Autocorrelation' with the data. This was the supported through residual plot (Figure 4.29). Residual points were not too much scattered around the fit line that is called the homoscedasticity of the residual (Figure 4.29). Further, Breusch-Pagan and Koenker test was performed using a macro developed by Ahmad Daryanto (Daryanto, 2020). Both tests i.e. Breusch-Pagan test (Lagrange Multiplier (LM) = .428, p= .283) andKoenker test (LM= .512, p= .319) were not significant and thus, ensured that the assumption of homoscedasticity has not been interrupted. Thirdly Normality of residual was examined with the help of visual inspection of the Q-Q plot, Histogram (Figure 4.28) of the unstandardized residual. Visual inspections of the normal probability curve were also checked though Statistical normality tests. Kolmogrov-Smirnov test (statistic= .061, p= .721) and the Shapiro-Wilk test (W= .987, p=.457) showed the statistically insignificant results normality of the unstandardized residual was finalized (Field, 2009). Fourth, linear regression was conducted between dependent variable (teaching style) in relation to independent variables. Each plot showed the value of R^2_{Linear}>0.3 (Neter, Kutner, Nachtsheim, & Wasserman, 1996), separately (see Figure 4.28).

Figure 4.27

Simple Scatter plot of teaching style against emotional intelligence and social intelligence

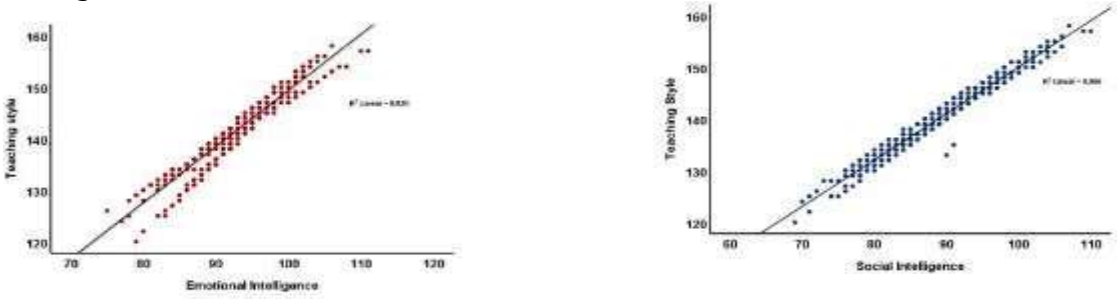


Figure 4.28

Histogram (left) and Normal Q-Q plots (right)

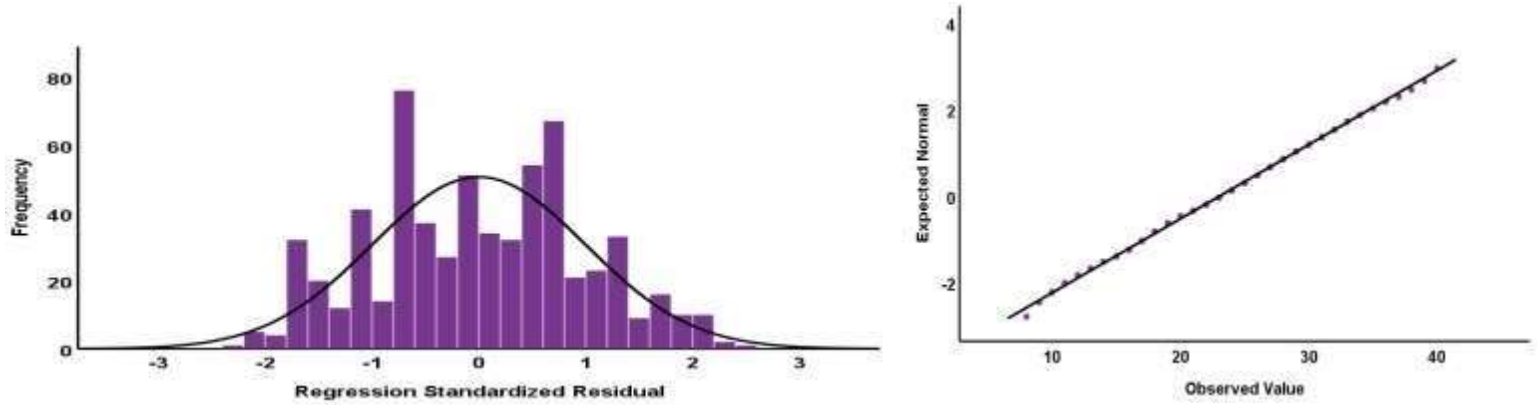


Figure 4.29

The Residual Plot of the dependent variable (Teaching Style) (left) and box plot of the residual (right)

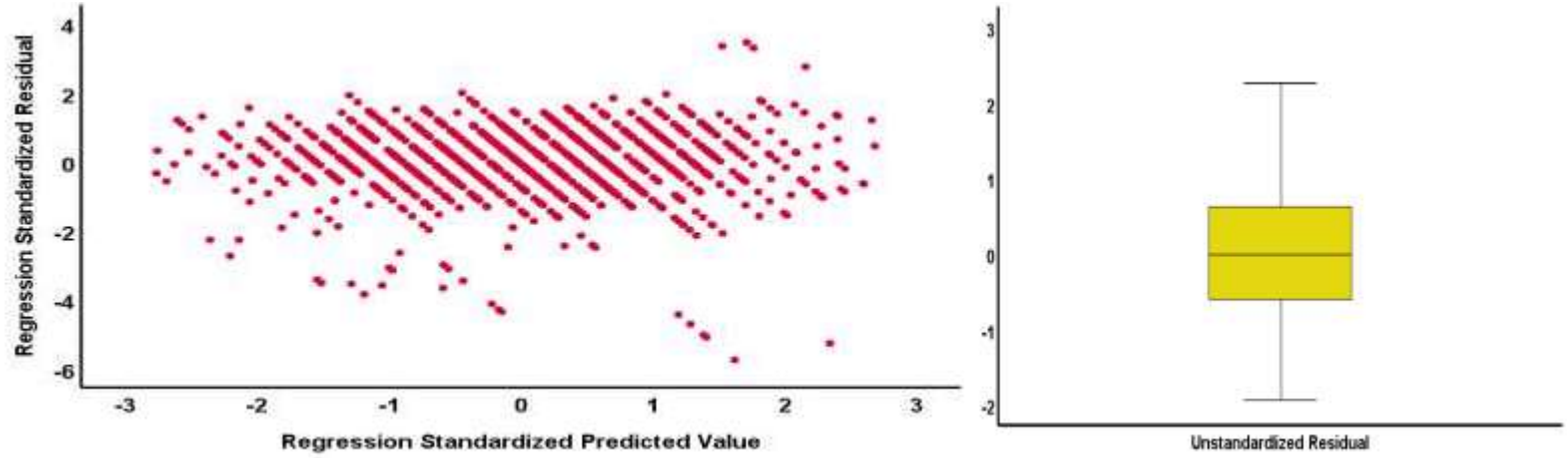


Table 4.21

Collinearity diagnostics of the Parallel Mediation Model with reference to Variance Inflation Factor (VIF) and Tolerance

Collinearity Statistics		
Predictor variables in the Model	**Tolerance**	**VIF**
Emotional Intelligence	0.321	3.115
Social intelligence	0.342	2.924
Teaching experience	0.875	1.142

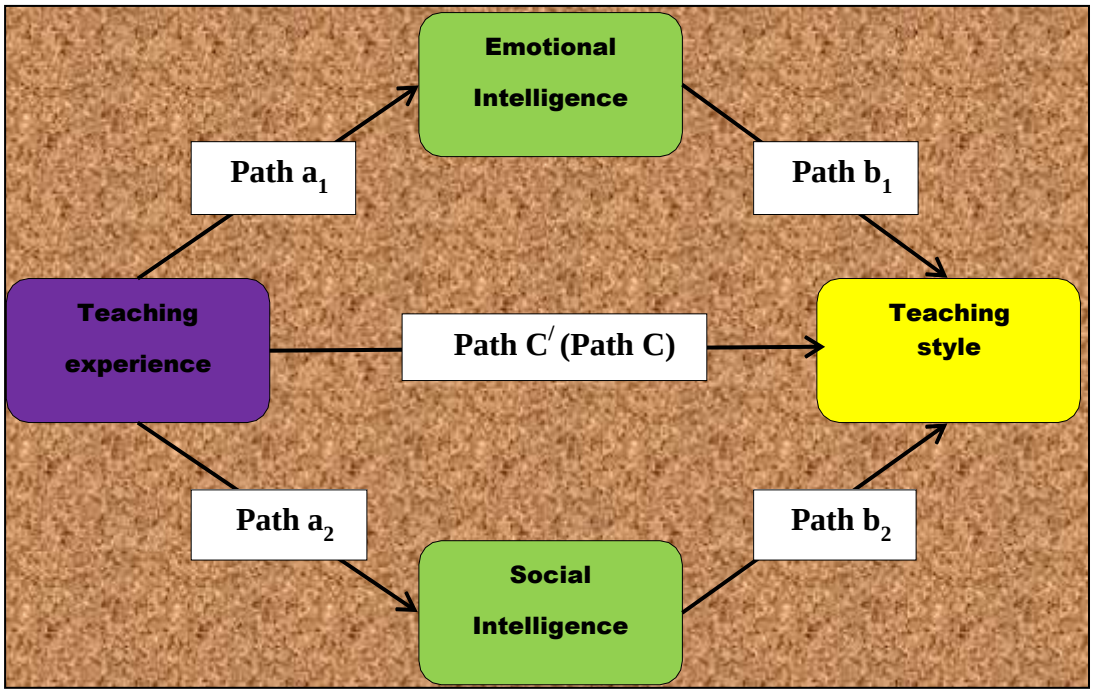
Fifth, the correlation matrix (see Table 3.6) of the variables depicted no high value of bivariate correlation coefficients (0.521) among the IVs. This shows that the IVs are not highly correlated to each other indicating the absence of multicollinearity among the IVs. Finally, from Table 4.21, it can be seen that the VIF value for emotional intelligence 3.115 for social intelligence2.924, for teaching experience was 1.142 which did not crossed the maximum level VIF<10 (Myers, 1990) and tolerance value for emotional intelligence was .321 and 0.342 for social intelligence and 1.142 for teaching experiences did not crossed the maximum level Tolerance>0.2 (Menard, 1995) for all the IVs. Hence, the absence of multicollinearity in the dataset is ensured.

So, the data fulfilled all the statistical assumptions needed for mediation analysis hence it ensured any kind of statistical bias. Thus, the findings and conclusions from the mediation analysis may be generalized in the target population. The parallel mediation analysis was run by selecting the emotional intelligence and social intelligence as two mediators indirectly. Hypothesized theoretical path model (see Figure 4.30 conceptual) were examined and evaluated (see Figure 4.31) two mediation relationship. The major focus was to examine whether the indirect effect of emotional intelligence and social intelligence on teaching style operates significantly to identify the route(s) of the flow of the indirect effect(s) and also to estimate the total, direct, and the indirect effect(s) along with their statistical significance. Bias-corrected Bootstrapping resampling methods were used for evaluating the statistical significance of the direct, indirect and total effects. It was needed to perform the

bootstrapping resampling procedures (on 5,000 Bootstrap sub-samples) that produced 95% bias-corrected confidence intervals (Preacher et al., 2007 and Hayes 2013). The total, direct and indirect effects were considered statistically significant at α=.05 when the corresponding bias-corrected confidence intervals of the effects did not include zero (Field, 2013). Nonparametric resampling procedure like bootstrapping method was selected deliberately and it does not violate assumptions of normality (Koopman et al., 2015). Further, Mediation with significant direct effect and significant indirect effects refers to 'Partial mediation' the mediation with a non-significant direct effect and significant indirect effect refers to 'full mediation' (Preacher and Hayes, 2008).

Figure 4.30

Hypothesized path model of the mediation effect for the emotional intelligence and social intelligence on the relationship between teaching experience and teaching style



Note. a_1 is effect of teaching experience on emotional intelligence; b_1 is effect of emotional intelligence on teaching style; $c^{/}$ is direct effect of teaching experience on teaching style; c is the total effect of teaching experience on teaching stylein absence of any mediator, a_1b_1 is the indirect effect via the Mediator variable emotional intelligence, and a_2b_2 is the indirect effect via the Mediator variable social intelligence

The results of the parallel mediation analysis showed that the *Total effect model* is significant: R^2= 0.003, F (1, 630) = 2.174, p<0.1409 (see Table A). The results also showed that teaching experiencepositively predicts teachers teaching style(c = .556, p<0.05, 95% CIs: [0.429, 0.683]) Further, results from the two*Mediator variable models* showed that teaching experiencepositively influencedteachers emotional intelligence (a_1= 0.782, p<0.01, 95% CIs: [0.238, 1.325], R^2=.013, F(1,630)= 7.982, p<.01), and teachers social intelligence (a_2= .385, p<0.05, 95% CIs: [0.238, 0.532] R^2=.002, F(1,630)= 1.249 , p<.05)(see Table 4.22).

In turn, teachers emotional intelligence positively influencedteachers teaching style (b_1= 0.340, p<0.001, 95% CIs: [0.274, 0.405]); andsocial intelligence positively influenced teachers teaching style (b_2= 0.637, p<0.001, 95% CIs: [0.585, 0.690]) (see Table A). Further, analyzing the indirect effects from the *Indirect effect model*, results revealed that emotional intelligence significantly mediated the relationship between teaching experience and teaching style: a_1*b_1= 0.265, 95% BootLLCI= 0.091, 95% BootULCI= 0.462] and social intelligence significantly mediated the relationship between teaching experience and teaching style: a_2*b_2= 0.245, 95% BootLLCI= 0137, 95% BootULCI= 0.353] (Hayes, 2013)(see Table A) were also statisticallysignificant.Therefore, emotional intelligence and social intelligence significantly mediated the relationship between teaching experience and teaching style. The total indirect effect exerted was also statistically significant: (Total indirect effect= 0.51095% BootLLCI=0.331, 95% BootULCI= 0.689]; see Table 4.22) which is 91.72% of the total effect.

The mediators were statistical significant although it has the indirect effects, it is required to calculate the effect size to find the practical significance of those effects. It was very important to measure kappa-squared (κ^2) to describe the effect sizeof the indirect effects, where $\kappa^2 \geq 0.01$ means small effect, $\kappa^2 \geq .09$ denoted medium effect, and $\kappa^2 \geq .25$ implies a large effect (Preacher and Kelley, 2011). Apart from this there was an argument that κ^2 is not an appropriate measure of effect size of mediationWen and Fan (2015).Besides, other effect size measures like $R^2_{4.5,}$ $R^2_{4.6}$, and $R^2_{4.7}$ (MacKinnon, 2008; Preacher and Kelley, 2011) are not preferred owing to the possibility of negative and non-intuitive values for R^2 (Fairchild et al., 2009) and κ^2 (Preacher and Kelley, 2011) is inappropriate as it is nonmonotonic with respect to *ab*(Wen and Fan, 2015). Wen and Fan (2015) argued that traditional mediation effect size measure

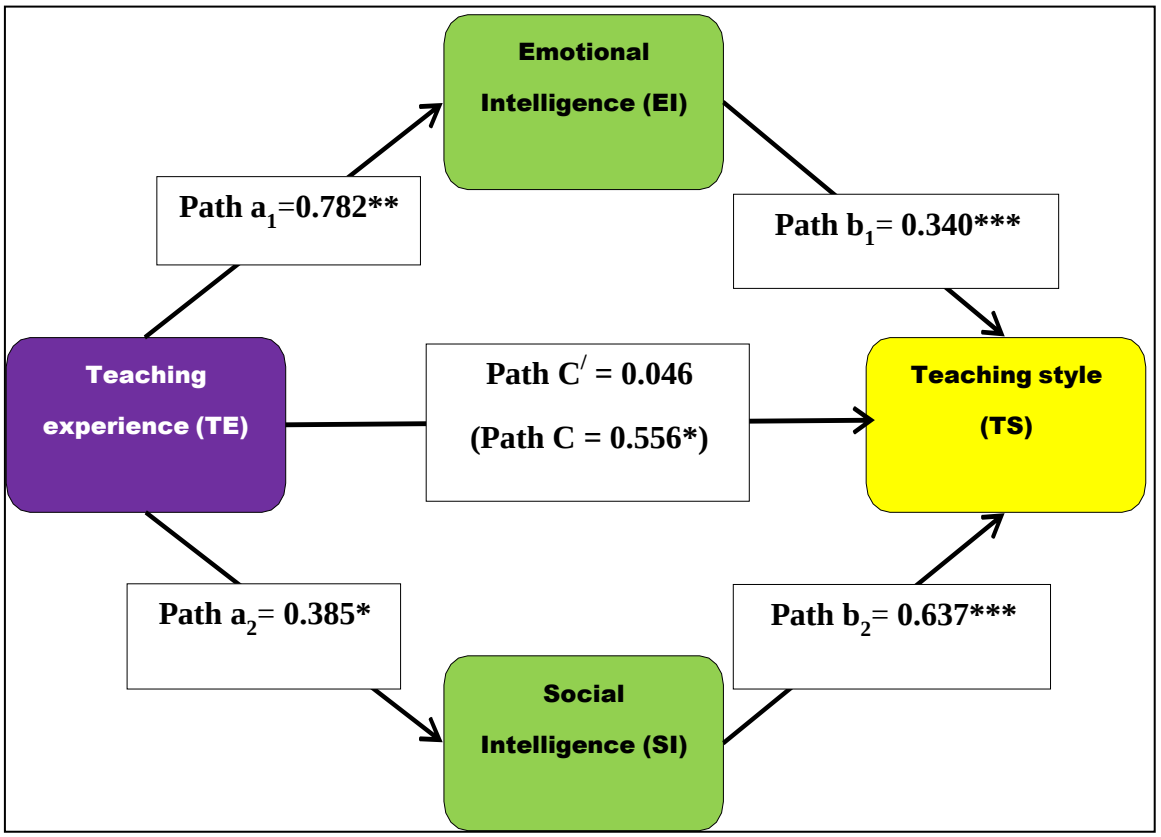
P_M (ratio of the indirect effect to the total effect) should be preferred for mediation model rather thatthe mediation models where the indirect and direct effects bear opposite signs (Preacher and Kelley, 2011).

The P_M for the two mediators emotional intelligence and social intelligence were found that 0.477 and 0.441 respectively (see Table 4.22).Individual paths in the mediated effect, correlations and standardized path measures are generally unbiased and accurate (Fairchild et al., 2009).However, still one limitation of the standardized effect-size measures is either restricted or excessive variability in Y, and also X if the fully standardized measure is used (Miočević, O'Rourke, MacKinnon, & Brown, 2018) which further highlights the instability of the ratio and proportion mediated (MacKinnon, Warsi& Dwyer, 1995; MacKinnon, 2008). So, it can be said that there was not any established guidelinesstandardized indirect effects in Mediation analysis in relation to the small, medium, and large groups. Although it was found that irrespective of the mediating effects of two variables that was emotional intelligence and social intelligence the *Direct effect model that* was teaching experience stilly positively significant to the teaching style($c^{/}$=0.046, p<0.001, 95% CIs: [-0.027, 0.119]) (see Table 4.22).

So, it was found that direct effect of teaching experience on teaching style was lessened but still it was significant. Therefore, it can be said that emotional intelligence partially mediated the relationship between teaching experience and teaching style. The percentage of mediation effect shared by the two mediators was 47.66% for emotional intelligence and 44.06% for social intelligence of teachers (see Table 4.22). Further the proportion of the total effect of teaching experienceon teaching style that operates indirectly through emotional intelligence through 47.66% and 44.06% through social intelligence. So, these findings provided the evidence that theteaching experience gap in teaching style was accounted for teaching experience gap in emotional intelligence and teaching experience in social intelligence.

Figure 4.31

Structural model of the total, direct and indirect effects for the emotional intelligence and social intelligence on the relationship between teaching experience *and teaching style*



Note. *p < .05, **p < .01, ***p < .001

Note. a_1 is effect of teaching experience on emotional intelligence; b_1 is effect of emotional intelligence on teaching style; $c^{/}$ is direct effect of teaching experience on teaching style; c is the total effect of teaching experience on teaching style in absence of any mediator, a_1b_1 is the indirect effect via the Mediator variable emotional intelligence, and a_2b_2 is the indirect effect via the Mediator variable social intelligence

Table 4.22

Results of Mediation analysis for Hypothesis 5

	B	SE	t	95%[LLCI, ULCI]
Total effect model: teaching experience →teaching style				
R^2=.003, F(1,630)= 2.174, p<.05				
Constant	191.220	0.695	275.262***	[189.855, 192.584]
Teaching Experience	0.556	0.225	2.474*	[.429,0.683]
Mediator variable model 1: Emotional intelligence				
R^2=.013, F(1,630)= 7.982, p<.01				
Constant	90.544	.610	148.352***	[89.345, 91.742]
Teaching Experience	0.782	0.277	2.825**	[0.238, 1.325]
Mediator variable model 2: Social intelligence				
R^2=.002, F(1,630)= 1.249 , p<.05				
Constant	88.597	0.759	116.717***	[87.106, 90.087]
Teaching Experience	0.385	0.182	2.118*	[0.238, 0.532]
Dependent variable model: Teaching style				
R^2=.982, F(1,630)= 11420.147 , p<.001				
Constant	104.033	0.815	127.717***	[102.433, 105.633]
Teaching Experience	0.046	0.023	2.016*	[0.035, 0.057]
Emotional intelligence	0.340	0.033	10.205***	[0.274, 0 .405]
Social intelligence	0.637	0.027	23.830***	[0.585,0.690]
Direct effect model	0.046	0.045	1.016	[-0.027, 0.119]
Indirect effect model				

	Effect (B)	SE	95% [LLCI, ULCI]	Nature of Mediation	P_M	% of Mediation
Indirect effect of Teaching Experience on Teaching style (Mediator= Emotional intelligence)	0.265	0.093	[.0914, .4615]	Full Mediation	0.477	47.66
Indirect effect of Teaching Experience on Teaching style (Mediator= Social intelligence)	0.245	0.219	[.137, .353]	Full Mediation	0.441	44.06
Total indirect effect of Teaching Experience on Teaching style	0.510	0.307	[.331, .689]	----------	0.917	91.72

Note (for Table 4.22). Unstandardized regression coefficients are reported. Bootstrap sample size = 5000, N= 632, LL: lower limit, UL: upper limit, CI: confidence interval, P_M :Ratio of indirect effect to the total effect

4.7 Mediation effect of emotional intelligence and social intelligence on the relationship between teaching experience and professional commitment of teachers

Objective 6: To study the mediation effect of emotional intelligence and social intelligence on the relationship between teaching experience and professional commitment of teachers

$H_0$6: There is no significant mediation effect of emotional intelligence and social intelligence on the relationship between teaching experience and professional commitment of teachers

According to the research objective 6, the following null hypothesis was formulated: $H_0$6: There is no significant mediation effect of emotional intelligence and social intelligence on the relationship between teaching experience and professional commitment of teachers'. This null hypothesis dealt with four variables, teaching experience as the predictor variable, emotional intelligence (EI) and social intelligence (SI) asmediator variables, professional commitment as outcome variable. The mediation hypothesis ($H_0$4) was tested following parallel mediation analysis using model 4 in PROCESS macro for SPSS (developed by Prof. Andrew F. Hayes; Hayes, 2013). PROCESS is based on regression-based path-analytic framework and estimates the indirect effect and bias-corrected confidence intervals.

It is very important to generalize the sample model to the entire population during conducting mediation analysis because it is an important criterion. Then it is very needed to meet several statistical assumptions of multiple regression analysis. If the data are violating the assumptions, then it will be insignificant for generalizing the conclusions to the main target population because the results might be wrong. Firstly, no potential outlier was identified from the Boxplot (see figure 4.34) of the residual of the regression model. Further, the absence of outlier was confirmed from the values of Cook's distance (Cook, 1977) that ranged from 0.00 to 0.813and never exceeded the threshold value of 1.00 (Cook & Weisberg, 1982). Besides, the maximum value of the Mahalanobis (Mahalanobis, 1930) statistic (i.e. M_{Max}=3.146) did not exceeded the critical value (i.e. 7.822 with df= 3 at 0.05 level) and thus, indicated the absence of any multivariate outlier in the residual.

Secondly, there was an acceptable range of Durbin-Watson statistic that was 1.00 to 3.00 (Field, 2013) and the results of this study also 1.289 falls under that acceptable range. So, there was no question of 'Autocorrelation' with the data. This was the supported through residual plot (Figure 4.34). Residual points were not too much scattered around the fit line that is called the homoscedasticity of the residual (Figure 4.34). Further, Breusch-Pagan and Koenker test was performed using a macro developed by Ahmad Daryanto (Daryanto, 2020). Both tests i.e. Breusch-Pagan test (Lagrange Multiplier (LM) = .436, p= .213) andKoenker test (LM= .628, p= .324) were not significant and thus, ensured that the assumption of homoscedasticity has not been interrupted.

Thirdly Normality of residual was examined with the help of visual inspection of the Q-Q plot, Histogram (Figure 4.33) of the unstandardized residual. Visual inspections of the normal probability curve were also checked though Statistical normality tests. Kolmogrov-Smirnov test (statistic= .084, p= .721) and the Shapiro-Wilk test (W= .906, p=.457) showed the statistically insignificant results normality of the unstandardized residual was finalized (Field, 2009).

Fourth, linear regression was conducted between dependent variable (professional commitment) in relation to independent variables. Each plot showed the value of R^2_{Linear}>0.3 (Neter, Kutner, Nachtsheim, & Wasserman, 1996), separately (see Figure 4.32).

Figure 4.32

Simple Scatter plot of professional commitment against emotional intelligence and social intelligence

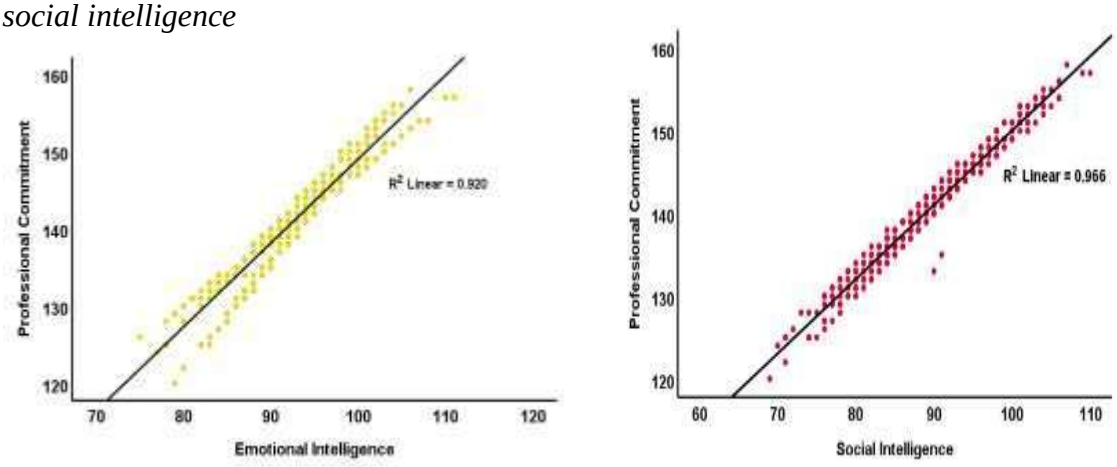


Figure 4.33

Histogram (left) Normal Q-Q plots (Right)

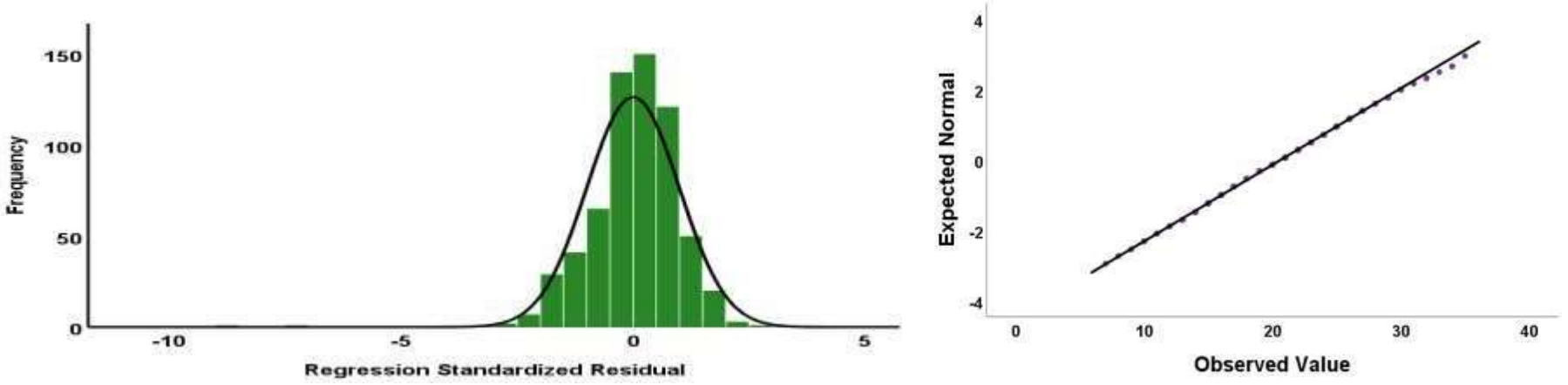


Figure 4.34

The Residual Plot of the dependent variable (Teaching Style) (left) and box plot of the residual (extreme right)

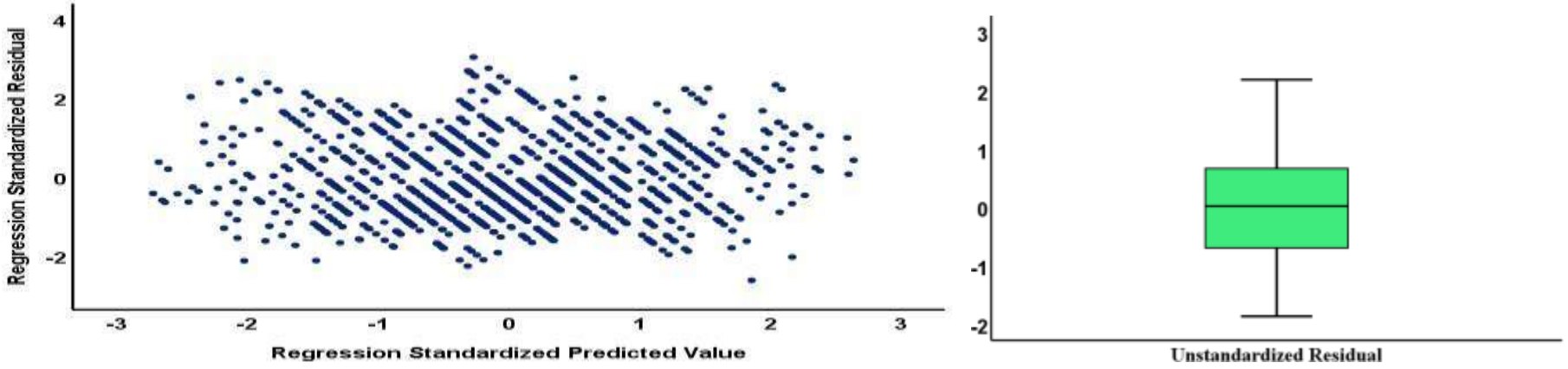


Table 4.23

Collinearity diagnostics of the Parallel Mediation Model with reference to VarianceInflation Factor (VIF) and Tolerance

	Collinearity Statistics	
Predictor variables in the Model	**Tolerance**	**VIF**
Emotional Intelligence	0.033	3.03
Social intelligence	0.037	2.70
Teaching experience	0.723	1.38

Fifth, the correlation matrix (Table 3.6) of the variables depicted no high value of bivariate correlation coefficients (0.521) among the IVs. This shows that the IVsare not highly correlated to each other indicating the absence of multicollinearity among the IVs. Finally, from Table 4.23, it can be seen that the VIF value for emotional intelligence was 3.03; 2.70 for social intelligence and 1.38 for teaching experience which did not crossed the maximum level VIF<10 (Myers, 1990) and Tolerence value for emotional intelligence was 0.033 and 0.037 for social intelligence and 0.723 for teaching experience did not crossed the maximum level Tolerance>0.2 (Menard, 1995) for all the IVs. Hence, the absence of multi-collinearity in the dataset is ensured.

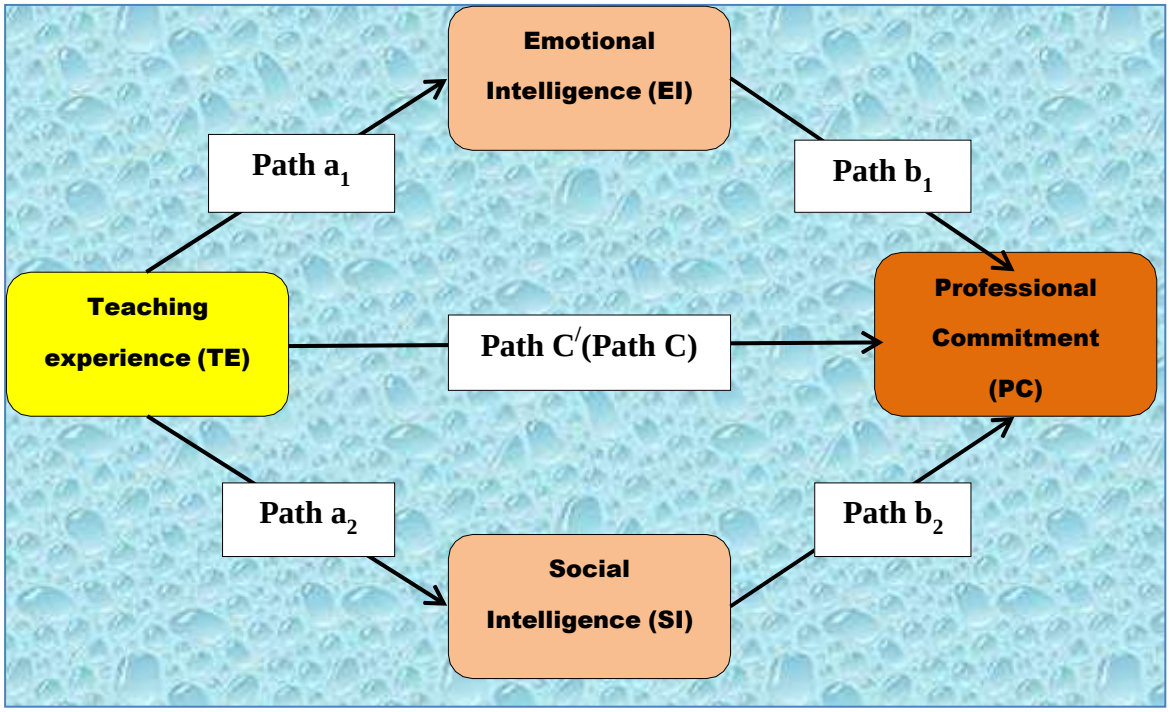
So, the data fulfilled all the statistical assumptions needed for mediation analysis hence it ensured any kind of statistical bias. Thus, the findings and conclusions from the mediation analysis may be generalized in the target population.

The parallel mediation analysis was run by selecting the emotional intelligence and social intelligence as two mediators indirectly. Hypothesized theoretical path model (see Figure 4.35 conceptual) were examined and evaluated (see Figure 4.36) two mediation relationship. The major focus was to examine whether the indirect effect of emotional intelligence and social intelligence on professional commitment operates significantly to identify the route(s) of the flow of the indirect effect(s) and also to estimate the total, direct, and the indirect effect(s) along with their statistical significance. Bias-corrected Boots trapping resampling methods were used for evaluating the statistical significance of the direct, indirect and total effects.

It was needed to perform the bootstrapping resampling procedures (on 5,000 Bootstrap sub-samples) that produced 95% bias-corrected confidence intervals (Preacher et al., 2007 and Hayes 2013). The total, direct and indirect effects were considered statistically significant at α=.05 when the corresponding bias-corrected confidence intervals of the effects did not include zero (Field, 2013). Nonparametric resampling procedure like bootstrapping method was selected deliberately and it does not violate assumptions of normality (Koopman et al., 2015). Further, Mediation with significant direct effect and significant indirect effects refers to 'Partial mediation' the mediation with a non-significant direct effect and significant indirect effect refers to 'full mediation' (Preacher and Hayes, 2008).

Figure 4.35

Hypothesized path model of the mediation effect for the emotional intelligence and social intelligence on the relationship between teaching experience and professional commitment



Note. a_1 is effect of teaching experience on emotional intelligence; b_1 is effect of emotional intelligence on professional commitment; $c^{/}$ is direct effect of teaching experience on professional commitment; c is the total effect of teaching experience on professional commitment in absence of any mediator, a_1b_1 is the indirect effect via the

Mediator variable emotional intelligence, and a_2b_2 is the indirect effect via the Mediator variable social intelligence

The results of the parallel mediation analysis showed that the *Total effect model* is significant: R^2= 0.087, F (1, 630) = 4.840, p<0.05 (see Table 4.24). The results also showed that teaching experience positively predicts teachers professional commitment (c = 0.515, p<0.001, 95% CIs: [1.042, 1.988]) Further, results from the two *Mediator variable models* showed that teaching experience positively influenced teachers emotional intelligence (a_1 = 0.782, p<0.01, 95% CIs: [0.238, 1.325] and R^2=.013, F(1,630)= 7.982, p<.01), and teachers social intelligence (a_2= 0.385, p<0.05, 95% CIs: [0.172, 0.598] and R^2=.045, F(1, 630)= 1.2487***, p*<.05) (see Table 4.24). In turn, teachers emotional intelligence positively influenced teachers professional commitment (b_1= 0.134, p<0.001, 95% CIs: [0.715, 0.196]); and social intelligence positively influenced teachers professional commitment (b_2= 0.800, p<0.001, 95% CIs: [0.750, 0.849]) (see Table 4.24).

Further, analyzing the indirect effects from the *Indirect effect model*, results revealed that emotional intelligence significantly mediated the relationship between teaching experience and professional commitment: a_1*b_1= 0.104, 95% BootLLCI= 0.502, 95% BootULCI= 0.158] and social intelligence significantly mediated the relationship between teaching experience and professional commitment: a_2*b_2= 0.308, 95% BootLLCI= 0.132, 95% BootULCI= 0.484] (Hayes, 2013) (see Table 4.24) were also statistically significant. Therefore, emotional intelligence and social intelligence significantly mediated the relationship between teaching experience and professional commitment. The total indirect effect exerted was also statistically significant: (Total indirect effect= 0.412, 95% BootLLCI=0.233, 95% BootULCI= 0.591]; see Table 4.24) which is 27.195% of the total effect.

The mediators were statistical significant although it has the indirect effects, it is required to calculate the effect size to find the practical significance of those effects. It was very important to measure kappa-squared (κ^2) to describe the effect size of the indirect effects, where $\kappa^2 \geq 0.01$ means small effect, $\kappa^2 \geq .09$ denoted medium effect, and $\kappa^2 \geq .25$ implies a large effect (Preacher and Kelley, 2011). Apart from this there was an argument that κ^2 is not an appropriate measure of effect size of mediation Wen and Fan (2015). Besides, other effect size measures like $R^2_{4.5,}$ $R^2_{4.6}$,

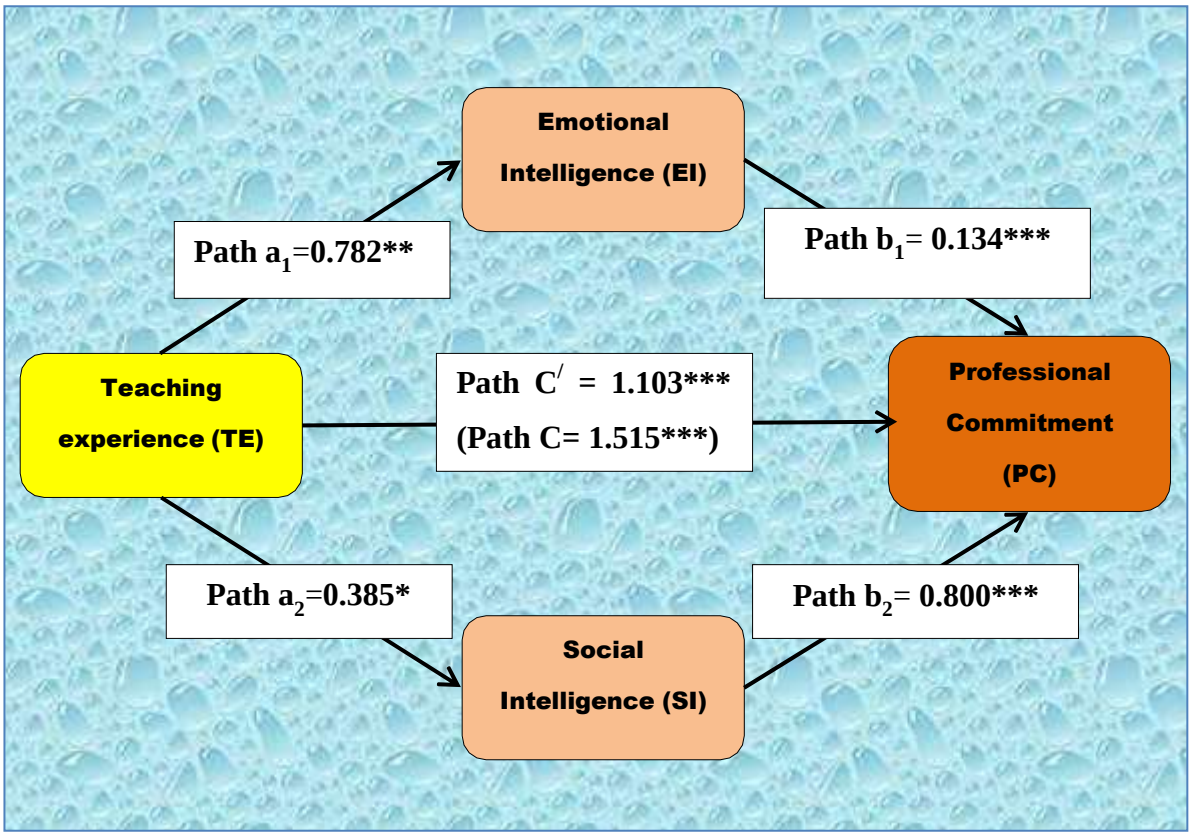
and R^2 (MacKinnon, 2008; Preacher and Kelley, 2011) are not preferred owing to the possibility of negative and non-intuitive values for R^2 (Fairchild et al., 2009) and κ^2 (Preacher and Kelley, 2011) is inappropriate as it is non-monotonic with respect to *ab*(Wen and Fan, 2015). Wen and Fan (2015) argued that traditional mediation effect size measure P_M (ratio of the indirect effect to the total effect) should be preferred for mediation model rather that the mediation models where the indirect and direct effects bear opposite signs (Preacher and Kelley, 2011).

The P_M for the two mediators emotional intelligence and social intelligence were found that 0.069 and 0.203 respectively (see Table 4.24). Individual paths in the mediated effect, correlations and standardized path measures are generally unbiased and accurate (Fairchild et al., 2009). However, still one limitation of the standardized effect-size measures is either restricted or excessive variability in Y, and also X if the fully standardized measure is used (Miočević, O'Rourke, MacKinnon, & Brown, 2018) which further highlights the instability of the ratio and proportion mediated (MacKinnon, Warsi& Dwyer, 1995; MacKinnon, 2008). So, it can be said that there was not any established guidelines standardized indirect effects in Mediation analysis in relation to the small, medium, and large groups. Although it was found that irrespective of the mediating effects of two variables that was emotional intelligence and social intelligence the *Direct effect model that* was teaching experience stilly positively significant to the professional commitment($c^{/}$=1.103, p<0.001, 95% CIs: [0.829, 1.377]) (see Table 4.24).

So, it was found that direct effect of teaching experience on professional commitment was lessened but still it was significant. Therefore, it can be said that emotional intelligence partially mediated the relationship between teaching experience and teaching style. The percentage of mediation effect shared by the two mediators was 6.865% for emotional intelligence and 20.330% for social intelligence of teachers (see Table 4.24). Further the proportion of the total effect of teaching experience on professional commitment that operates indirectly through emotional intelligence through 6.865% and 20.330% through social intelligence. So, these findings provided the evidence that the teaching experience gap in professional commitment was accounted for teaching experience gap in emotional intelligence and teaching experience in social intelligence.

Figure 4.36

Structural model of the total, direct and indirect effects for the emotional intelligence and social intelligence on the relationship between teaching experience and teaching style



Note. *p < .05, **p < .01, ***p < .001

Note. a_1 is effect of teaching experience on emotional intelligence; b_1 is effect of emotional intelligence on teaching styles; $c^{/}$ is direct effect of teaching experience on teaching style; c is the total effect of teaching experience on professional commitment in absence of any mediator, a_1b_1 is the indirect effect via the Mediator variable emotional intelligence, and a_2b_2 is the indirect effect via the Mediator variable social intelligence

Table 4.24

Results of Mediation analysis for Hypothesis 6

	B	SE	t	95%[LLCI, ULCI]
Total effect model: Professional Commitment				
R^2=.087, F(1,630)=4.84***, p<.05***				
Constant	141.908	0.693	204.815***	[140.547, 143.269]
Teaching Experience	1.515	0.314	12.200***	[1.042, 1.988]
Mediator variable model 1: Emotional intelligence				
R^2=.013, F(1,630)=7.982***, p<.01***				
Constant	90.544	0.610	148.352***	[89.345, 91.742]
Teaching Experience	0.782	0.277	2.825**	[.238, 1.33]
Mediator variable model 2: Social intelligence				
R^2=.045, F(1, 630)=1.2487***, p***<.05				
Constant	88.596	0.759	116.717***	[87.106, 90.087]
Teaching Experience	0.385	0.182	2.118	[.172, .598]
Dependent variable model: Professional Commitment				
R^2=.9837, F(3, 628)=, p<.001				
Constant	58.984	0.774	76.220***	[57.465, 60.504]
Teaching Experience	1.103	0.043	25.619***	[.829, 1.377]
Emotional intelligence	0.134	0.032	4.226***	[.072 , .196]
Social intelligence	0.800	0.025	31.470***	[.750 .849]
Direct effect model TE→PC	1.103	0.043	25.619***	[.829, 1.377]
Indirect effect model				

	Effect (B)	SE	95% [LLCI, ULCI]	Nature of Mediation	P_M	% of Mediation
Indirect effect of Teaching Experience on *Professional Commitment* (Mediator= Emotional intelligence)	0.104	0.093	0.050, 0.158	Partial mediation	0.069	6.865
Indirect effect of Teaching Experience on *Professional Commitment* (Mediator= Social intelligence)	0.308	0.282	0.132, 0.484	Partial mediation	0.203	20.330
Total indirect effect of Teaching Experience on *Professional Commitment*	0.412	0.315	0.233, 0.591	----------	0.272	27.195

Note (for Table 4.24). Unstandardized regression coefficients are reported. Bootstrap sample size = 5000, N= 632, LL: lower limit, UL: upper limit, CI: confidence interval, $P_{M:}$ Ratio of indirect effect to the total effect of teaching experience on teaching style, *p<.05, **p<.01, ***p<.001

4.8 Moderation effect of gender on the relationship between emotional intelligence and teaching style of teachers

$H_0$7: There is no significant moderation effect of gender on the relationship between emotional intelligence and teaching style of teachers

According to research objective 7, the following null hypothesis was formulated: $H_0$7: There is no significant moderation effect of gender on the relationship between emotional intelligence and teaching style of teachers‘. This null hypothesis deals withfour variables that were gender, emotional intelligence, interaction (i.e. EI*Gender) and teaching style. Here gendercategorical variable however emotional intelligence and teaching style is a continuous variable. Gender has two levels male and female teachers. so, to check moderation effect of gender on the relationship between emotional intelligence and teaching style of teachers, the above null hypothesis $H_0$7 was tested using moderation analysis Model 1 in PROCESS macro for SPSS (developed by Prof. Andrew F. Hayes; Hayes, 2013). PROCESS is based on regression-based path-analytic framework and estimates the interaction (between emotional intelligence and the moderator variable i.e. gender) effect and bias-corrected confidence intervals.

During conducting moderation analysis, moderation analysis the major aim was to generation of the sample population. Data needs to meet several statistical measures of multiple regressions. Here it was very relevant to check the normality of the data because any ravishing of data will be meaningless for generalizing the conclusion to the targeted population because those results would be biased. To know the absence of outlier in the dataset the values of Cook‘s distance (Cook, 1977) ranged from 0.00 to 0.05 and never exceeded the threshold value of 1.00 (Cook & Weisberg, 1982). Apart fom this the maximum value of the Mahalanobis (Mahalanobis, 1930) statistic (i.e. M_{Max}=3.76) didnot exceeded the critical value (i.e. 7.81 with df=3 at 0.05 level) so it can be said that there was absence of any multivariate outlier in the residual. Secondly, the acceptable range of Durbin-Watson test is 1.00 to 3.00 (Field, 2013)and here results of Durbin-Watson statistic is 1.752 that falls within acceptable range. So,there was no problem of ‘Autocorrelation’ with the data. This data also

supported by theresidual plot (Figure 4.23).Thirdly, homoscedasticity of the residual as the residual points are not too scattered from the *Fit line* (see Figure 4.33). Further, Breusch-Pagan and Koenker test was performed using a macro developed by Ahmad Daryanto (Daryanto, 2020). Both tests i.e. Breusch-Pagan test (Lagrange Multiplier (LM) = .594, p= .941) and Koenker test (LM= .579, p= .645) were not significant and thus, so homoskedasticity of data has not been elapsed.

Fourth, the normality of the residual was checked through the visual inspectionsof the normality plots of the residual that were Histogram plot and Q-Q plot (Figure 4.33) of the unstandardized residual. Further, to check the visual inspection of normality test were performed. However, normality of the unstandardized residual was confirmed from the statistically insignificant results of Kolmogrov-Smirnov test (statistic= .090, p= .752) and the Shapiro-Wilk test (W= .967, p=.834) (Field, 2009).

Finally, from Table 4.25, it can be seen that the VIF value was 1.290 for emotional intelligence and 1.362 for gender because it is not crossed the limitation VIF<10 (Myers, 1990) and Tolerence value 0.775 for emotional intelligence and 0.734 for gender and it was within the maximum value of tolerance that was Tolerance>0.2 (Menard, 1995) for all the IVs. Hence, the absence of multicollinearity in the dataset is ensured.

Table 4.25

Collinearity diagnostics of the moderation Model with reference to Variance Inflation Factor (VIF) and Tolerance

	Collinearity Statistics	
Predictor variables in the Model	**Tolerance**	**VIF**
Emotional Intelligence	0.775	1.290
Gender	0.734	1.362

Figure 4.37

Histogram (extreme left), Normal Q-Q plot (left)

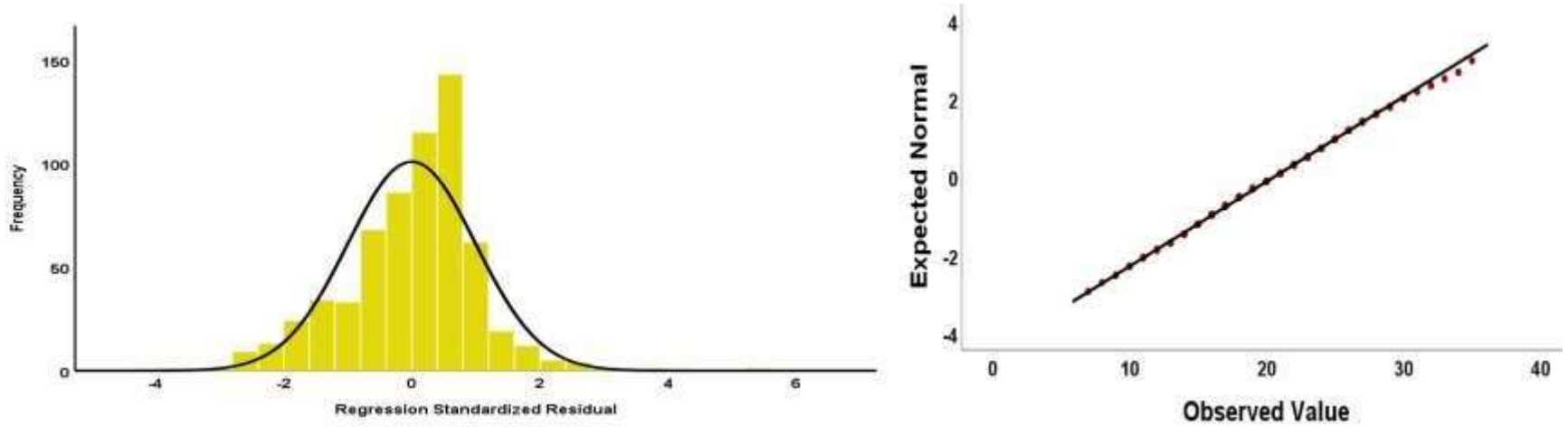
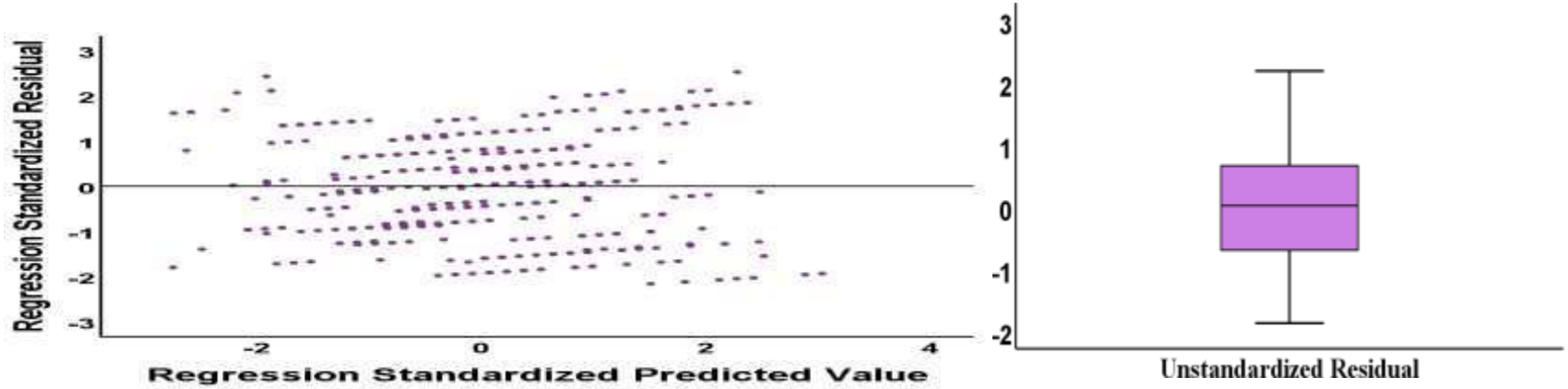


Figure 4.38

The Residual Plot of the dependent variable (teaching style) and Box-plot of the residual (extreme right)

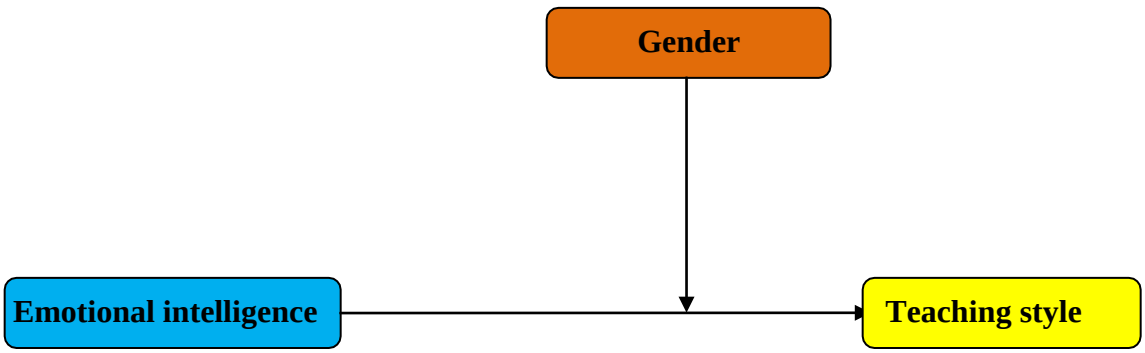


So, the data fulfilled all the statistical assumptions needed for moderation analysis. It can be concluded that the data was absence of any bias. Thus, the findings and conclusions from the moderation analysis may be generalized in the target population.

Here the moderation analysis was run by selecting teachers‘ gender as the moderator variable that might exert differential effect on the relationship between emotional intelligence and teaching style.The hypothesized moderation model (see Figure 4.39) was then examined and evaluated (see Figure 3.40). The major focus to check whether gender pretends any differential effect on the relationship between emotional intelligence and teaching style and also to estimate the interaction (between emotional intelligence and teaching style) effect along with the statistical significance of the differential Bias-corrected Bootstrapping resampling methods were used to test the statistical significance of differential effect. According to Preacher et al. (2007) and Hayes (2013), it can be said that to perform the bootstrapping resampling procedures (on 5,000 Bootstrap sub-samples) that produced 95% bias-corrected confidence intervals. Bias-corrected lower and upper limit of 95% confidence intervals of the effects did not include zero means the differential (moderation) effect was considered statistically significant at α=.05 (Field, 2013). Bootstrapping method did not violate the assumptions of normality as it is a nonparametric resampling procedure (Koopman et al., 2015).

Figure 4.39

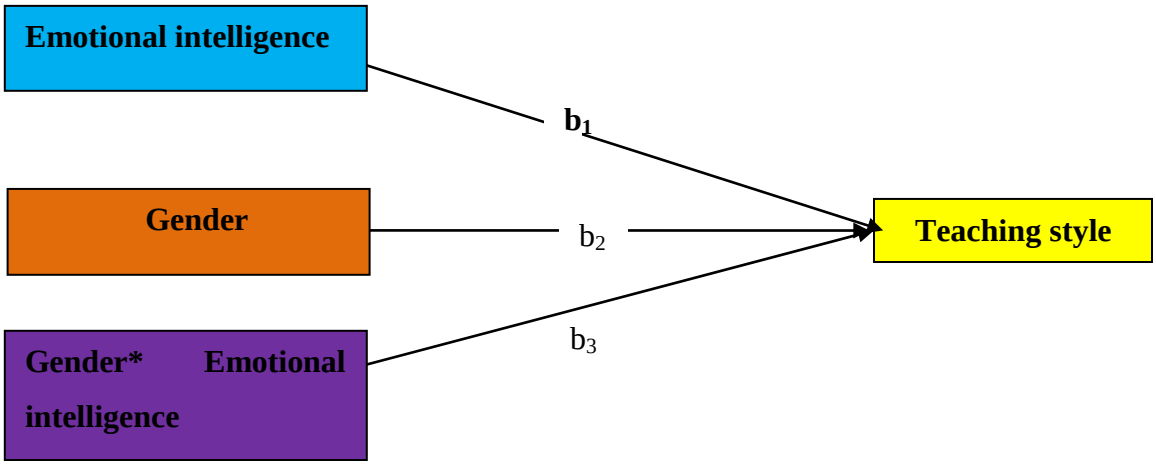
Hypothesized (conceptual) path model for the moderation effect of Gender on the relationship between emotional intelligence and teaching style



Aiken, West, and Reno (1991) prescribed a follow up analysis was done by plotting teaching style on emotional intelligence separately for male and female teachers. Apart from this simple slope analysis were performed to check slope of regression lines differ significantly or not in relation to gender. However, moderation interaction effect size was expressed with f-squared (f^2) statistic (Selya, Rose, Dierker, Hedeker, &Mermelstein, 2012): where $f^2 \geq 0.02$ implies small effect, $f^2 \geq 0.15$ implies medium effect, and $f^2 \geq 0.35$ implies a large effect (Cohen, 1988).

Figure 4.40

Statistical model for the moderation effect of gender on the relationship between emotional intelligence and teaching style



In this model emotional intelligence was an independent variable teaching style was a dependent variable and gender was a moderator variable on the relationship between emotional intelligence and teaching style was constructed and it was checked by performing moderation analysis (see Figure 4.39). As shown the result bellow the overall moderation model was significant: R^2=.964, F= 5590.598, df= (3, 628), p<.001 (see Table 4.26).The effect of emotional intelligence on teaching style was positive and significant, (B= 1.009, 95% CI [.944, 1.074], p<0.001; see Table 4.26). Then the effect of gender on teaching style was positive significantly related (B= 5.623, 95% CI [3.245, 8.001], p<0.01; see Table 4.26).

Although, the effect of interaction between emotional intelligence and teachers gender on teaching style was found positively significant (B= .057, 95% CI [.018, .096], p<.01; see Table 4.26]. However, from the test of highest order unconditional interaction showed that R^2-change for inclusion of the interaction term (Gender*emotional intelligence) in the moderation model was significant: R^2-change= .001, F (1, 628) = 8.321, p<.01. This means interaction moderation model is significant. From the table 1 it can be concluded that gender was considered as a significant moderator on the relationship between emotional intelligence and teaching style. So, there was a significant differential effect of gender on the relationship between emotional intelligence and teaching style. So, emotional intelligence influences teaching style irrespective of gender. Hence, emotional intelligence was found to be very beneficial for promoting better teaching style regardless of gender of teachers.

Here interaction effect of emotional intelligence and gender was statistically significant. But weather effect was practically significant or not calculated through effect size. So, the f^2 effect size measure was considered to describe the effect size of the interaction effect (Selya, Rose, Dierker, Hedeker, &Mermelstein, 2012).The effect size for the moderation effect was found to be 26.71 which is a large effect ($f^2 \geq 0.35$) following the Cohen's (1988) guidelines. The conditional effects of gender on teaching style shows that for both male and female teachers, the effect of gender on teaching style was significant (for male teachers B= 1.066, p<.001 for female teachers B= 1.124, p<.001).

Simple slope analysis was performed to compare the degree of interaction effect of emotional intelligence and gender on teaching style for male and female teachers separately. The simple slopes analysis also shows that slope for emotional intelligence on teaching style at each level of gender were: $b_{females}$= 1.124, SE= .013. t= 88.946, p<0.001, 95% CIs: [1.099, 1.148] for the female teachers and b_{males}= 1.066, SE= .015, t= 69.458, p<0.001, 95% CIs: [1.036, 1.096] for the male teachers. So, female students were found to be significantly higher than male teachers. It can be concluded from here that significant differential effect of gender on the relationship between emotional intelligence and teaching style. Here it can be found from that bellow table 4.26 that relationships

between emotional intelligence and teaching style stronger for female teacher than that of the male teachers.

After conducting moderation analysis, it was found that interaction effect of gender and emotional intelligence is significant statistically on the relationship between emotional intelligence and teaching style of teachers. Gender was found to be a significant moderator in the relationship between Emotional intelligence and teaching style. So, it is clear that emotional intelligence has differential effect on teaching style with respect to gender of the teachers. That is emotional intelligence affect differently for both male and female teachers. Further, the relationship between emotional intelligence and teaching style was significantly stronger for female teachers than that of the male teachers. Thus, it can be said that teachers' emotional intelligence is more beneficial for the female teachers in attaining higher level of teaching style.

An interaction graph was plotted to know the interaction between gender and emotional intelligence on teaching style of teachers. Further, to know the trend of influence of the interaction between gender and emotional intelligence on teaching style, a graph was plotted. Graph 4.1 depicted that irrespective of teachers' gender teaching style increases with the increasing of emotional intelligence. The relationship trend between emotional intelligence and teaching style were similar for male and female teachers. Interaction graph was steeper significantly for female teachers than that of the male teachers. So, effect of emotional intelligence on teaching style did not remain same across gender. Effect was significantly stronger for female teachers than that of the male teachers. Therefore, it can be concluded that gender gap in emotional intelligence is significantly contributed in explaining mechanism for gender gap in teaching style. So, the teachers who were more emotionally intelligent then their teaching style should be better and become professionally more successful.

Table 4.26

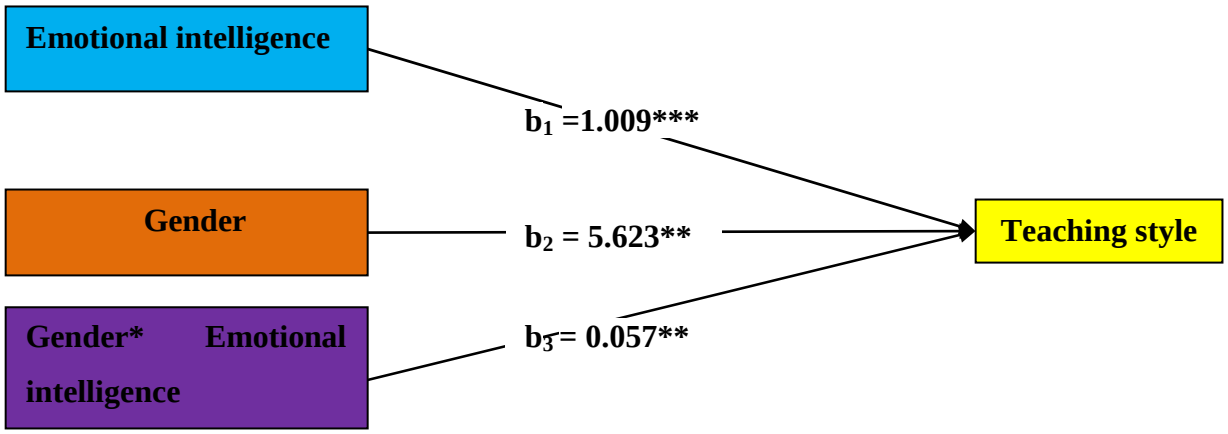
Moderating effect of gender on the relationship between emotional intelligence andteaching style

Regression Path	**B**	**SE**	**t**	**P**	**95% LLCI**	**95% ULCI**
Predictor: Emotional Intelligence, Moderator= Gender, Outcome Variable=Teaching Styles						
(R^2=.964, F= 5590.598, df= (3, 628), p<.001)						
Constant	99.820	3.145	31.738	<.001	93.644	105.996
Emotional Intelligence	1.009	.033	30.389	<.001	.944	1.074
Gender	5.623	1.856	3.030	<.01	3.245	8.001
Interaction: EI*Gender	0.057	0.020	2.885	<.01	.0183	.096
Test(s) of highest order unconditional interaction(s)						
	R2-change	**F**	**df1**	**df2**	**p**	
EI*Gender	.001	8.321	1	628	<.01	
Effect size (f square)=26.71						
Conditional effect						
Male teachers	1.066	0.015	69.458	<.001	1.036	1.096
Female Teachers	1.124	0.013	88.946	<.001	1.099	1.148

Note (Table 4.26). Unstandardized regression coefficients are reported. Bootstrapsample size = 5000, N= 632, LL: lower limit, UL: upper limit, CI: confidence interval

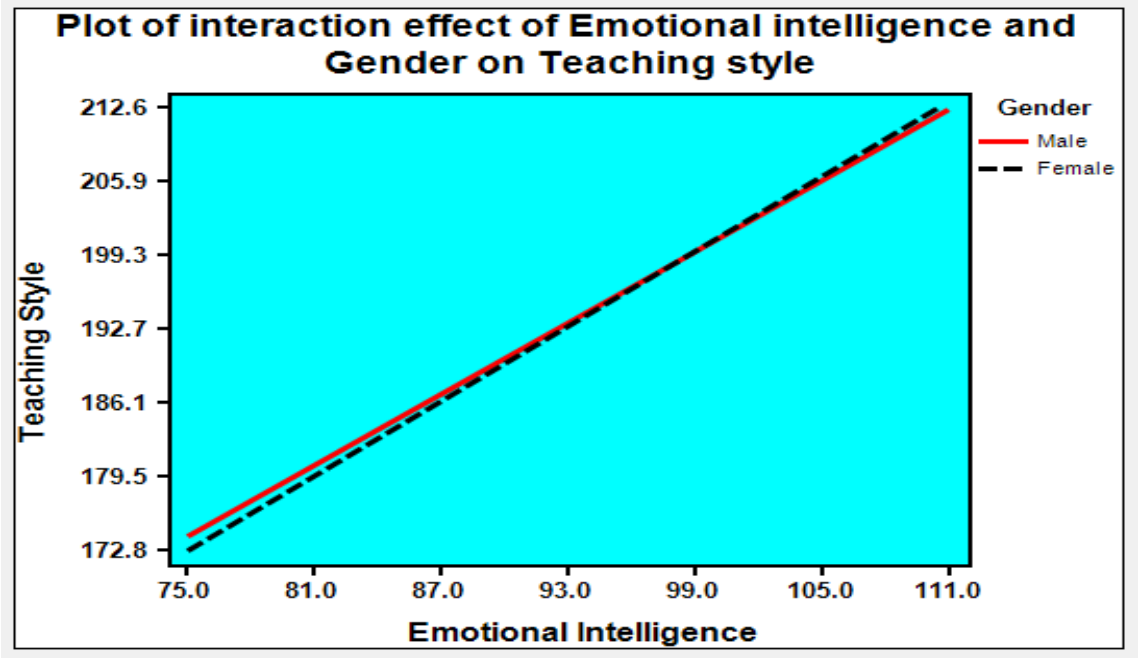
Figure 4.41

Statistical model for the moderation effect of gender on the relationship between emotional intelligence and teaching style



Graph 4.1

The plots of effect of interaction between emotional intelligence and teachers" gender onteaching style of teachers



4.9 Moderation effect of gender on the relationship between social intelligence and teaching style of teachers

Objective 8: To study the moderation effect of gender on the relationship between social intelligence and teaching style of teachers

$H_0$8: There is no significant moderation effect of gender on the relationship between social intelligence and teaching style of teachers

According to research objective 8, the following null hypothesis was formulated: $H_0$8: There is no significant moderation effect of gender on the relationship between social intelligence and teaching style of teachers'. This null hypothesis deals with four variables that were gender, Social intelligence, interaction (i.e. SI*Gender) and teaching style. Here gender categorical variable however Social intelligence and teaching style is a continuous variable. Gender has two levels male and female teachers. so, to check moderation effect of gender on the relationship between Social intelligence and teaching style of teachers, the above null hypothesis $H_0$8 was tested using moderation analysis Model 1 in PROCESS macro for SPSS (developed by Prof. Andrew F. Hayes; Hayes, 2013). PROCESS is based on regression-based path-analytic framework and estimates the interaction (between Social intelligence and the moderator variable i.e. gender) effect and bias-corrected confidence intervals.

During conducting moderation analysis, moderation analysis the major aim was to generation of the sample population. Data needs to meet several statistical measures of multiple regressions. Here it was very relevant to check the normality of the data because any ravishing of data will be meaningless for generalizing the conclusion to the targeted population because those results would be biased.

To know the absence of outlier in the dataset the values of Cook's distance (Cook, 1977) ranged from 0.000 to 0.039 and never exceeded the threshold value of 1.00 (Cook & Weisberg, 1982). Apart fom this the maximum value of the Mahalanobis (Mahalanobis, 1930) statistic (i.e. M_{Max}=5.92) did not exceeded the critical value (i.e. 7.81 with df=3 at 0.05 level) so it can be said that there was absence of any multivariate outlier in the residual.

Secondly, the acceptable range of Durbin-Watson test is 1.00 to 3.00 (Field, 2013) and here results of Durbin-Watson statistic is 1.710 that falls within acceptable range. So, there was no problem of 'Autocorrelation' with the data. This data also supported by the residual plot.

Thirdly, homoscedasticity of the residual as the residual points are not too scattered from the *Fit line* (see Figure 4.42). Further, Breusch-Pagan and Koenker test was performed using a macro developed by Ahmad Daryanto (Daryanto, 2020). Both tests i.e. Breusch- Pagan test (Lagrange Multiplier (LM) = .759, p= .163) and Koenker test (LM= .753, p=.591) were not significant and thus, so homoskedasticity of data has not been elapsed.

Fourth, the normality of the residual was checked through the visual inspections of the normality plots of the residual that were Histogram plot (Figure 4.42) and Q-Q plot (Figure 4.42) of the unstandardized residual. Further, to check the visual inspection of normality test were performed. However, normality of the unstandardized residual was confirmed from the statistically insignificant results of Kolmogrov-Smirnov test (statistic= .063, p= .581) and the Shapiro-Wilk test (W= .984, p=.654) (Field, 2009).

Finally, from Table 4.27, it can be seen that the VIF value was 1.351 for Social intelligence and 1.312 for gender because it is not crossed the limitation VIF<10 (Myers, 1990) and Tolerence value 0.740for Social intelligence and 0.762for gender and it was within the maximum value of tolerance that was Tolerance>0.2 (Menard, 1995) for all the IVs. Hence, the absence of multicollinearity in the dataset is ensured.

Table 4.27

Collinearity diagnostics of the moderation Model with reference to Variance Inflation Factor (VIF) and Tolerance

	Collinearity Statistics	
Predictor variables in the	**Tolerance**	**VIF**
Model Social Intelligence	0.740	1.351
Gender	0.762	1.312

Figure 4.42

Histogram (extreme left), Normal Q-Q plot (left)

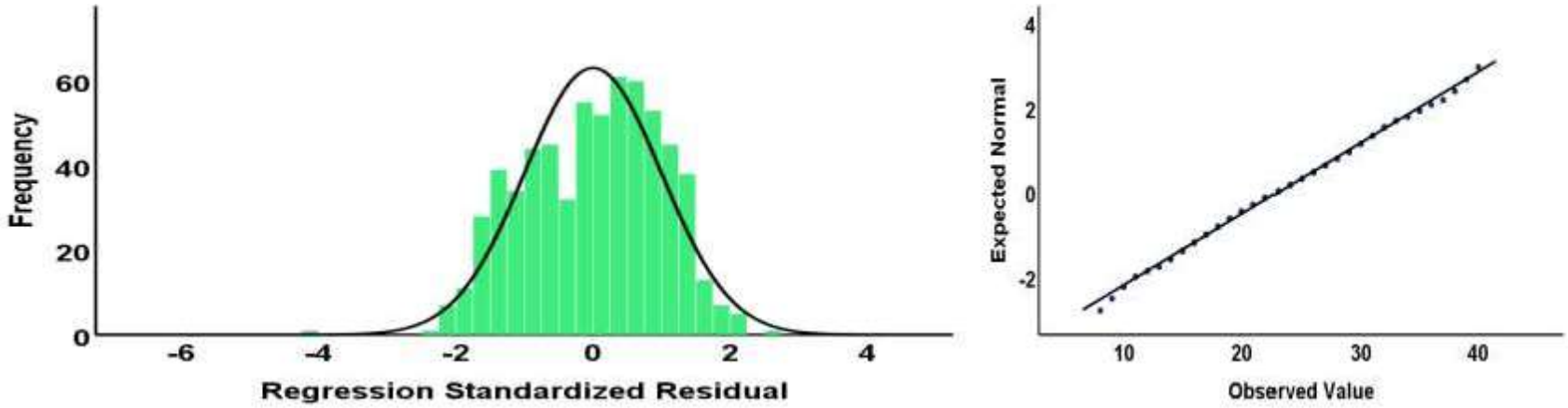
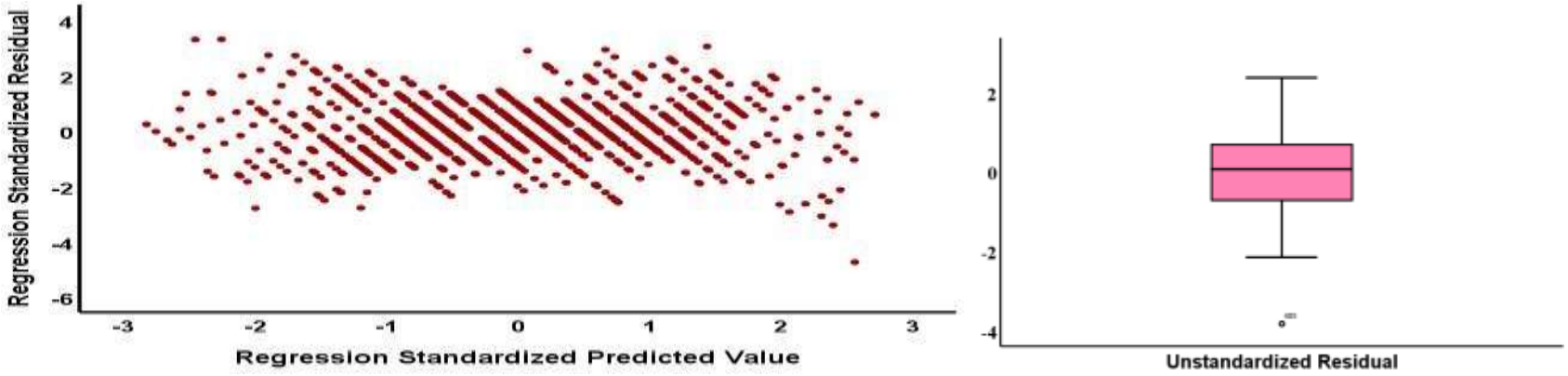


Figure 4.43

The Residual Plot of the dependent variable (teaching style) and Box-plot of the residual (right)

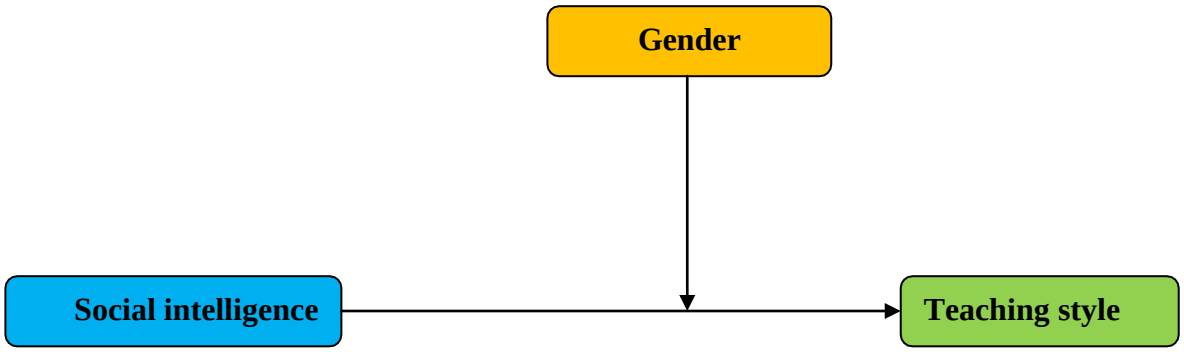


So, the data fulfilled all the statistical assumptions needed for moderation analysis. It can be concluded that the data was absence of any bias. Thus, the findings and conclusions from the moderation analysis may be generalized in the target population.

Here the moderation analysis was run by selecting teachers' gender as the moderator variable that might exert differential effect on the relationship between Social intelligence and teaching style. The hypothesized moderation model (see Figure 4.44 and Figure 4.45) was then examined and evaluated (see Figure 4.46). The major focus to check whether gender pretends any differential effect on the relationship between Social intelligence and teaching style and also to estimate the interaction (between Social intelligence and teaching style) effect along with the statistical significance of the differential Bias-corrected Bootstrapping resampling methods were used to test the statistical significance of differential effect. According to Preacher et al. (2007) and Hayes (2013), it can be said that to perform the bootstrapping resampling procedures (on 5,000 Bootstrap sub-samples) that produced 95% bias-corrected confidence intervals. Bias-corrected lower and upper limit of 95% confidence intervals of the effects did not include zero means the differential (moderation) effect was considered statistically significant at α=.05 (Field, 2013). Bootstrapping method did not violate the assumptions of normality as it is a nonparametric resampling procedure (Koopman et al., 2015).

Figure 4.44

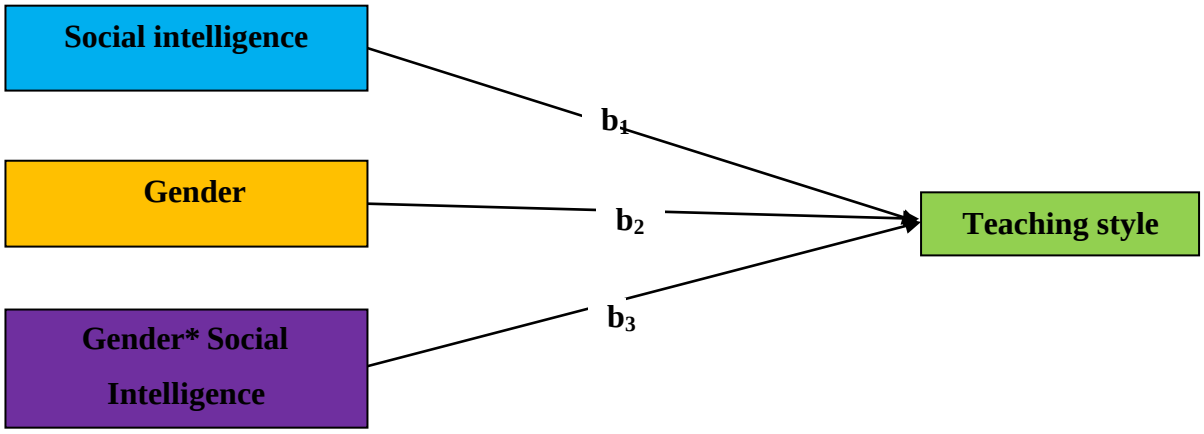
Hypothesized (conceptual) path model for the moderation effect of Gender on the relationship between Social intelligence and teaching style



Aiken, West, and Reno (1991) prescribed a follow up analysis was done by plotting teaching style on Social intelligence separately for male and female teachers. Apart from this simple slope analysis were performed to check slope of regression lines differ significantly or not in relation to gender. However, moderation interaction effect size was expressed with f-squared (f^2) statistic (Selya, Rose, Dierker, Hedeker, &Mermelstein, 2012): where $f^2 \geq 0.02$ implies small effect, $f^2 \geq 0.15$ implies medium effect, and $f^2 \geq 0.35$ implies a large effect (Cohen, 1988).

Figure 4.45

Statistical model for the moderation effect of gender on the relationship between Socialintelligence and teaching style



In this model Social intelligence was an independent variable teaching style was a dependent variable and gender was a moderator variable on the relationship between social intelligence and teaching style was constructed and it was checked by performing moderation analysis (see Figure 4.45). As shown the result bellow the overall moderation model was significant: R^2=.9795, F= 10004.756, df= (3, 628), p<.001 (see Table 4.28).The effect of Social intelligence on teaching style was positive and significant, (B= 0.935, 95% CI [.983, 0.977], p<0.001; see Table 4.28). Then the effect of gender on teaching style was statistically not significantly related (B= 1.243, 95% CI [0.499, 1.987], p = 0.2794; see Table 4.28).

Although, the effect of interaction between Social intelligence and teachers gender on teaching style was found positively significant (B= .009, 95% CI [-0.038, 0.056], p<.462; see Table 4.28]. After conducting moderation analysis, it was found that interaction effect of gender and social intelligence is not significant statistically on the relationship between social intelligence and teaching style of teachers. Gender was not found to be a significant moderator in the relationship between social intelligence and teaching style. Therefore, it can be said that social intelligence of teachers has no differential effect on teaching style both for male and female teachers. Further, it can alsobe said that social Intelligence is equally important for male teachers as well as for the female teachers in attaining higher level of teaching style.

Further, to know the trend of influence of the interaction between gender and social intelligenceon teaching style, Graph 4.2 was plotted where no interaction was found. So, the relationship between major predictor variable social intelligence and teaching style did not depend upon students' gender. Thus, it can be said that the effect ofsocial intelligence on teaching style remains same irrespective of gender. So, it can be concluded from this finding that gender gap in social intelligence did not contributed the explaining mechanism for the gender gap in teaching style. Further, the test of highest order unconditional interaction show that R^2-change for inclusion of the interaction term (Gender*social intelligence) in the moderation model was not significant: R^2-change=

.000, F (1, 628) = 0.562, p=.4536. Therefore, interaction term did not contributed significantly for moderation model. From these results it can be concluded that gender was not significant moderator on the relationship between social intelligence and teaching style.So, there is no statistically significant differential effect of gender on the relationship between social intelligence and teaching style.Social intelligence influenced teaching style to the same extent irrespective of gender. Therefore, it can be concluded that social intelligence found to be equally beneficial for male and female teachers.

Table 4.28

Moderating effect of gender on the relationship between Social intelligence and teaching Style

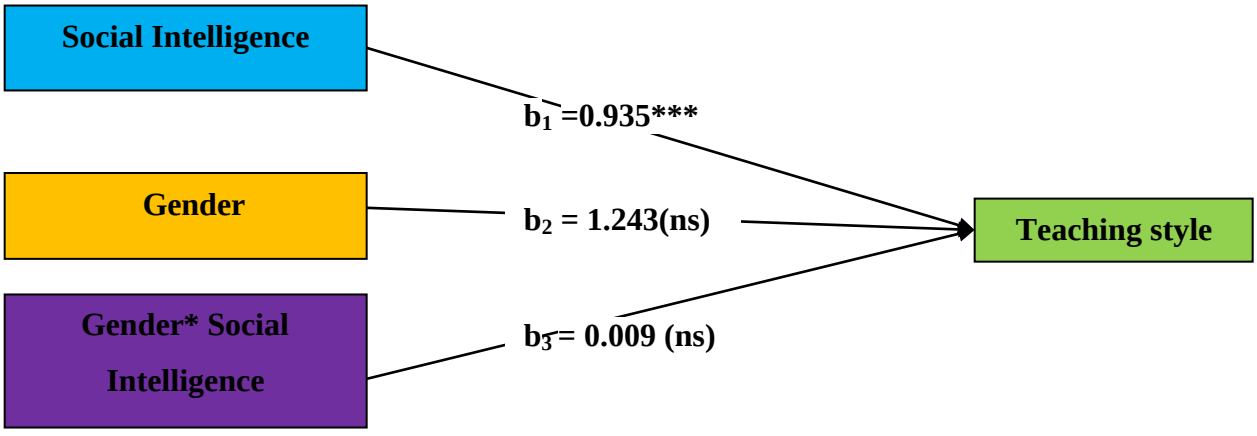
Regression Path	B	SE	t	p	95% LLCI	95% ULCI
Predictor: Social Intelligence, Moderator= Gender, Outcome Variable=Teaching Style						
(R^2= .980, F= 10004.756, df= (3, 628), p<.001						
Constant	107.886	1.987	54.291	<.001	103.984	111.788
Social Intelligence	0.935	0.021	43.759	<.001	0.893	0.977
Gender	1.243	1.148	1.083	.2794	0.499	1.987
Interaction: SI*Gender	0.009	0.012	0.736	.4620	-0.038	0.056
Test(s) of highest order unconditional interaction(s)						

	R2-change	F	df1	df2	p
SI*Gender	.000	0.542	1	628	0.462

Note (for Table 4.28). Unstandardized regression coefficients are reported. Bootstrap sample size = 5000, N= 632, ns= not significant, LL: lower limit, UL: upper limit, CI: confidence interval

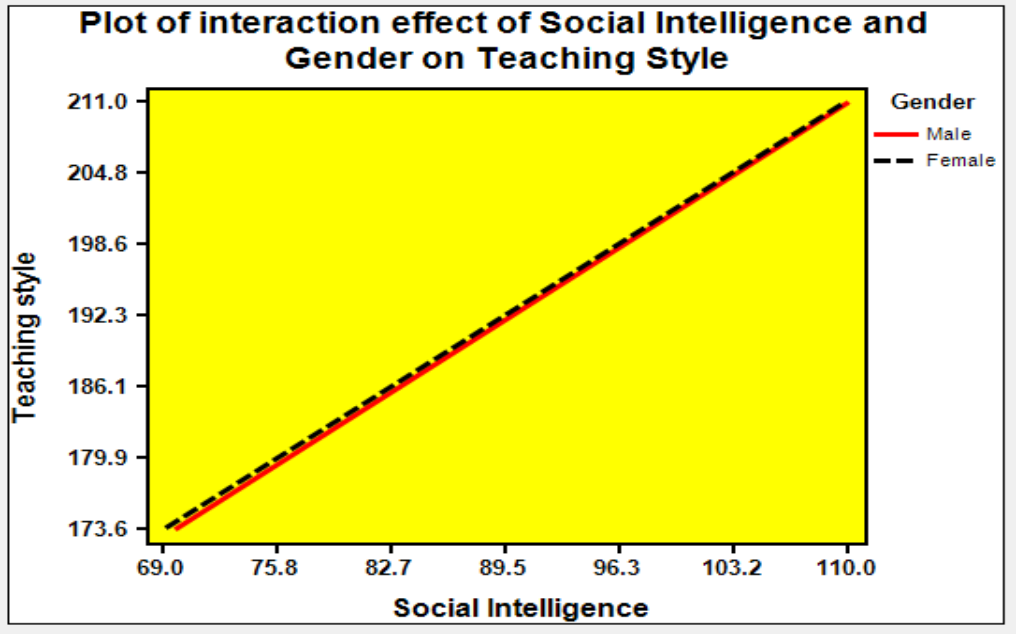
Figure 4.46

Statistical model for the moderation effect of gender on the relationship between social intelligence and teaching style



Graph 4.2

The plots of effect of interaction between social intelligence and teachers" gender on teaching style of teachers



4.10 Moderation effect of gender on the relationship emotional intelligence between and professional commitment of teachers

Objective 9: To study the moderation effect of gender on the relationship emotional intelligence between and professional commitment of teachers

$H_0$9: There is no significant moderation effect of gender on the relationship emotional intelligence between and professional commitment of teachers

According to research objective 9, the following null hypothesis was formulated: $H_0$9: There is no significant moderation effect of gender on the relationship between emotional intelligence and professional commitment of teachers'. This null hypothesis deals with four variables that were gender, emotional intelligence, interaction (i.e. EI*Gender) and professional commitment. Here gender categorical variable however emotional intelligence and professional commitment is a continuous variable. Gender hastwo levels male and female teachers. So, to check moderation effect of gender on the relationship between emotional intelligence and professional commitment of teachers, the

above null hypothesis $H_0$7 was tested using moderation analysis Model 1 in PROCESS macro for SPSS (developed by Prof. Andrew F. Hayes; Hayes, 2013). PROCESS is based on regression-based path-analytic framework and estimates the interaction (between emotional intelligence and the moderator variable i.e. gender) effect and bias-corrected confidence intervals.

During conducting moderation analysis, moderation analysis the major aim was to generation of the sample population. Data needs to meet several statistical measures of multiple regressions. Here it was very relevant to check the normality of the data because any ravishing of data will be meaningless for generalizing the conclusion to the targeted population because those results would be biased.

First of all, to know the absence of outlier in the dataset the values of Cook's distance (Cook, 1977) ranged from 0.00 to 0.05 and never exceeded the threshold value of 1.00 (Cook & Weisberg, 1982). Apart fom this the maximum value of the Mahalanobis (Mahalanobis, 1930) statistic (i.e. M_{Max}=3.76) did not exceeded the critical value (i.e. 7.81 with df=3 at 0.05 level) so it can be said that there was absence of any multivariate outlier in the residual.

Secondly, the acceptable range of Durbin-Watson test is 1.00 to 3.00 (Field, 2013) and here results of Durbin-Watson statistic is 1.19 that falls within acceptable range. So, there was no problem of 'Autocorrelation' with the data. This data also supported by the residual plot.

Thirdly, homoscedasticity of the residual as the residual points are not too scattered from the *Fit line* (see Figure 4.47). Further, Breusch-Pagan and Koenker test was performed using a macro developed by Ahmad Daryanto (Daryanto, 2020). Both tests i.e. Breusch-Pagan test (Lagrange Multiplier (LM) = .545, p= .789) andKoenker test (LM= .628, p= .512) were not significant and thus, so homoskedasticity of data has not been elapsed.

Fourth, the normality of the residual was checked through the visual inspections of the normality plots of the residual that were Histogram plot (Figure 4.47) and Q-Q plot

(Figure 4.47) of the unstandardized residual. Further, to check the visual inspection of normality test were performed. However, normality of the unstandardized residual was confirmed from the statistically insignificant results of Kolmogrov-Smirnov test (statistic= .090, p= .425) and the Shapiro-Wilk test (W= .967, p=.473) (Field, 2009).

Finally, from Table 4.29, it can be seen that the VIF value was 1.314 for emotional intelligence and 1.338 for gender which was not crossed the limitation VIF<10 (Myers, 1990) and Tolerence value 0.761 for emotional intelligence and 0.747 for gender and it was within the maximum value of tolerance that was Tolerance>0.2 (Menard, 1995) for all the IVs. Hence, the absence of multicollinearity in the dataset is ensured.

Table 4.29

Collinearity diagnostics of the moderation Model with reference to Variance Inflation Factor (VIF) and Tolerance

Predictor variables in the Model		**Collinearity Statistics**	
		Tolerance	**VIF**
1	**Emotional Intelligence**	0.761	1.314
2	**Gender**	0.747	1.338

Figure 4.47

Histogram (left) and Normal Q-Q plot (right)

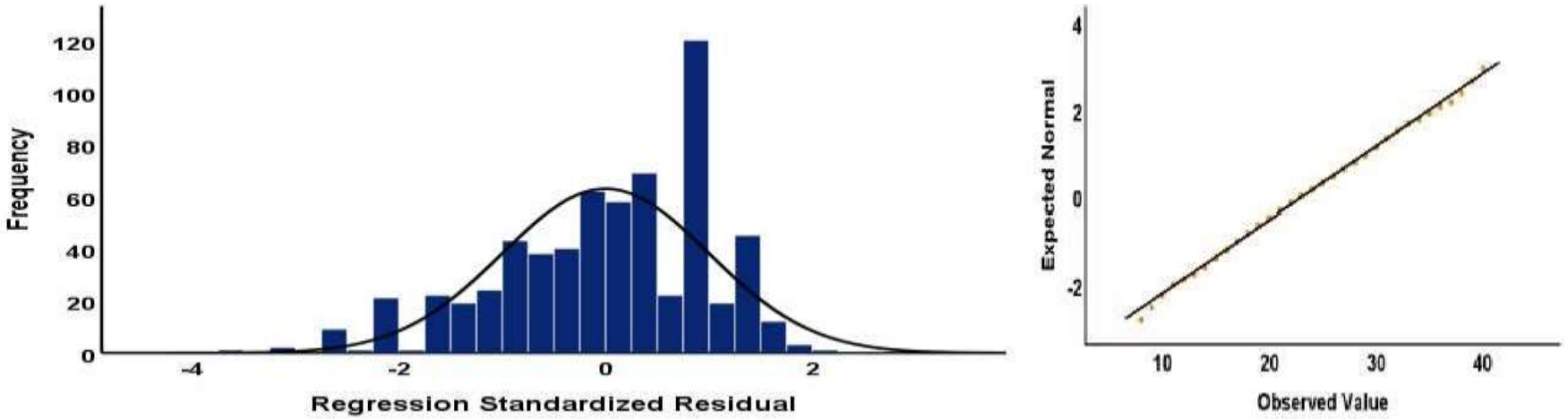
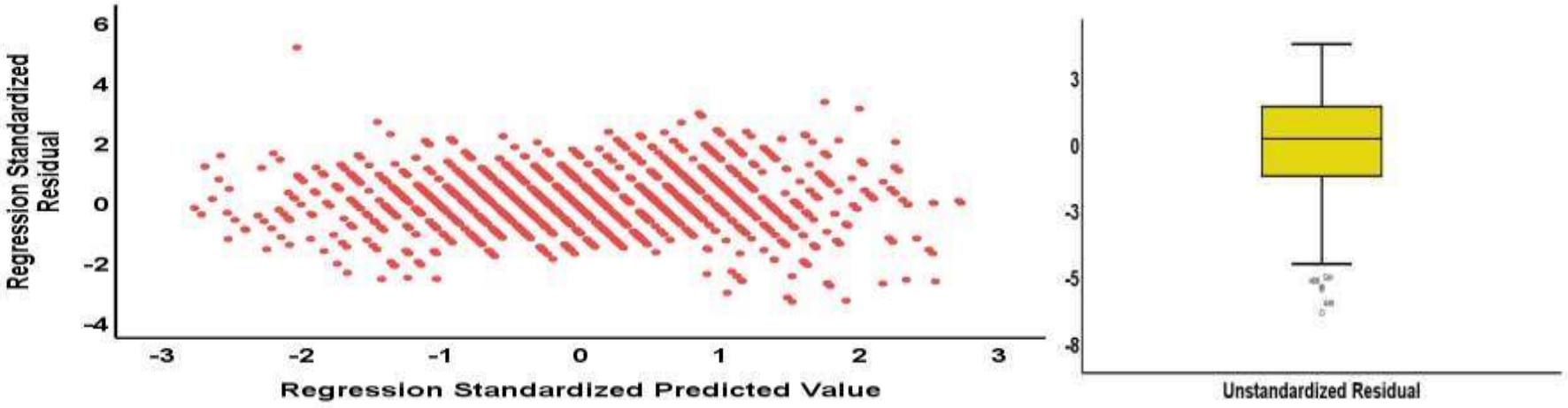


Figure 4.48

The Residual Plot of the dependent variable (professional commitment) (left) and Box-plot of the residual (right)

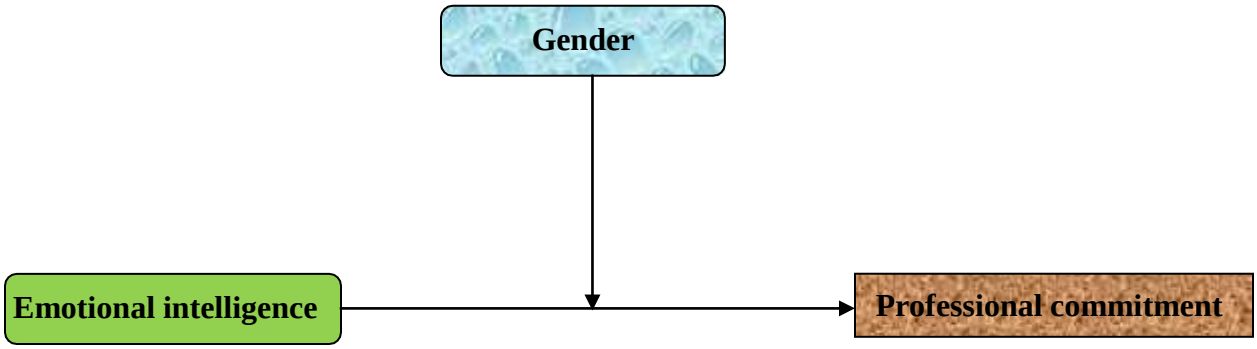


So, the data fulfilled all the statistical assumptions needed for moderation analysis. It can be concluded that the data was absence of any bias. Thus, the findings and conclusions from the moderation analysis may be generalized in the target population.

Here the moderation analysis was run by selecting teachers‘ gender as the moderator variable that might exert differential effect on the relationship between emotional intelligence and professional commitment. The hypothesized moderation model (see Figure 4.49 and Figure 4.50) was then examined and evaluated (see Figure 4.51). The major focus to check whether gender pretends any differential effect on the relationship between emotional intelligence and professional commitment and also to estimate the interaction (between emotional intelligence and professional commitment) effect along with the statistical significance of the differential Bias-corrected Bootstrapping resampling methods were used to test the statistical significance of differential effect. According to Preacher et al. (2007) and Hayes (2013), it can be said that to perform the bootstrapping resampling procedures (on 5,000 Bootstrap sub-samples) that produced 95% bias-corrected confidence intervals. Bias-corrected lower and upper limit of 95% confidence intervals of the effects did not include zero means the differential (moderation) effect was considered statistically significant at α=.05 (Field, 2013). Bootstrapping method did not violate the assumptions of normality as it is a nonparametric resampling procedure (Koopman et al., 2015).

Figure 4.49

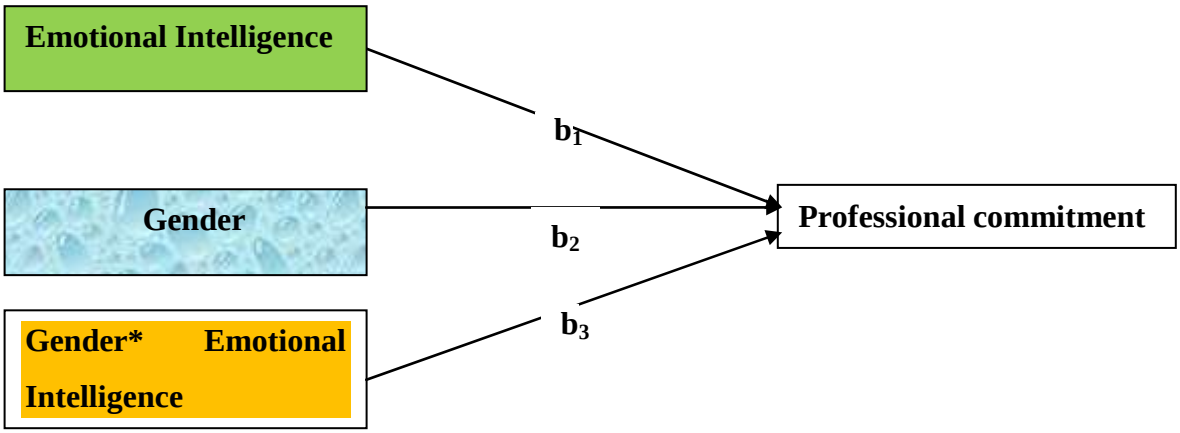
Hypothesized (conceptual) path model for the moderation effect of Gender on the relationship between emotional intelligence and professional commitment



Aiken, West, and Reno (1991) prescribed a follow up analysis was done by plotting professional commitment on emotional intelligence separately for male and female teachers. Apart from this simple slope analysis were performed to check slope of regression lines differ significantly or not in relation to gender. However, moderation interaction effect size was expressed with f-squared (f^2) statistic (Selya, Rose, Dierker, Hedeker, &Mermelstein, 2012): where $f^2 \geq 0.02$ implies small effect, $f^2 \geq 0.15$ implies medium effect, and $f^2 \geq 0.35$ implies a large effect (Cohen, 1988).

Figure 4.50

Statistical model for the moderation effect of gender on the relationship between emotional intelligence and professional commitment



In this model emotional intelligence was an independent variable professional commitment was a dependent variable and gender was a moderator variable on the relationship between emotional intelligence and professional commitment was constructed and it was checked by performing moderation analysis (see Figure 4.51). As shown the result bellow the overall moderation model was significant: R^2=.9293, F= 2752.0712, df= (3, 628), p<.001 (see Table 4.30).The effect of emotional intelligence on professional commitment was positive and significant, (B= 0.934, 95% CI [0.8431, 1.026], p<0.001; see Table 1). Then the effect of gender on professional commitment was positive significantly related (B= 6.887, 95% CI [4.309, 9.465], p<0.01; see Table 4.30).

Although, the effect of interaction between emotional intelligence and teachers gender on professional commitment was found positively significant (B= 0.059, 95% CI [0.004, 0.113], p<.05; see Table 4.30]. However, from the test of highest order unconditional interaction showed that R^2-change for inclusion of the interaction term (Gender*emotional intelligence) in the moderation model was significant: R^2-change= 0.0005, F (1, 628) = 4.454, p<.05. This means interaction moderation model is significant. From the table 1 it can be concluded that gender was considered as a significant moderator on the relationship between emotional intelligence and professional commitment. So, there was a significant differential effect of gender on the relationship between emotional intelligence and professional commitment. So, emotional intelligence influences professional commitment irrespective of gender. Hence, emotional intelligence was found to be very beneficial for promoting better professional commitment regardless of gender of teachers.

Here interaction effect of emotional intelligence and gender was statistically significant. But weather effect was practically significant or not calculated through effect size. So, the f^2 effect size measure was considered to describe the effect size of the interaction effect (Selya, Rose, Dierker, Hedeker, & Mermelstein, 2012).The effect size for the moderation effect was found to be 13.146 which is a large effect ($f^2 \geq 0.35$) following the Cohen's (1988) guidelines. The conditional effects of gender on professional commitment shows that for both male and female teachers, the effect of gender on professional commitment was significant (for male teachers B= 0.993, p<.001 for female teachers B= 1.052, p<.001).

Simple slope analysis was performed to compare the degree of interaction effect of emotional intelligence and gender on professional commitment for male and female teachers separately. The simple slopes analysis also shows that slope for emotional intelligence on professional commitment at each level of gender were: $b_{females}$= 1.052, SE= 0.0177, t= 59.521, p<0.001, 95% CIs: [1.017, 1.086] for the female teachers and b_{males}= 0.993, SE= 0.022, t= 46.247, p<0.001, 95% CIs: [0.951, 1.035] for the male teachers. So, female teachers were found to be significantly higher than male teachers. It can be concluded from here that significant differential effect of gender on the

relationship between emotional intelligence and professional commitment. Here it can be found from that bellow table 4.30 that relationships between emotional intelligence and professional commitment stronger for female teacher than that of the male teachers.

After conducting moderation analysis, it was found that interaction effect of gender and emotional intelligence is significant statistically on the relationship between emotional intelligence and professional commitment of teachers. Gender was found to be a significant moderator in the relationship between emotional intelligence and professional commitment. So, it is clear that emotional intelligence has differential effect on professional commitment with respect to gender of the teachers. That is emotional intelligence affect differently for both male and female teachers. Further, the relationship between emotional intelligence and professional commitment was significantly stronger for female teachers than that of the male teachers. Thus, it can be said that teachers' emotional intelligence is more beneficial for the female teachers in attaining higher level of professional commitment.

An interaction graph was plotted to know the interaction between gender and emotional intelligence on professional commitment of teachers. Further, to know the trend of influence of the interaction between gender and emotional intelligence on professional commitment, a graph was plotted. Graph 4.3 depicted that irrespective of teachers' gender and professional commitment increases with the increasing of emotional intelligence. The relationship trend between emotional intelligence and professional commitment were similar for male and female teachers. Interaction graph was steeper significantly for female teachers than that of the male teachers. So, effect of emotional intelligence on professional commitment did not remain same across gender. Effect was significantly stronger for female teachers than that of the male teachers. Therefore, it can be concluded that gender gap in emotional intelligence is significantly contributed in explaining mechanism for gender gap in professional commitment. So, the teachers who were more emotionally intelligent then their professional commitment should be better and become professionally more successful.

Table 4.30

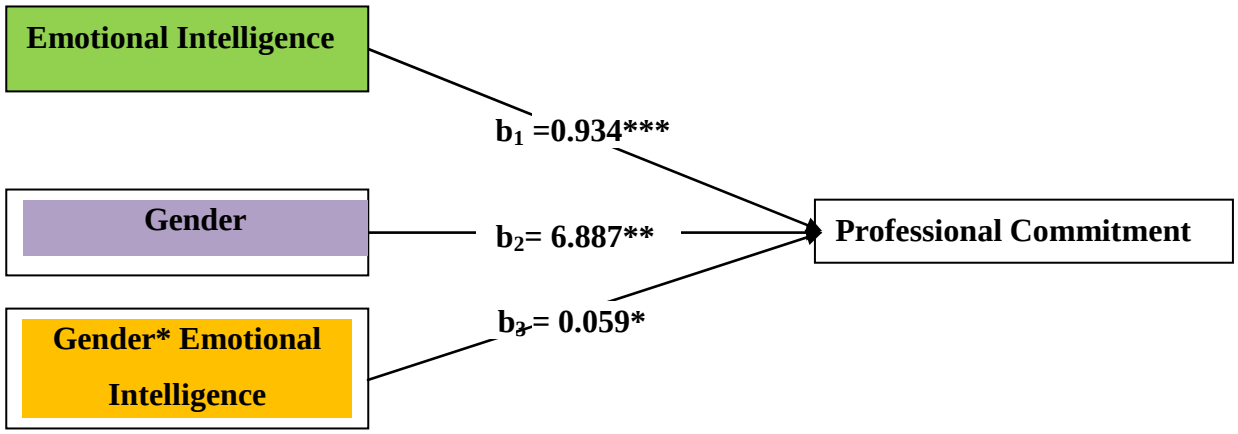
Moderating effect of gender on the relationship between emotional intelligence and professional commitment

Regression path	B	SE	T	p	95% LLCI	95% ULCI
Predictor: Emotional Intelligence, Moderator= Gender, Outcome Variable=professional commitment (R^2=.929, F=2752.071, df= (3, 628), p<.001						
Constant	56.827	4.400	12.917	<.001	48.188	65.466
Emotional Intelligence	0.934	0.046	20.121	<.001	0.843	1.026
Gender	6.887	2.595	2.654	<.01	4.309	9.465
Interaction: EI*Gender	0.059	0.028	2.110	<.05	0.004	0.113
Test(s) of highest order unconditional interaction(s)						
	R2-change	**F**	**df1**	**df2**	**p**	
EI*Gender	0.001	4.454	1	628	<.001	
Effect size (f square)=13.146						
Conditional effect						
Male teachers	0.993	0.022	46.247	<.001	0.951	1.035
Female teachers	1.052	0.018	59.521	<.001	1.017	1.086

Note (for Table 4.30). Unstandardized regression coefficients are reported. Bootstrapsample size = 5000, N= 632, LL: lower limit, UL: upper limit, CI: confidence interval

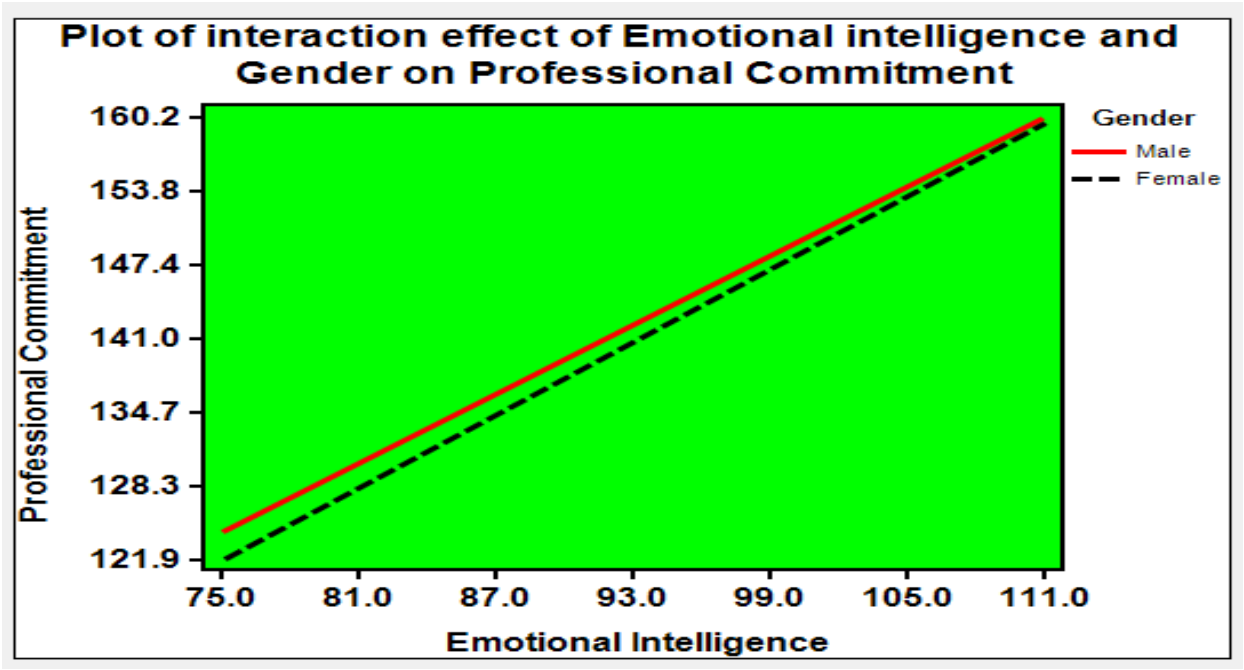
Figure 4.51

Statistical model for the moderation effect of gender on the relationship between emotional intelligence and professional commitment



Graph 4.3

The plots of effect of interaction between emotional intelligence and teachers" gender on professional commitment of teachers



4.11 Moderation effect of gender on the relationship between social intelligence and professional commitment of teachers

Objective 10: To study the moderation effect of gender on the relationship between social intelligence and professional commitment ofteachers

$H_0$10: There is no significant moderation effect of gender on the relationship between social intelligence and professional commitment of teachers

According to research objective 10, the following null hypothesis was formulated: $H_0$10: There is no significant moderation effect of gender on the relationship between social intelligence and professional commitment of teachers'. This null hypothesis deals with four variables that were gender, Social intelligence, interaction (i.e. SI*Gender) and professional commitment. Here gender categorical variable however Social intelligence and Professional Commitment was a continuous variable. Gender has two levels maleand female teachers. so, to check moderation effect of gender on the relationship between Social intelligence and Professional Commitment of teachers, the above null hypothesis $H_0$10 was tested using moderation analysis Model 1 in PROCESS macro for SPSS (developed by Prof. Andrew F. Hayes; Hayes, 2013). PROCESS is based on regression- based path-analytic framework and estimates the interaction (between Social intelligence and the moderator variable i.e. gender) effect and bias-corrected confidence intervals.

During conducting moderation analysis, moderation analysis the major aim was to generation of the sample population. Data needs to meet several statistical measures of multiple regressions. Here it was very relevant to check the normality of the data because any ravishing of data will be meaningless for generalizing the conclusion to the targeted population because those results would be biased.

To know the absence of outlier in the dataset the values of Cook's distance (Cook, 1977) ranged from 0.000 to 0.049 and never exceeded the threshold value of 1.00 (Cook & Weisberg, 1982). Apart fom this the maximum value of the Mahalanobis (Mahalanobis, 1930) statistic (i.e. M_{Max}=4.27) did not exceeded the critical value (i.e.7.81 with df=3 at 0.05 level) so it can be said that there was absence of any multivariate outlier in the residual.

Secondly, the acceptable range of Durbin-Watson test is 1.00 to 3.00 (Field, 2013) and here results ofDurbin-Watson statistic is 1.614 that falls within acceptable range. So, there was no problem of 'Autocorrelation' with the data. This data also supported by the residual plot.

Thirdly, homoscedasticity of the residual as the residual points are not too scattered from the *Fit line* (see Figure 4.52). Further, Breusch-Pagan and Koenker test was performed using a macro developed by Ahmad Daryanto (Daryanto, 2020). Both tests i.e. Breusch-Pagan test (Lagrange Multiplier (LM) = 0.456, p= 0.321) and Koenker test (LM= 0.987, p= 0.463) were not significant and thus, so homoskedasticity of data has not been elapsed.

Fourth, the normality of the residual was checked through the visual inspections of the normality plots of the residual that were Histogram plot (Figure 4.52) and Q-Q plot (Figure 2) of the unstandardized residual. Further, to check the visual inspection of normality test were performed. However, normality of the unstandardized residual was confirmed from the statistically insignificant results of Kolmogrov-Smirnov test(statistic= 0.077, p=0.458) and the Shapiro-Wilk test (W= 0.939, p= 0.724) (Field, 2009).

Finally, from Table 4.31, it can be seen that the VIF value was 1.351 for Social intelligence and 1.223 for gender because it is not crossed the limitation VIF<10 (Myers, 1990) and Tolerence value 0.740 for Social intelligence and 0.817for gender and it was within the maximum value of tolerance that was Tolerance>0.2 (Menard, 1995) for all the IVs. Hence, the absence of multicollinearity in the dataset is ensured.

Table 4.31

Collinearity diagnostics of the moderation Model with reference to Variance Inflation Factor (VIF) and Tolerance

	Collinearity Statistics	
Predictor variables in the Model	**Tolerance**	**VIF**
Social Intelligence	0.740	1.351
Gender	0.817	1.223

Figure 4.52

Histogram (left) and Normal Q-Q plot (left)

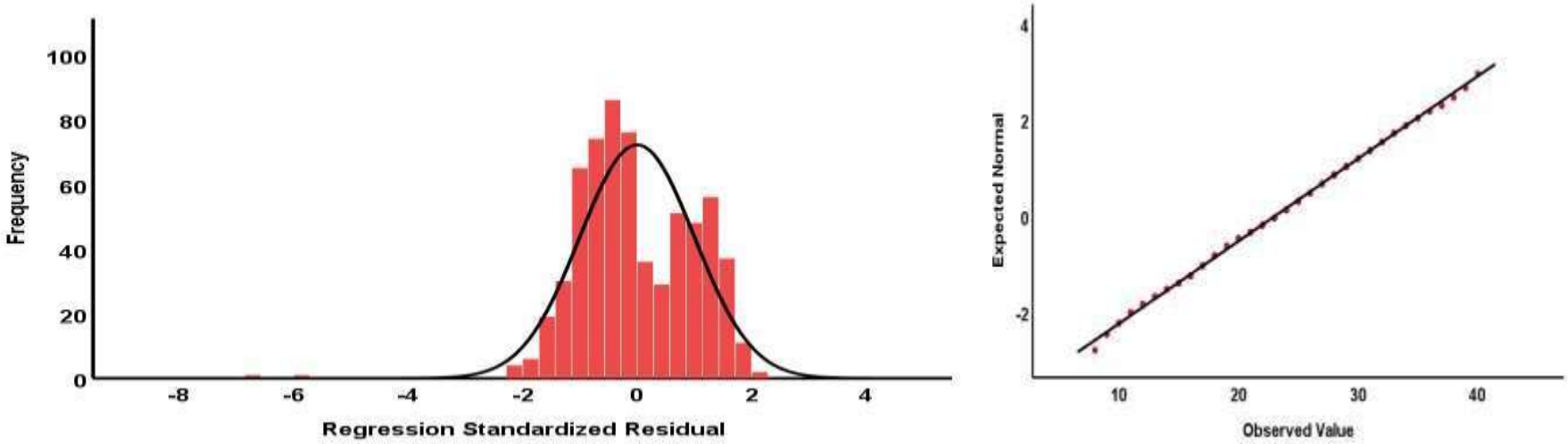
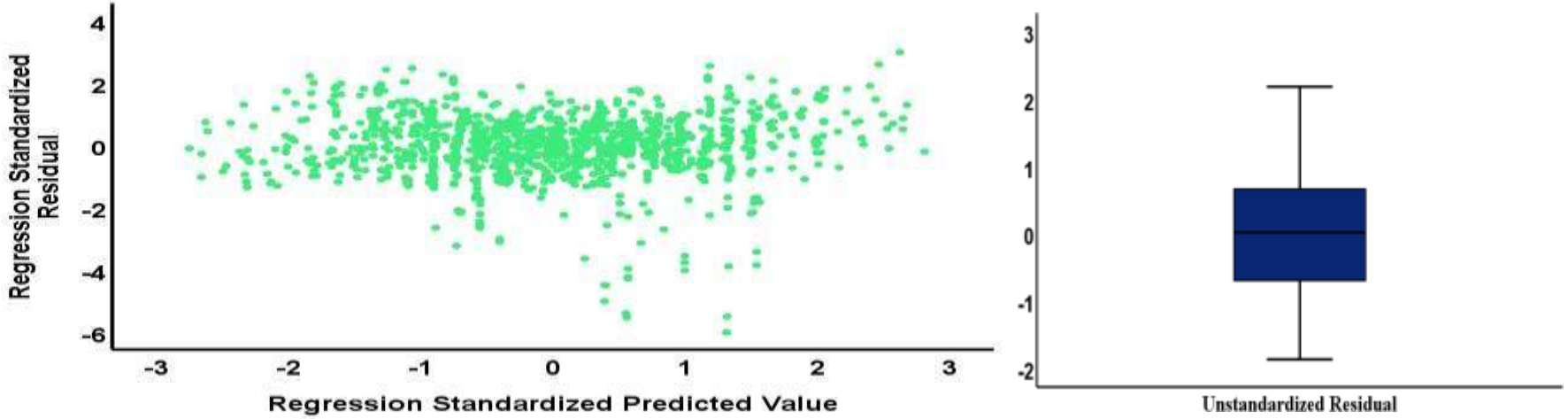


Figure 4.53

The Residual Plot of the dependent variable (professional commitment) (left) and Box-plot of the residual (right)

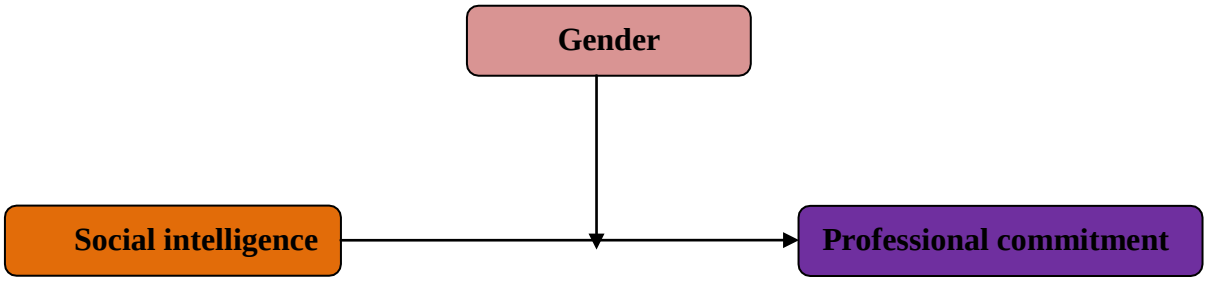


So, the data fulfilled all the statistical assumptions needed for moderation analysis. It can be concluded that the data was absence of any bias. Thus, the findings and conclusions from the moderation analysis may be generalized in the target population.

Here the moderation analysis was run by selecting teachers' gender as the moderator variable that might exert differential effect on the relationship between Social intelligence and professional commitment. The hypothesized moderation model (see Figure 4.54 and Figure 4.55) was then examined and evaluated (see Figure 4.56). The major focus to check whether gender pretends any differential effect on the relationship between Social intelligence and Professional Commitment and also to estimate the interaction (between Social intelligence and Professional Commitment) effect along with the statistical significance of the differential Bias-corrected Bootstrapping resampling methods were used to test the statistical significance of differential effect. According to Preacher et al. (2007) and Hayes (2013), it can be said that to perform the bootstrapping resampling procedures (on 5,000 Bootstrap sub-samples) that produced 95% bias-corrected confidence intervals. Bias-corrected lower and upper limit of 95% confidence intervals of the effects did not include zero means the differential (moderation) effect was considered statistically significant at α=.05 (Field, 2013). Bootstrapping method did not violate the assumptions of normality as it is a nonparametric resampling procedure (Koopman et al., 2015).

Figure 4.54

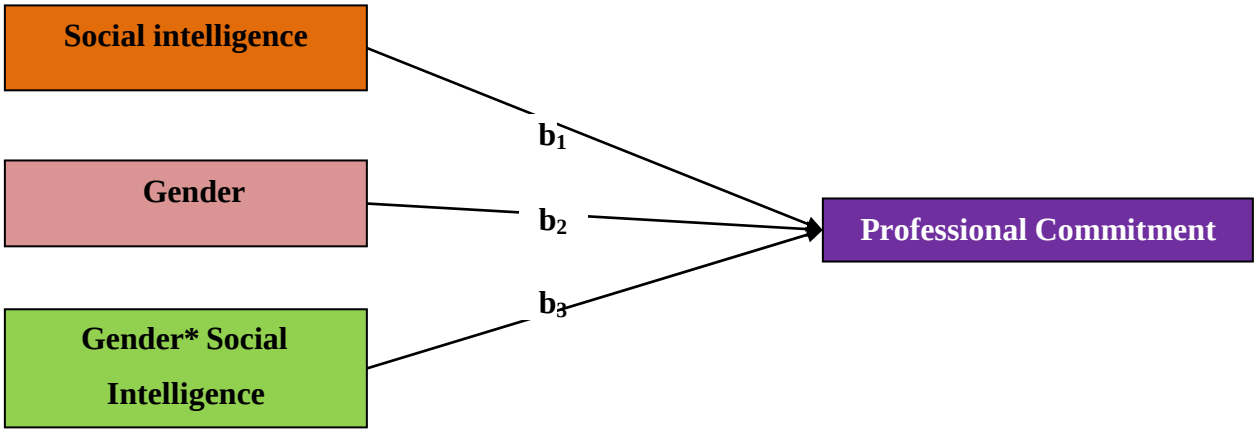
Hypothesized (conceptual) path model for the moderation effect of Gender on the relationship between Social intelligence and professional commitment



Aiken, West, and Reno (1991) prescribed a follow up analysis was done by plotting Professional Commitment onSocial intelligence separately for male and female teachers. Apart from this simple slope analysis were performed to check slope of regression lines differ significantly or not in relation to gender. However, moderation interaction effect size was expressed with f-squared (f^2) statistic (Selya, Rose, Dierker, Hedeker, &Mermelstein, 2012): where $f^2 \geq 0.02$ implies small effect, $f^2 \geq 0.15$ implies medium effect, and $f^2 \geq 0.35$ implies a large effect (Cohen, 1988).

Figure 4.55

Statistical model for the moderation effect of gender on the relationship between Socialintelligence and professional commitment



In this model Social intelligence was an independent variable Professional Commitment was a dependent variable and gender was a moderator variable on the relationship between social intelligence and Professional Commitment was constructed and it was checked by performing moderation analysis (see Figure 4.55). As shown the result bellow the overall moderation model was significant: R^2=.968, F= 6330.977, df= (3, 628), p<.001 (see Table 4.32).The effect of Social intelligence on Professional Commitment was positive and significant, (B= 0.8569, 95% CI [0.805, 0.909], p<0.001; see Table 4.32). Then the effect of gender on Professional Commitment was statistically not significantly related (B= 1.737, 95% CI [1.166, 2.308], p <0.5; see Table 4.32).

Although, the effect of interaction between Social intelligence and teachers gender on Professional Commitment was found positively significant (B= 0.012, 95% CI [-0.0191, 0.0427], p<.453; see Table 4.32].

After conducting moderation analysis, it was found that interaction effect of gender and social intelligence is not significant statistically on the relationship between social intelligence and professional commitment of teachers. Gender was not found to be a significant moderator in the relationship between social intelligence and professional commitment. Therefore, it can be said that social intelligence of teachers has no differential effect on professional commitment both for male and female teachers. Therefore, it can be said that social intelligence of teachers was equally related to their professional commitment both for male and female teachers. Further, it can also be said that social Intelligence is equally important for male teachers as well as for the female teachers in attaining higher level of professional commitment.

Further, to know the trend of influence of the interaction between gender and social intelligenceon professional commitment, Graph 4.4 was plotted where no interaction was found. So, the relationship between major predictor variable social intelligence and professional commitment did not depend upon students' gender. Thus, it can be said that the effect of social intelligence on professional commitment remains same irrespective of gender. So, it can be concluded from this finding that gender gap in social intelligence did not contributed the explaining mechanism for the gender gap in professional commitment. Further, the test of highest order unconditional interaction show that R^2-change for inclusion of the interaction term (Gender*social intelligence) in the moderation model was not significant: R^2-change= .000, F (1, 628) = 0.562, p=.4536.Therefore, interaction term did not contributed significantly for moderation model. From these results it can be concluded that gender was not significant moderator on the relationship between social intelligence and professional commitment.So, there is no statistically significant differential effect of gender on the relationship between social intelligence and professional commitment.Social intelligence influenced professional commitment to the same extent irrespective of gender. Therefore, it can be concluded that social intelligence found to be equally beneficial for male and female teachers.

Table 4.32

Moderating effect of gender on the relationship between Social intelligence and teaching style

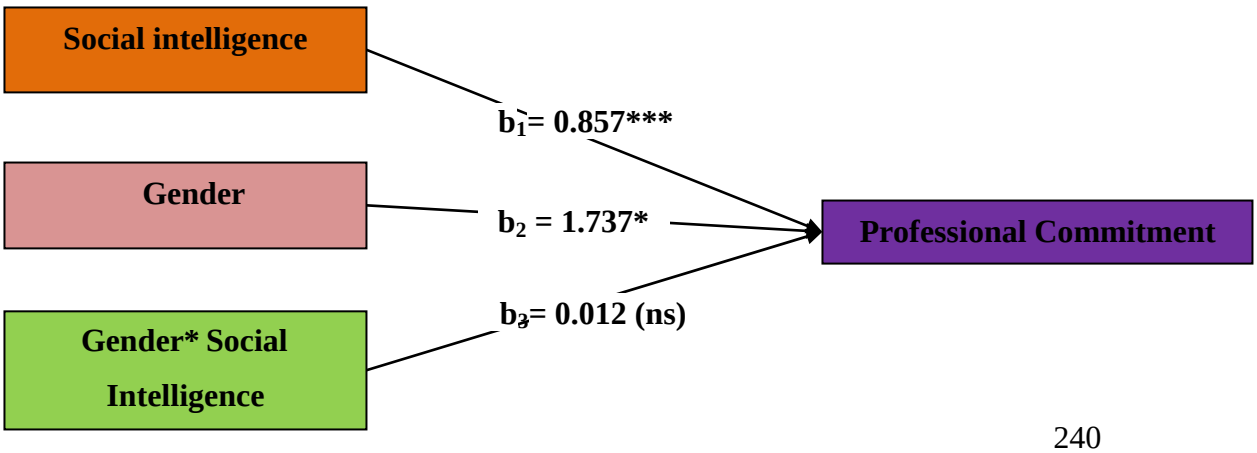
Regression path	B	SE	t	p	95% LLCI	95% ULCI
Predictor: Social Intelligence, Moderator= Gender, Outcome Variable= Professional Commitment						
(R^2= .968, F= 6330.977, df= (3, 628), p<.001						
Constant	65.003	2.482	26.189	<.001	60.129	69.877
Social Intelligence	.857	.027	32.095	<.001	0.805	0.909
Gender	1.737	0.786	2.211	<.05	1.166	2.308
Interaction: SI*Gender	0.012	0.016	0.750	0.454	-0.019	0.043
Test(s) of highest order unconditional interaction(s)						

	R2-change	F	df1	df2	p
SI*Gender	.0000	0.562	1	628	0.454

*Note (for Table 4.32). Unstandardized regression coefficients are reported. Bootstrap sample size = 5000, N= 632, LL: lower limit, UL: upper limit, CI: confidence interval, ***p<.001, **p<.01, *p<.05, ns= not significant*

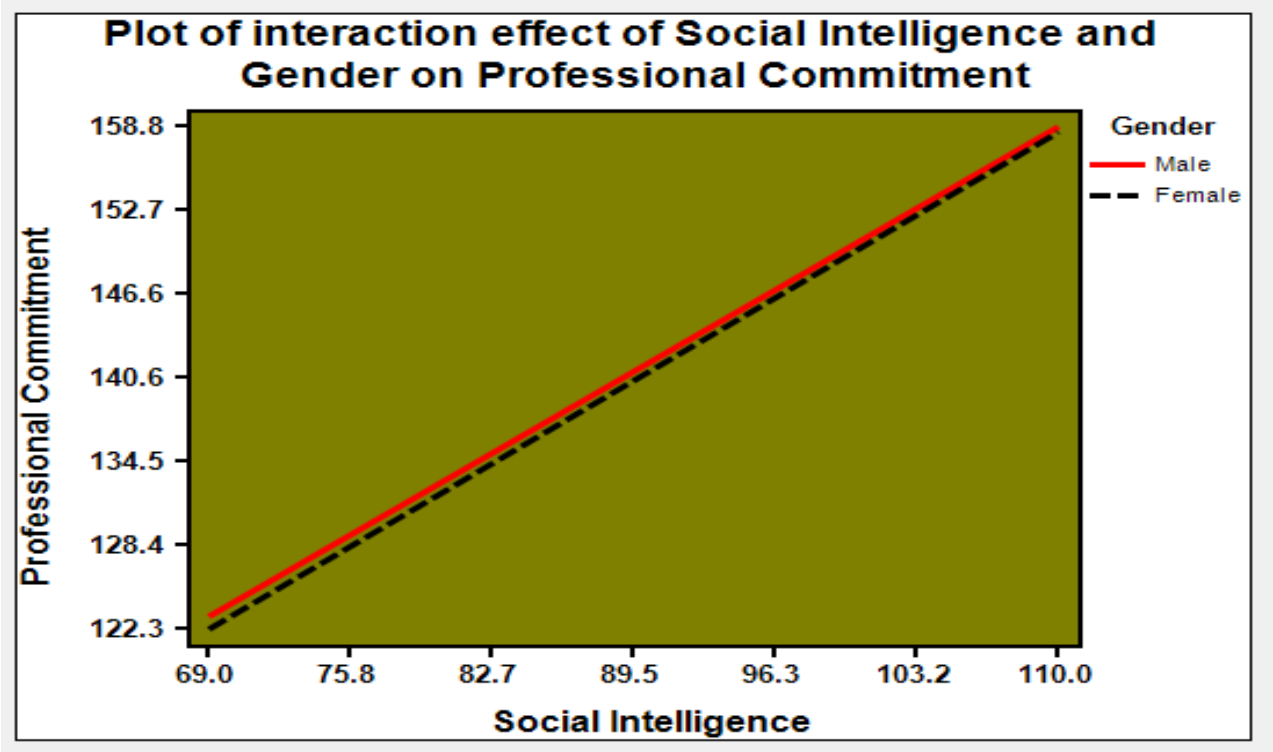
Figure 4.56

Statistical model for the moderation effect of gender on the relationship between social intelligence and professional commitment



Graph 4.4

The plots of effect of interaction between social intelligence and teachers" gender on Professional Commitment of teachers



4.12 Moderation effect of teaching experience on the relationship between emotional intelligence and teaching style of teachers

Objective 11: To study the moderation effect of teaching experience on the relationship between emotional intelligence and teaching style of teachers

$H_0$11: There is no significant moderation effect of teaching experience on the relationship between emotional intelligence and teaching style of teachers

According to research objective 11, the following null hypothesis was formulated: $H_0$11: There is no significant moderation effect of teaching experience on the relationship between emotional intelligence and teaching style of teachers'.

This null hypothesis deals with four variables that were teaching experience, emotional intelligence, interaction (i.e. Emotional Intelligence*teaching experience) and

teaching style. Here teaching experience categorical variable however emotional intelligence and teaching style is a continuous variable. Teaching experience has three levels novice, experienced and expertteachers. so, to check moderation effect of teaching experience on the relationship between emotional intelligence and teaching style of teachers, the above null hypothesis $H_0$11 was tested using moderation analysis Model 1 in PROCESS macro for SPSS (developed by Prof. Andrew F. Hayes; Hayes, 2013). PROCESS is based on regression-based path-analytic framework and estimates the interaction (between emotional intelligence and the moderator variable i.e. teaching experience) effect and bias-corrected confidence intervals.

During conducting moderation analysis, moderation analysis the major aim was to generation of the sample population. Data needs to meet several statistical measures of multiple regressions. Here it was very relevant to check the normality of the data because any ravishing of data will be meaningless for generalizing the conclusion to the targeted population because those results would be biased.

To know the absence of outlier in the dataset the values of Cook's distance (Cook, 1977) ranged from 0.00 to 0.05 and never exceeded the threshold value of 1.00 (Cook & Weisberg, 1982). Apart fom this the maximum value of the Mahalanobis (Mahalanobis, 1930) statistic (i.e. M_{Max}=3.21) did not exceeded the critical value (i.e. 7.81 with df=3 at 0.05 level) so it can be said that there was absence of any multivariate outlier in the residual. Secondly, the acceptable range of Durbin-Watson test is 1.00 to 3.00 (Field, 2013) and here results of Durbin-Watson statistic is 1.880 that falls within acceptable range. So, there was no problem of 'Autocorrelation' with the data. This data also supported by the residual plot (see Figure 4.58).

Thirdly, homoscedasticity of the residual as the residual points are not too scattered from the *Fit line* (see Figure 4.57). Further, Breusch-Pagan and Koenker test was performed using a macro developed by Ahmad Daryanto (Daryanto, 2020). Both tests i.e. Breusch- Pagan test (Lagrange Multiplier (LM) = .794, p= .472) and Koenker test (LM= .653, p= .321) were not significant and thus, so homoskedasticity of data has not been elapsed.

Fourth, the normality of the residual was checked through the visual inspections of the normality plots of the residual that were Histogram plot (Figure 4.57) and Q-Q plot (Figure 4.57) of the unstandardized residual. Further, to check the visual inspection of normality test were performed. However, normality of the unstandardized residual was confirmed from the statistically insignificant results of Kolmogrov-Smirnov test (statistic= .082, p= .394) and the Shapiro-Wilk test (W= .967, p=.485) (Field, 2009).

Finally, from Table 4.57, it can be seen that the VIF value was1.013 for emotional intelligence and 1.214 for teaching experience those values were not crossed the limitation VIF<10 (Myers, 1990) and Tolerence value 0.987for emotional intelligence and 0.824 for teaching experience and it was within the maximum value of tolerance that was Tolerance>0.2 (Menard, 1995) for all the IVs. Hence, the absence of multicollinearity in the dataset is ensured.

Table 4.33

Collinearity diagnostics of the moderation Model with reference to Variance Inflation Factor (VIF) and Tolerance

Predictor variables in theModel	**Collinearity Statistics**	
	Tolerance	**VIF**
Emotional Intelligence	0.987	1.013
Teaching experience	0.824	1.214

Figure 4.57
Histogram (extreme left), Normal Q-Q plot (left)

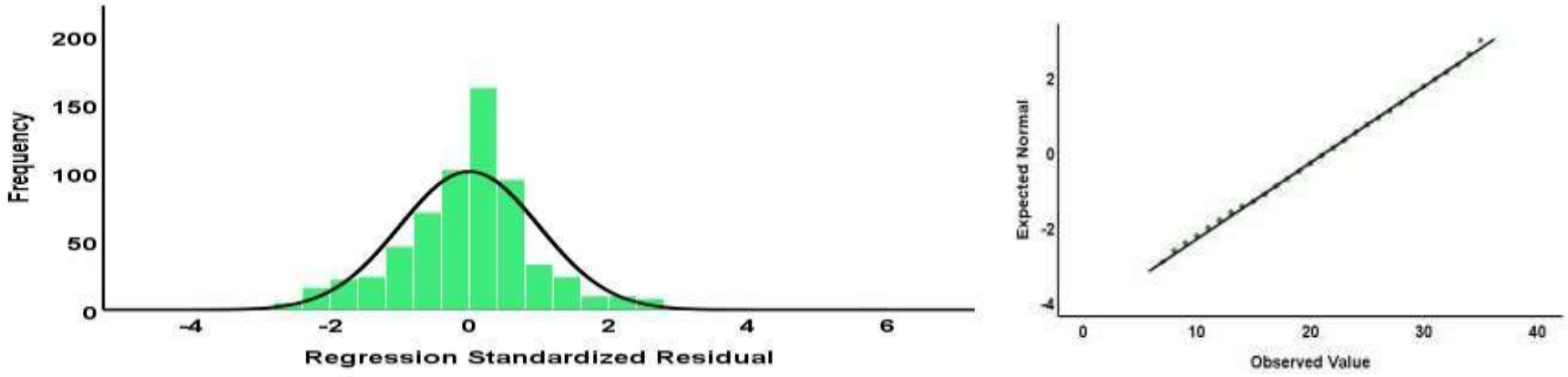
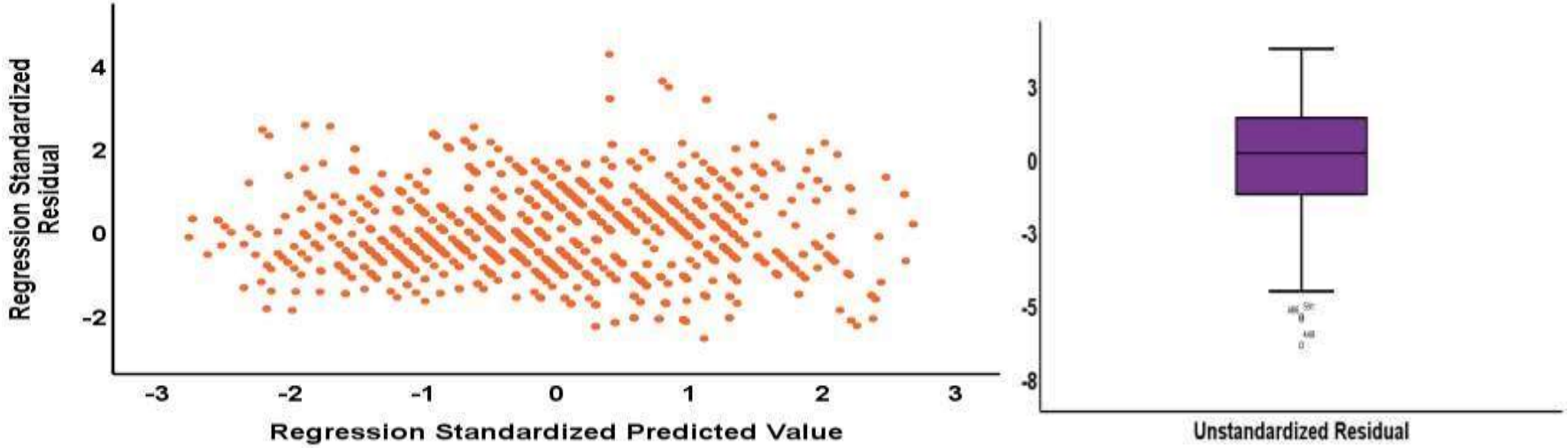


Figure 4.58
The Residual Plot of the dependent variable (teaching style) and Box-plot of the residual (right)

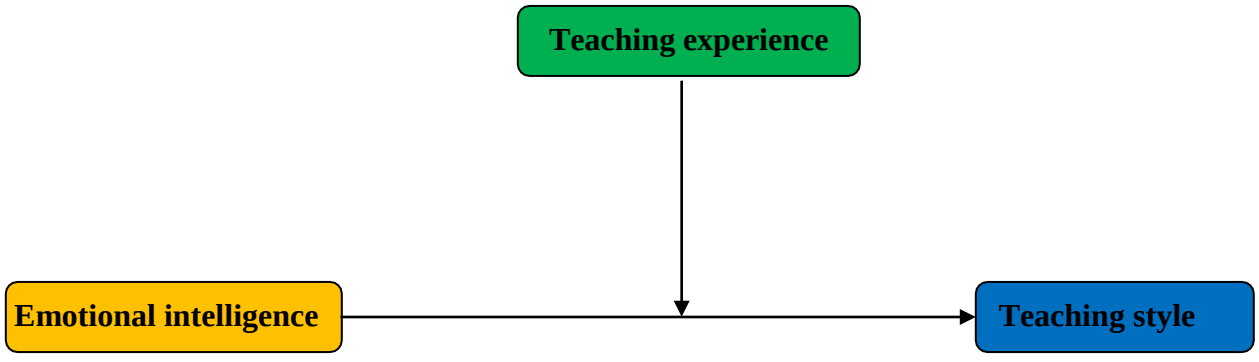


So, the data fulfilled all the statistical assumptions needed for moderation analysis. It can be concluded that the data was absence of any bias. Thus, the findings and conclusions from the moderation analysis may be generalized in the target population.

Here the moderation analysis was run by selectingteaching experience as the moderator variable that might exert differential effect on the relationship between emotional intelligence and teaching style. The hypothesized moderation model (see Figure 4.59 and Figure 4.60) was then examined and evaluated (see Figure 4.61). The major focus to check whether teaching experience pretends any differential effect on the relationship between emotional intelligence and teaching style and also to estimate the interaction (between the predictor that was emotional intelligence and the moderator that was teaching experience) effect along with the statistical significance of the differential Bias-corrected Bootstrapping resampling methods were used to test the statistical significance of differential effect. According to Preacher et al. (2007) and Hayes (2013), it can be said that to perform the bootstrapping resampling procedures (on 5,000 Bootstrap sub-samples) that produced 95% bias-corrected confidence intervals. Bias-corrected lower and upper limit of 95% confidence intervals of the effects did not include zero means the differential (moderation) effect was considered statistically significant at α=.05 (Field, 2013). Bootstrapping method did not violate the assumptions of normality as it is a nonparametric resampling procedure (Koopman et al., 2015).

Figure 4.59

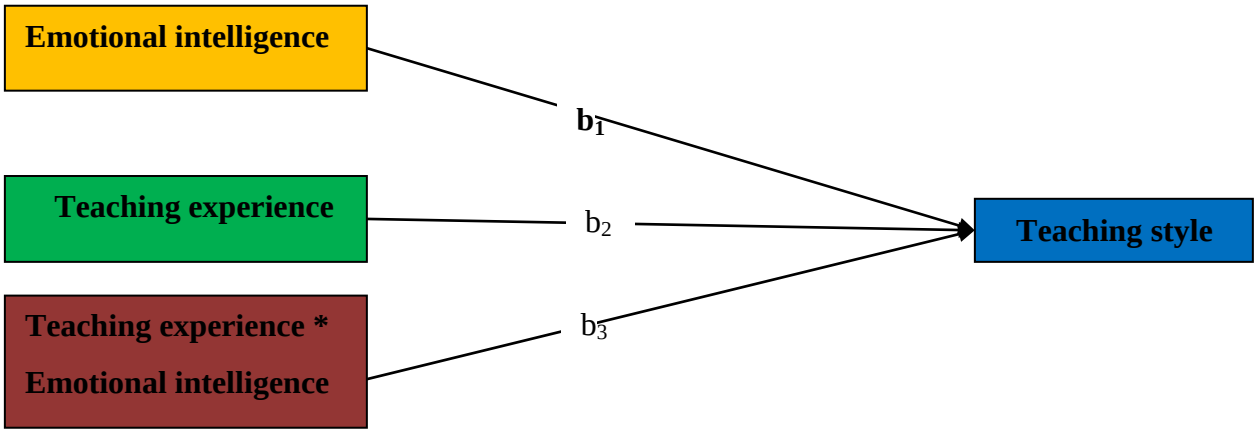
Hypothesized (conceptual) path model for the moderation effect of teachingexperience on the relationship between emotional intelligence and teaching style



Aiken, West, and Reno (1991) prescribed a follow up analysis was done by plotting teaching style on emotional intelligence separately for novice, experienced and expert teachers. Apart from this simple slope analysis were performed to check slope of regression lines differ significantly or not in relation to teaching experience. However, moderation interaction effect size was expressed with f-squared (f^2) statistic (Selya, Rose, Dierker, Hedeker, &Mermelstein, 2012): where $f^2 \geq 0.02$ implies small effect, $f^2 \geq 0.15$ implies medium effect, and $f^2 \geq 0.35$ implies a large effect (Cohen, 1988).

Figure 4.60

Statistical model for the moderation effect of teaching experience on the relationship between emotional intelligence and teaching style



In this model emotional intelligence was an independent variable teaching style was a dependent variable and teaching experience was a moderator variable on the relationship between emotional intelligence and teaching style was constructed and it waschecked by performing moderation analysis (see Figure 4.4.61). As shown the result bellow the overall moderation model was significant: R^2=.976, F= 8483.844, df= (3, 628), p<.001 (see Table 4.34).The effect of emotional intelligence on teaching style was positive and significant, (B= 0.809, 95% CI [0.770, 0.850], p<0.001; see Table 1). Then the effect of teaching experience on teaching style was positive significantly related (B= 14.622, 95% CI [11.375, 17.869], p<0.01; see Table 4.34).

Although, the effect of interaction between emotional intelligence and teachers teaching experience on teaching style was found positively significant (B= .154, 95% CI [136, .173], p<.01; see Table 4.34]. However, from the test of highest order unconditional interaction showed that R^2-change for inclusion of the interaction term (Teaching experience *emotional intelligence) in the moderation model was significant: R^2-change= .010, F (1, 628) = 265.910, p<.001. This means interaction moderation model is significant. From the table 4.34 it can be concluded that teaching experience was considered as a significant moderator on the relationship between emotional intelligence and teaching style. So, there was a significant differential effect of teaching experience on the relationship between emotional intelligence and teaching style. So, emotional intelligence influences teaching style irrespective of teaching experience. Hence, emotional intelligence was found to be very beneficial for promoting better teaching style regardless of teaching experience of teachers.

Here interaction effect of emotional intelligence and teaching experience was statistically significant. But weather effect was practically significant or not calculated through effect size. So, the f^2 effect size measure was considered to describe the effect size of the interaction effect (Selya, Rose, Dierker, Hedeker, &Mermelstein, 2012).The effect size for the moderation effect was found to be 137.626 which is a large effect ($f^2 \geq 0.35$) following the Cohen's (1988) guidelines. The conditional effects of teaching experience on teaching style shows that for novice, experienced and expert teachers, the effect of teaching experience on teaching style was significant (for novice teachers B= .964 , p<.001, for experienced teachers B= 1.118, p<.001, for expert teachers B = 1.272 , p<.001.

Simple slope analysis was performed to compare the degree of interaction effect of emotional intelligence and teaching experience on teaching style for novice, experience and expert teachers separately. The simple slopes analysis also shows that slope for emotional intelligence on teaching style at each level of teaching experience were: b_{Novice}= 0.964, SE= 0.012. t= 81.615, p<0.001, 95% CIs: [0.9408, 0.9872] for the novice teachers and $b_{Experienced}$= 1.118, SE= .007, t= 158.382, p<0.001, 95% CIs: [1.104, 1.132] for the experienced teachers. b_{Expert}= 1.2724, SE= .0118, t= 107.940, p<0.001,

95% CIs: [1.249, 1.296] for the expert teachers. So, expert teachers were found to be significantly higher than that ofexperienced and novice teachers. It can be concluded from here that significant differential effect of teaching experience on the relationship between emotional intelligence and teaching style. Here it can be found from that bellow table 1 that relationships between emotional intelligence and teaching style stronger for expert teachersthan that of experienced and novice teachers.

After conducting moderation analysis, it was found that interaction effect of teaching experience and emotional intelligence is significant statistically on the relationship between emotional intelligence and their teaching style of teachers. Teaching experience was found to be a significant moderator in the relationship between emotional intelligence and teaching style. So, it is clear that emotional intelligence has differential effect on teaching style with respect to teaching experience of the teachers. That is emotional intelligence affect differently for novice, experience and expert teachers. Further, the relationship between emotional intelligence and teaching style was significantly stronger for expert teachers than that of experienced and novice teachers. Thus, it can be said that teachers' emotional intelligence is more beneficial for the expert teachers than that of experienced and novice teachers in attaining higher level of teaching style.

An interaction graph was plotted to know the interaction between teaching experience and emotional intelligence on teaching style of teachers. Further, to know the trend of influence of the interaction between teaching experience and emotional intelligence on teaching style, a graph was plotted. Graph 4.5 depicted that irrespective of teachers' teaching experience, teaching style increases with the increasing of emotional intelligence. The relationship trend between emotional intelligence and teaching style were similar for novice, experienced and expert teachers. Interaction graph was steeper significantly for expert teachers than that of the experienced and novice teachers. So, effect of emotional intelligence on teaching style did not remain same across teaching experience.

Effect was significantly stronger for expert teachers than that of novice and experienced teachers. Therefore, it can be concluded that teaching experience gap in

emotional intelligence is significantly contributed in explaining mechanism for teaching experience gap in teaching style. So, the teachers who were more emotionally intelligent then their teaching style should be more students friendly and become professionally more successful.

Table 4.34

Moderating effect of teaching experience on the relationship between emotional intelligence and teaching style

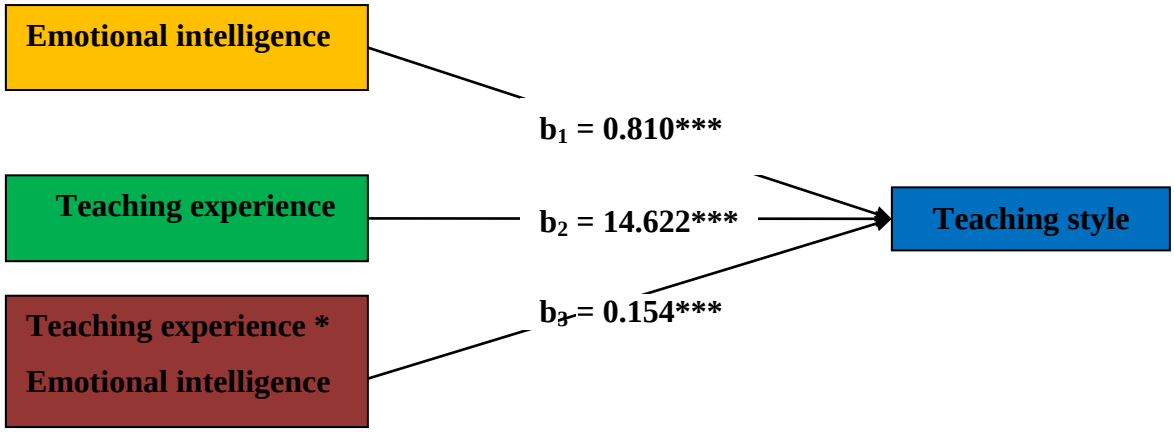
Regressionpath	B	SE	t	P	95% LLCI	95% ULCI
Predictor: Emotional Intelligence, Moderator= Teaching Experience, Outcome						
Variable=TeachingStyles						
(R^2=.976, F= 8483.844, df= (3, 628), P<.001						
Constant	118.315	1.856	63.733	<.001	114.670	121.961
Emotional Intelligence	0.810	0.020	40.095	<.001	0.770	0.850
Teaching Experience	14.622	0.873	16.750	<.001	11.375	17.869
Interaction: EI*TE	0.154	0.010	16.307	<.001	0.136	0.173
Test(s) of highest order unconditional interaction(s)						

	R2-change	F	df1	df2	p
EI*TE	0.010	265.910	1	628	<.001
Effect size (f square)=137.626					
Conditional effect					
Novice Teachers	0.964	0.012	81.615	<.001	0.941	0.987
Experienced Teachers	1.118	0.007	158.382	<.001	1.104	1.132
Expert Teachers	1.272	0.012	107.940	<.001	1.249	1.296

*Note (for Table 4.34). Unstandardized regression coefficients are reported. Bootstrap sample size = 5000, N= 632, LL: lower limit, UL: upper limit, CI: confidence interval, ***p<.001, **p<.01, *p<.05*

Figure 4.61

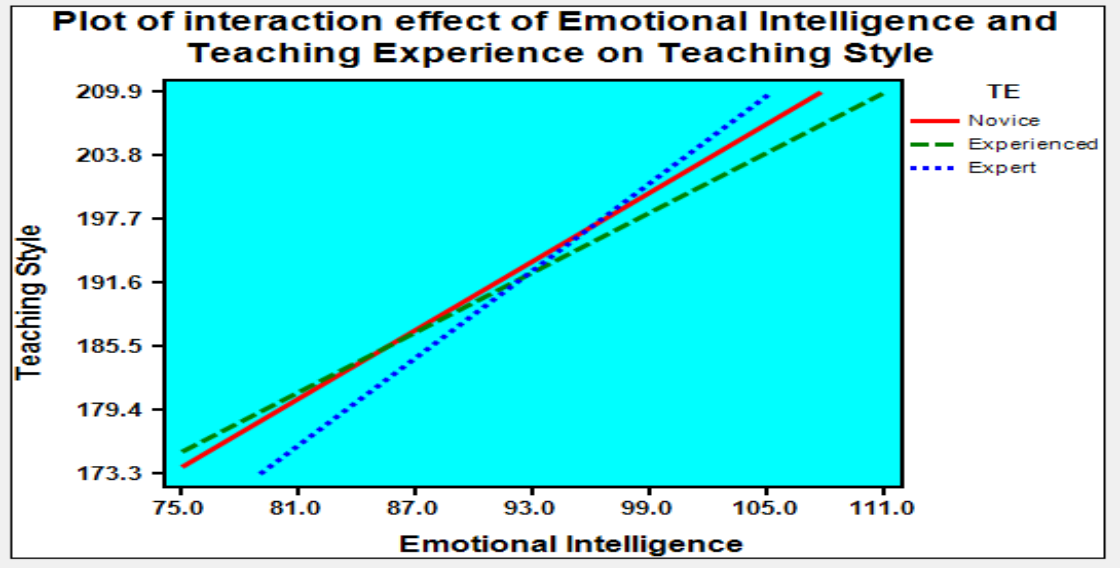
Statistical model for the moderation effect of teaching experience on the relationshipbetween emotional intelligence and teaching style



Note: TE = Teaching Experience, EI = Emotional intelligence, *- Interaction

Graph 4.5

The plots of effect of interaction between emotional intelligence and teaching experienceon teaching style of teachers



4.13 Moderation effect of teaching experience on the relationship between socialintelligence and teaching style of teachers

Objective 12: To study the moderation effect of teaching experience on the relationship between social intelligence and teaching style of teachers

$H_0$12: There is no significant moderation effect of teaching experience on the relationship between social intelligence and teaching style of teachers

According to research objective 12, the following null hypothesis was formulated: $H_0$12: There is no significant moderation effect of teaching experience on the relationship between social intelligence and teaching style of teachers‘. This null hypothesis deals with four variables that were teaching experience, social intelligence, interaction (i.e. Social intelligence * teaching experience) and teaching style. Here teaching experience categorical variable however social intelligence and teaching style is a continuous variable. Teaching experience has three types novice, experienced, expert teachers. So, to check moderation effect of teaching experience on the relationship between social intelligence and teaching style of teachers, the above null hypothesis $H_0$12 was tested using moderation analysis Model 1 in PROCESS macro for SPSS (developed by Prof. Andrew F. Hayes; Hayes, 2013). PROCESS is based on regression- based path-analytic framework and estimates the interaction (between social intelligence and the moderator variable i.e. teaching experience) effect and bias-corrected confidence intervals.

During conducting moderation analysis, moderation analysis the major aim was to generation of the sample population. Data needs to meet several statistical measures of multiple regressions. Here it was very relevant to check the normality of the data because any ravishing of data will be meaningless for generalizing the conclusion to the targeted population because those results would be biased.

To know the absence of outlier in the dataset the values of Cook‘s distance (Cook, 1977) ranged from 0.000 to 0.016 and never exceeded the threshold value of 1.00 (Cook & Weisberg, 1982). Apart fom this the maximum value of the Mahalanobis (Mahalanobis, 1930) statistic (i.e. M_{Max}=5.994) did not exceeded the critical value (i.e.

7.81 with df=3 at 0.05 level) so it can be said that there was absence of any multivariate outlier in the residual.

Secondly, the acceptable range of Durbin-Watson test is 1.00 to 3.00 (Field, 2013) and here results of Durbin-Watson statistic is 1.673 that falls within acceptable range. So, there was no problem of 'Autocorrelation' with the data. This data also supported by the residual plot (Figure 4.63).Thirdly, homoscedasticity of the residual as the residual points are not too scattered from the *Fit line* (see Figure 4.62). Further, Breusch-Pagan and Koenker test was performed using a macro developed by Ahmad Daryanto (Daryanto, 2020). Both tests i.e. Breusch-Pagan test (Lagrange Multiplier (LM) = .798, p= .361) and Koenker test (LM= .985, p= .475) were not significant and thus, so homoskedasticity of data has not been elapsed.Fourth, the normality of the residual was checked through the visual inspections of the normality plots of the residual that were Histogram plot (Figure 4.62) and Q-Q plot (Figure 4.62) of the unstandardized residual. Further, to check the visual inspection of normality test were performed. However, normality of the unstandardized residual was confirmed from the statistically insignificant results of Kolmogrov-Smirnov test (Statistic= .075, p= .546) and the Shapiro-Wilk test (W= .976, p=.358) (Field, 2009). Finally, from Table 4.35, it can be seen that the VIF value was

1.002 for social intelligence and 1.117 for teaching experience those values were not crossed the limitation VIF<10 (Myers, 1990) and Tolerence value 0.998 for social intelligence and 0.895 for teaching experience and it was within the maximum value of tolerance that was Tolerance>0.2 (Menard, 1995) for all the IVs. Hence, the absence of multicollinearity in the dataset is ensured.

Table 4.35

Collinearity diagnostics of the moderation Model with reference to Variance Inflation Factor (VIF) and Tolerance

	Collinearity Statistics	
Predictor variables in the Model	**Tolerance**	**VIF**
Social intelligence	0.998	1.002
Teaching experience	0.895	1.117

Figure 4.62

Histogram (extreme left), Normal Q-Q plot (left)

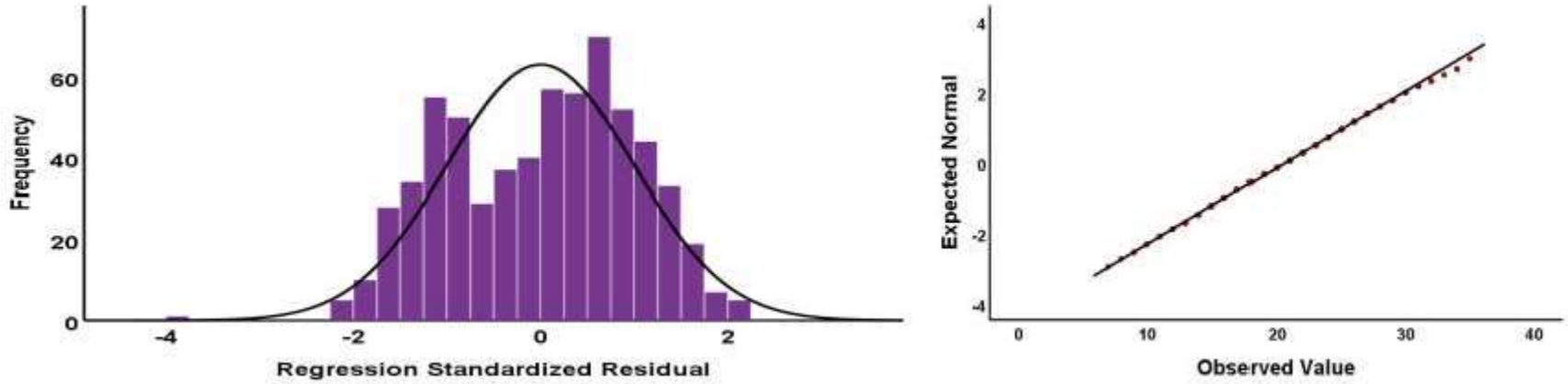
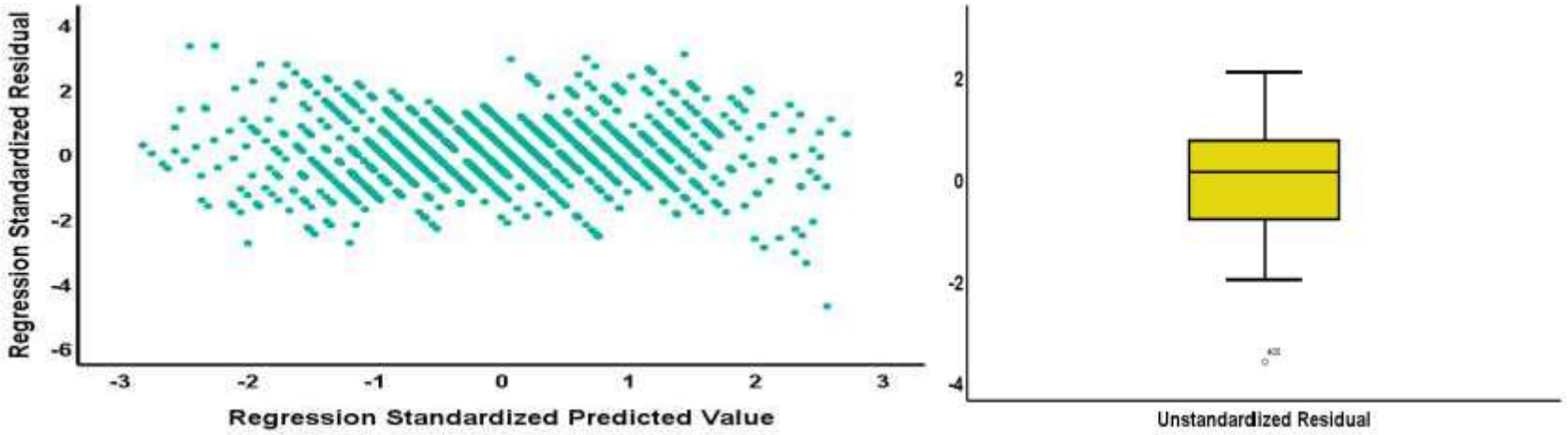


Figure 4.63

The Residual Plot of the dependent variable (teaching style) and Box-plot of the residual (right)

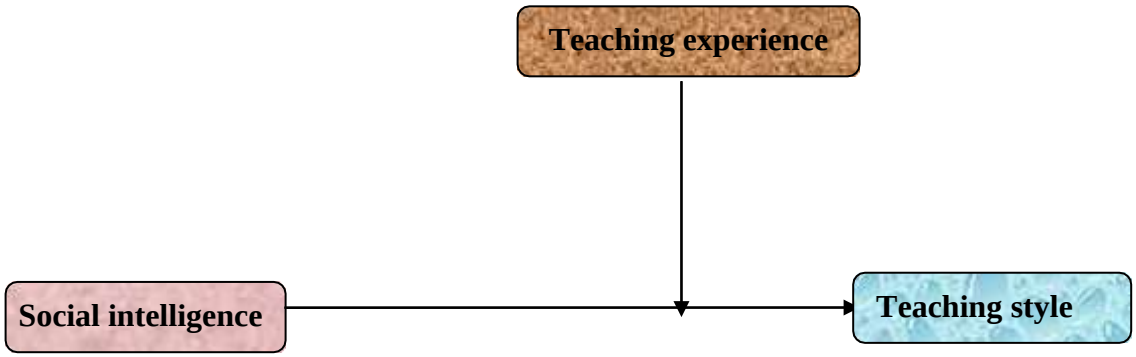


So, the data fulfilled all the statistical assumptions needed for moderation analysis. It can be concluded that the data was absence of any bias. Thus, the findings and conclusions from the moderation analysis may be generalized in the target population.

Here the moderation analysis was run by selecting teaching experience as the moderator variable that might exert differential effect on the relationship between social intelligence and teaching style. The hypothesized moderation model (see Figure 4.64 and Figure 4.65) was then examined and evaluated (see Figure 4.66). The major focus to check whether teaching experience pretends any differential effect on the relationship between social intelligence and teaching style and also to estimate the interaction (between the predictor that was social intelligence and the moderator that was teaching experience) effect along with the statistical significance of the differential Bias-corrected Bootstrapping resampling methods were used to test the statistical significance of differential effect. According to Preacher et al. (2007) and Hayes (2013), it can be said that to perform the bootstrapping resampling procedures (on 5,000 Bootstrap sub-samples) that produced 95% bias-corrected confidence intervals. Bias-corrected lower and upper limit of 95% confidence intervals of the effects did not include zero means the differential (moderation) effect was considered statistically significant at α=.05 (Field, 2013). Bootstrapping method did not violate the assumptions of normality as it is a nonparametric resampling procedure (Koopman et al., 2015).

Figure 4.64

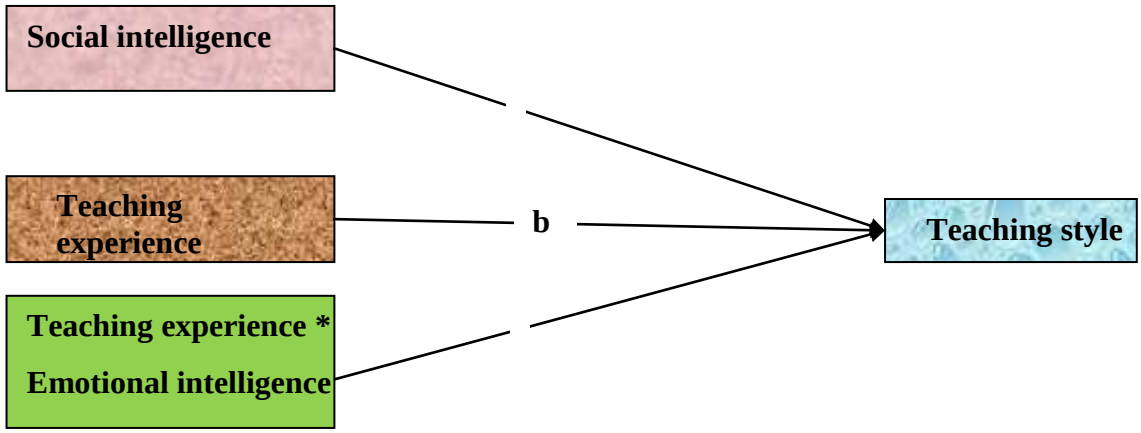
Hypothesized (conceptual) path model for the moderation effect of teaching experience on the relationship between social intelligence and teaching style



Aiken, West, and Reno (1991) prescribed a follow up analysis was done by plotting teaching style on social intelligence separately for novice, experienced and expert teachers. Apart from this simple slope analysis were performed to check slope of regression lines differ significantly or not in relation to teaching experience. However, moderation interaction effect size was expressed with f-squared (f^2) statistic (Selya, Rose, Dierker, Hedeker, &Mermelstein, 2012): where $f^2 \geq 0.02$ implies small effect, $f^2 \geq 0.15$ implies medium effect, and $f^2 \geq 0.35$ implies a large effect (Cohen, 1988).

Figure 4.65

Statistical model for the moderation effect of teaching experience on the relationship between social intelligence and teaching style



In this model social intelligence was an independent variable teaching style was a dependent variable and teaching experience was a moderator variable on the relationship between social intelligence and teaching style was constructed and it was checked by performing moderation analysis (see Figure 4.65). As shown the result bellow the overall moderation model was significant: R^2=.983, F= 11937.3276, df= (3, 628), p<.001 (see Table 4.36).The effect of social intelligence on teaching style was positive and significant, (B= 0.764, 95% CI [0.739, 0.790], p<0.001; see Table 4.36). Then the effect of teaching experience on teaching style was positive significantly related (B= 5.97, 95% CI [3.830, 8.114], p<0.01; see Table 1).

Although, the effect of interaction between social intelligence and teachers teaching experience on teaching style was found positively significant (B= 0.0684, 95% CI [0.057, 0.080], p<.001; see Table 4.36]. However, from the test of highest order unconditional interaction showed that R^2-change for inclusion of the interaction term (Teaching experience *social intelligence) in the moderation model was significant: R^2-change= 0.004, F (1, 628) = 136.694, p<.001. This means interaction moderation model is significant. From the table 1 it can be concluded that teaching experience was considered as a significant moderator on the relationship between social intelligence and teaching style. So, there was a significant differential effect of teaching experience on the relationship between social intelligence and teaching style. So, social intelligence influences teaching style irrespective of teaching experience. Hence, social intelligence was found to be very beneficial for promoting better teaching style regardless of teaching experience of teachers.

Here interaction effect of social intelligence and teaching experience was statistically significant. But weather effect was practically significant or not calculated through effect size. So, the f^2 effect size measure was considered to describe the effect size of the interaction effect (Selya, Rose, Dierker, Hedeker, &Mermelstein, 2012).The effect size for the moderation effect was found to be 250.445 which is a large effect ($f^2 \geq 0.35$) following the Cohen's (1988) guidelines. The conditional effects of teaching experience on teaching style shows that for novice, experienced and expert teachers, the effect of teaching experience on teaching style was significant (for novice teachers B = 0.833 , p<.001, for experienced teachers B = 0.901, p<.001, for expert teachers B = 0.969, p<.001.

Simple slope analysis was performed to compare the degree of interaction effect of social intelligence and teaching experience on teaching style for novice, experience and expert teachers separately. The simple slopes analysis also shows that slope for social intelligence on teaching style at each level of teaching experience were: b_{Novice}= 0.833, SE= 0.008. t= 105674, p<0.001, 95% CIs: [0.817, 0.848] for the novice teachers and $b_{Experiened}$= 0.901, SE= .005, t= 186.959, p<0.001, 95% CIs: [0.891, 0.910] for the experienced teachers. b_{Expert}= 0.969, SE= .007, t= 133.345, p<0.001, 95% CIs: [0.955,

0.984] for the expert teachers. So, expert teachers were found to be significantly higher than that of experienced and novice teachers. It can be concluded from here that significant differential effect of teaching experience on the relationship between social intelligence and teaching style. Here it can be found from that bellow table 4.36 that relationships between social intelligence and teaching style stronger for expert teacher than that of experienced and novice teachers.

In this study, a significant differential effect of teaching experience on the relationship between social intelligence and teaching style was found. Besides, the relationships between social intelligence and teaching style were stronger for expert teacher than that of experienced and novice teachers. After conducting moderation analysis, it was found that interaction effect of teaching experience and social intelligence is significant statistically on the relationship between social intelligence and their teaching style of teachers. Teaching experience was found to be a significant moderator in the relationship between social intelligence and teaching style. So, it is clear that social intelligence has differential effect on teaching style with respect to teaching experience of the teachers. That is social intelligence affect differently for novice, experience and expert teachers. Further, the relationship between social intelligence and teaching style was significantly stronger for expert teachers than that of experienced and novice teachers. Thus, it can be said that teachers' social intelligence is more beneficial for the expert teachers than that of experienced and novice teachers in attaining higher level of teaching style.

An interaction graph was plotted to know the interaction between teaching experience and social intelligence on teaching style of teachers. Further, to know the trend of influence of the interaction between teaching experience and social intelligence on teaching style, a graph was plotted. Graph 4.6 depicted that irrespective of teachers' teaching experience, teaching style increases with the increasing of social intelligence. The relationship trend between social intelligence and teaching style were similar for novice, experienced and expert teachers. Interaction graph was steeper significantly for expert teachers than that of the experienced and novice teachers. So, effect of social intelligence on teaching style did not remain same across teaching experience.Effect was

significantly stronger for expert teachers than that of novice and experienced teachers. Therefore, it can be concluded that teaching experience gap in social intelligence is significantly contributed in explaining mechanism for teaching experience gap in teaching style. So, the teachers who were more socially intelligent then their teaching style should be more students friendly and become more successful in personal and professional life.

Table 4.36

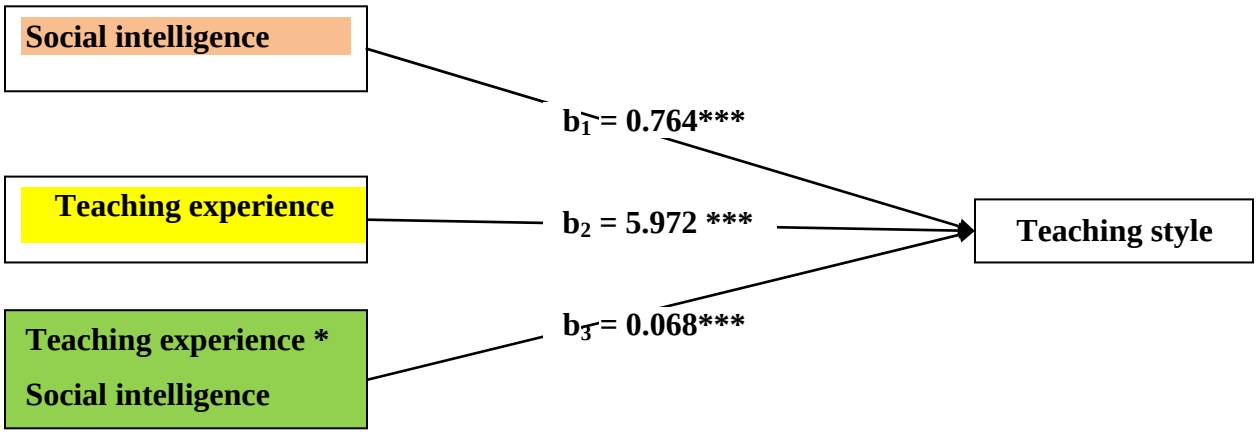
Moderating effect of teaching experience on the relationship between social intelligence and teaching style

Regression path	**B**	**SE**	**t**	**p**	**95%**
LLCI		**95% ULCI *Predictor: Social Intelligence,***			
Moderator*= Teaching Experience, *Outcome Variable=TeachingStyle (R^2= 0.983,					
F*= 11937.328, *df= (3, 628), P<.001					
Constant	123.566	1.160	106.537	<.001	121.289	125.844
Social Intelligence	0.764	0.0130	58.712	<.001	0.739	0.790
Teaching Experience	5.972	0.522	11.432	<.001	3.830	8.114
Interaction: SI*TE	0.0684	0.006	11.692	<.001	0.057	0.080
Test(s) of highest order unconditional interaction(s)						
	R2-change	**F**	**df1**	**df2**	**p**
SI*TE	0.004	136.694	1	628	<.001
Effect size (f square)=250.445					
Conditional effect					
Novice Teachers	0.833	0.008	105.674	<.001	0.817	0.848
Experienced Teachers	0.901	0.005	186.959	<.001	0.891	0.910
Expert Teachers	0.969	0.007	133.345	<.001	0.955	0.984

*Note (for Table4.36). Unstandardized regression coefficients are reported. Bootstrap sample size = 5000, N= 632, LL: lower limit, UL: upper limit, CI: confidence interval, ***p<.001, **p<.01, *p<.05*

Figure 4.66

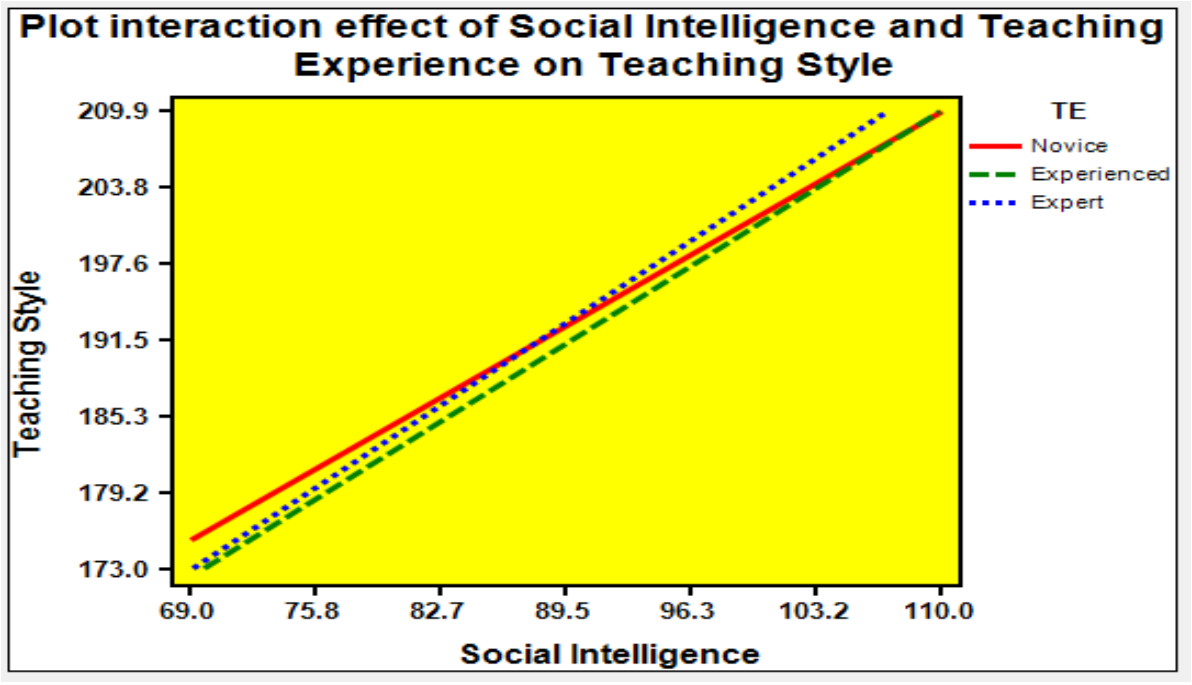
Statistical model for the moderation effect of teaching experience on the relationship between social intelligence and teaching style



Note: TE = Teaching Experience, SI = Social intelligence, * - Interaction

Graph 4.6

The plots of effect of interaction between social intelligence and teaching experience on teaching style of teachers



4.14 Moderation effect of teaching experience on the relationship between emotional intelligence and professional commitment of teachers

Objective 13: To study the he moderation effect of teaching experience on the relationship between emotional intelligence and professional commitment of teachers

$H_0$13: There is no significant he moderation effect of teaching experience on the relationship between emotional intelligence and professional commitment of teachers

According to research objective 13, the following null hypothesis was formulated: $H_0$13: There is no significant moderation effect of teaching experience on the relationship between emotional intelligence and professional commitment of teachers'. This null hypothesis deals with four variables that were teaching experience, emotional intelligence, interaction (i.e. Emotional Intelligence*teaching experience) and professional commitment. Here teaching experience categorical variable however emotional intelligence and professional commitment is a continuous variable. Teaching experience werethree types novice, experienced and expert teachers. So, to check moderation effect of teaching experience on the relationship between emotional intelligence and professional commitment of teachers, the above null hypothesis $H_0$13 was tested using moderation analysis Model 1 in PROCESS macro for SPSS (developed by Prof. Andrew F. Hayes; Hayes, 2013). PROCESS is based on regression-based path-analytic framework and estimates the interaction (between emotional intelligence and the moderator variable i.e. teaching experience) effect and bias-corrected confidence intervals.

During conducting moderation analysis, moderation analysis the major aim was to generation of the sample population. Data needs to meet several statistical measures of multiple regressions. Here it was very relevant to check the normality of the data because any ravishing of data will be meaningless for generalizing the conclusion to the targeted population because those results would be biased.

To know the absence of outlier in the dataset the values of Cook's distance (Cook, 1977) ranged from 0.000 to 0.077 and never exceeded the threshold value of 1.00 (Cook & Weisberg, 1982). Apart fom this the maximum value of the Mahalanobis

(Mahalanobis, 1930) statistic (i.e. M_{Max}=5.083) did not exceeded the critical value (i.e. 7.81 with df=3 at 0.05 level) so it can be said that there was absence of any multivariate outlier in the residual (Figure 4.68). Secondly, the acceptable range of Durbin-Watson testis 1.00 to 3.00 (Field, 2013) and here results of Durbin-Watson statistic is 1.977 that falls within acceptable range. So, there was no problem of 'Autocorrelation' with the data. This data also supported by the residual plot (Figure 4.68).

Thirdly, homoscedasticity of the residual as the residual points are not too scattered from the *Fit line* (see Figure 4.67). Further, Breusch-Pagan and Koenker test was performed using a macro developed by Ahmad Daryanto (Daryanto, 2020). Both tests i.e. Breusch-Pagan test (Lagrange Multiplier (LM) = .951, p= .624) and Koenker test (LM= .984, p= .423) were not significant and thus, so homoskedasticity of data has not been elapsed.

Fourth, the normality of the residual was checked through the visual inspections of the normality plots of the residual that were Histogram plot (Figure 467) and Q-Q plot (Figure 4.67) of the unstandardized residual. Further, to check the visual inspection of normality test were performed. However, normality of the unstandardized residual was confirmed from the statistically insignificant results of Kolmogrov-Smirnov test (statistic= .065, p= .451) and the Shapiro-Wilk test (W= .985, p=.365) (Field, 2009).

Finally, from Table 4.37, it can be seen that the VIF value was1.164 for emotional intelligence and 1.317 for teaching experience those values were not crossed the limitation VIF<10 (Myers, 1990) and Tolerence value 0.859 for emotional intelligence and 0.759 for teaching experience and it was within the maximum value of tolerance that was Tolerance>0.2 (Menard, 1995) for all the IVs. Hence, the absence of multicollinearity in the dataset is ensured.

Table 4.37
Collinearity diagnostics of the moderation Model with reference to Variance Inflation Factor (VIF) and Tolerance

	Collinearity Statistics	
Predictor variables in the Model	**Tolerance**	**VIF**
Emotional Intelligence	0.859	1.164
Teaching experience	0.759	1.317

Figure 4.67

Histogram (left) and Normal Q-Q plot (right)

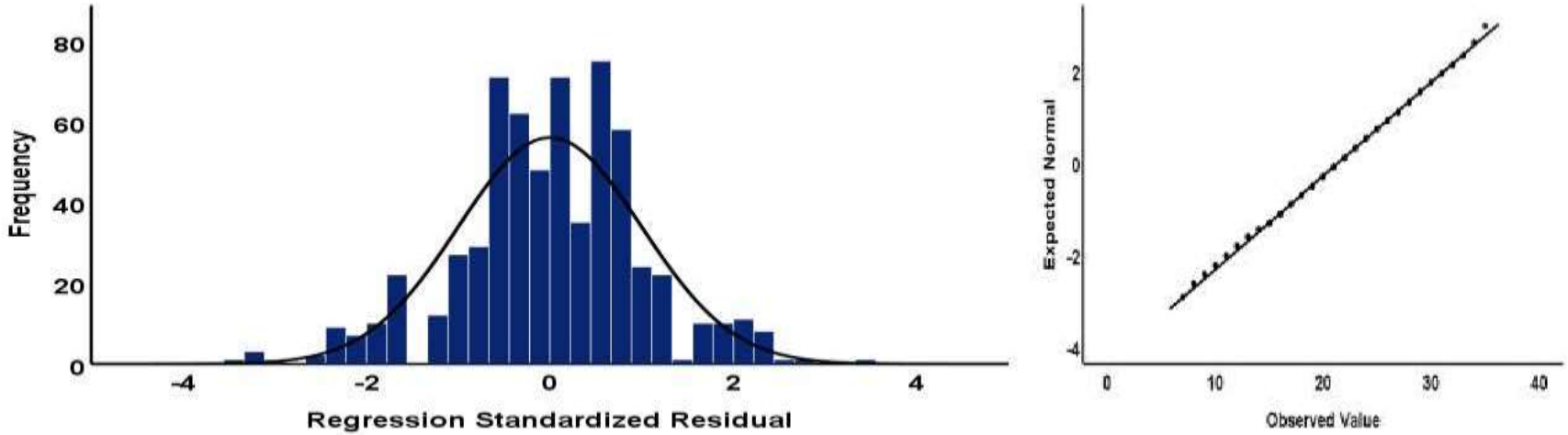
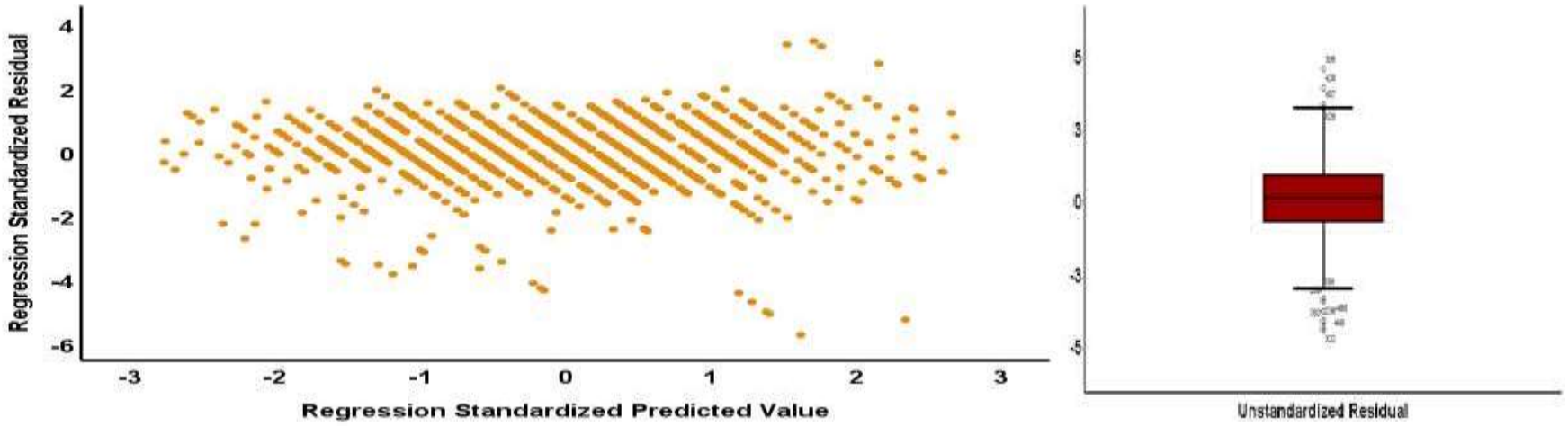


Figure 4.68

The Residual Plot of the dependent variable (professional commitment) and Box-plot of the residual (right)

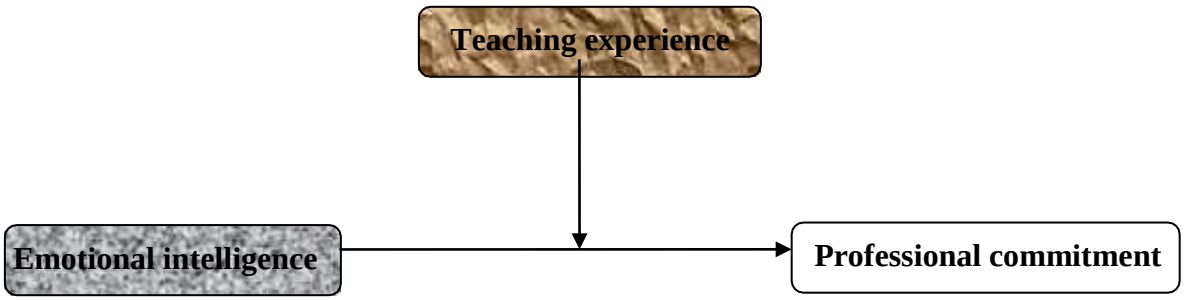


So, the data fulfilled all the statistical assumptions needed for moderation analysis. It can be concluded that the data was absence of any bias. Thus, the findings and conclusions from the moderation analysis may be generalized in the target population.

Here the moderation analysis was run by selectingteaching experience as the moderator variable that might exert differential effect on the relationship between emotional intelligence and professional commitment. The hypothesized moderation model (see Figure 4.69 and Figure 4.70) was then examined and evaluated (see Figure 4.71). The major focus to check whether teaching experience pretends any differential effect on the relationship between emotional intelligence and professional commitment and also to estimate the interaction (between the predictor that was emotional intelligence and the moderator that was teaching experience) effect along with the statistical significance of the differential Bias-corrected Bootstrapping resampling methods were used to test the statistical significance of differential effect. According to Preacher et al. (2007) and Hayes (2013), it can be said that to perform the bootstrapping resampling procedures (on 5,000 Bootstrap sub-samples) that produced 95% bias-corrected confidence intervals. Bias-corrected lower and upper limit of 95% confidence intervals of the effects did not include zero means the differential (moderation) effect was considered statistically significant at α=.05 (Field, 2013). Bootstrapping method did not violate the assumptions of normality as it is a nonparametric resampling procedure (Koopman et al., 2015).

Figure 4.69

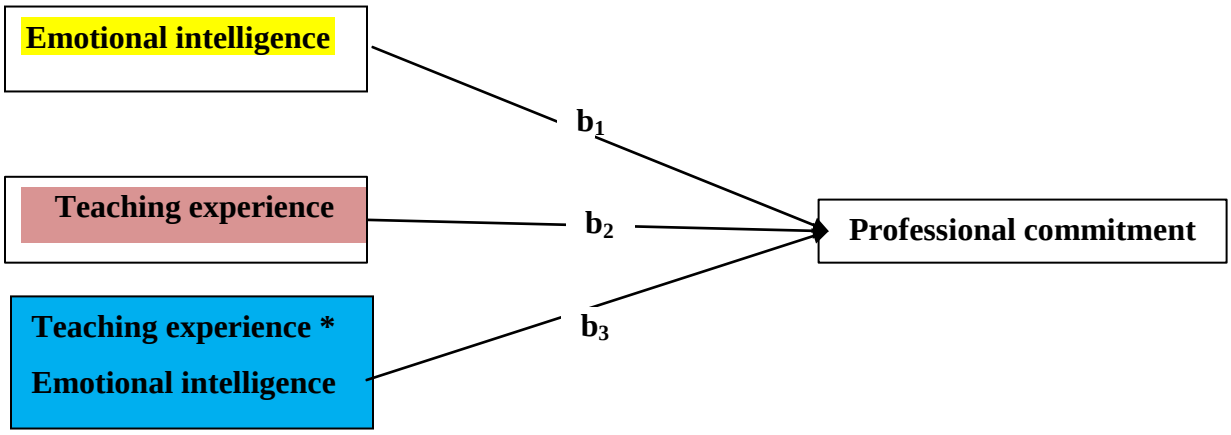
Hypothesized (conceptual) path model for the moderation effect of teaching experience on the relationship between emotional intelligence and professional commitment



Aiken, West, and Reno (1991) prescribed a follow up analysis was done by plotting professional commitment on emotional intelligence separately for male and female teachers. Apart from this simple slope analysis were performed to check slope of regression lines differ significantly or not in relation to teaching experience. However, moderation interaction effect size was expressed with f-squared (f^2) statistic (Selya, Rose, Dierker, Hedeker, &Mermelstein, 2012): where $f^2 \geq 0.02$ implies small effect, $f^2 \geq 0.15$ implies medium effect, and $f^2 \geq 0.35$ implies a large effect (Cohen, 1988).

Figure 4.70

Statistical model for the moderation effect of teaching experience on the relationship between emotional intelligence and professional commitment



In this model emotional intelligence was an independent variable professional commitment was a dependent variable and teaching experience was a moderator variable on the relationship between emotional intelligence and professional commitment was constructed and it was checked by performing moderation analysis (see Figure 4.71). As shown the result bellow the overall moderation model was significant: R^2=.964, F= 5535.853, df= (3, 628), p<.001 (see Table 4.38).The effect of emotional intelligence on professional commitment was positive and significant, (B= 0.885, 95% CI [0.836, 0.934], p<0.001; see Table 4.38). Then the effect of teaching experience on professional commitment was positive significantly related (B= 11.968, 95% CI [9.493, 14.443], p<0.01; see Table 4.38).

Although, the effect of interaction between emotional intelligence and teachers teaching experience on professional commitment was found positively significant (B=113, 95% CI [.0901, 0.1357], p<.01; see Table 4.38]. However, from the test of highest order unconditional interaction showed that R^2-change for inclusion of the interaction term (Teaching experience *emotional intelligence) in the moderation model was significant: R^2-change= .006, F (1, 628) = 94367, p<.001. This means interaction moderation model is significant. From the table 1 it can be concluded that teaching experience was considered as a significant moderator on the relationship between emotional intelligence and professional commitment. So, there was a significant differential effect of teaching experience on the relationship between emotional intelligence and professional commitment. So, emotional intelligence influences professional commitment irrespective of teaching experience. Hence, emotional intelligence was found to be very beneficial for promoting better professional commitment regardless of teaching experience of teachers.

Here interaction effect of emotional intelligence and teaching experience was statistically significant. But weather effect was practically significant or not calculated through effect size. So, the f^2 effect size measure was considered to describe the effect size of the interaction effect (Selya, Rose, Dierker, Hedeker, &Mermelstein, 2012).The effect size for the moderation effect was found to be 197.495 which is a large effect ($f^2 \geq 0.35$) following the Cohen's (1988) guidelines. The conditional effects of teaching experience on professional commitment shows that for novice, experienced and expert teachers, the effect of teaching experience on professional commitment was significant (for novice teachers B = .998 , p<.001, for experienced teachers B = 1.111, p<.001, for expert teachers B = 1.224 , p<.001.

Simple slope analysis was performed to compare the degree of interaction effect of emotional intelligence and teaching experience on professional commitment for novice, experience and expert teachers separately. The simple slopes analysis also shows that slope for emotional intelligence on professional commitment at each level of teaching experience were: b_{Novice}= 0.998, SE= 0.015. t= 68.712, p<0.001, 95% CIs: [0.969, 1.026] for the novice teachers and $b_{Experienced}$= 1.112, SE= .009, t= 127.970,

p<0.001, 95% CIs: [1.0938, 1.1279] for the experienced teachers andb_{Expert}= 1.224, SE= .015, t= 84.438, p<0.001, 95% CIs: [1.195, 1.252] for the expert teachers. So, expert teachers were found to be significantly higher than that of experienced and novice teachers. It can be concluded from here that significant differential effect of teaching experience on the relationship between emotional intelligence and professional commitment. Here it can be found from that bellow table 1 that relationships between emotional intelligence and professional commitment stronger for expert teachers than that of experienced and novice teachers.

Significant differential effect of teaching experience on the relationship between emotional intelligence and professional commitment was found. Further, the relationships between emotional intelligence and professional commitment were stronger for expert teachers than that of experienced and novice teachers. Therefore, it can be concluded that teaching experience gap in emotional intelligence significantly contributed in explaining teaching experience gap in professional commitment. Thus, when teachers were more emotionally intelligent then psycho-social bonding to their profession would be more that means they will be professionally more committed.

After conducting moderation analysis, it was found that interaction effect of teaching experience and emotional intelligence is significant statistically on the relationship between emotional intelligence and their teaching style of teachers. Teaching experience was found to be a significant moderator in the relationship between emotional intelligence and teaching style. So, it is clear that emotional intelligence has differential effect on teaching style with respect to teaching experience of the teachers. That is emotional intelligence affect differently for novice, experience and expert teachers. Further, the relationship between emotional intelligence and teaching style was significantly stronger for expert teachers than that of experienced and novice teachers. Thus, it can be said that teachers' emotional intelligence is more beneficial for the expert teachers than that of experienced and novice teachers in attaining higher level of teaching style.

An interaction graph was plotted to know the interaction between teaching experience and emotional intelligence on professional commitment of teachers. Further,

to know the trend of influence of the interaction between teaching experience and emotional intelligence on professional commitment, a graph was plotted. Graph 4.7 depicted that irrespective of teachers' teaching experience, professional commitment increases with the increasing of emotional intelligence. The relationship trend between emotional intelligence and professional commitment were similar for novice, experienced and expert teachers. That interaction graph was steeper for novice teachers than the expert teachers. On the other way interaction graph was steeper for expert teachers than that of the experienced teachers. So, effect of emotional intelligence on professional commitment did not remain same across teaching experience. Effect was significantly stronger for novice teachers than that of expert and experienced teachers. Therefore, it can be concluded that teaching experience gap in emotional intelligence is significantly contributed in explaining mechanism for teaching experience gap in professional commitment. If teacherswere more emotionally intelligent then psycho-social bonding to their profession would be more that means they were more professionally committed.

Table 4.38

Moderating effect of teaching experience on the relationship between emotional intelligence and professional commitment

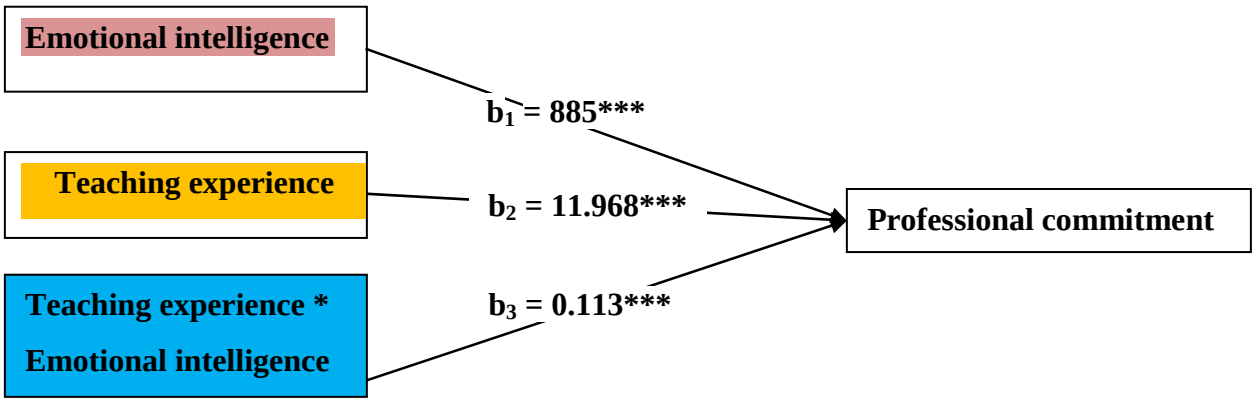
Regression Path	**B**	**SE**	**T**	**p**	**95% LLCI**	**95% ULCI**
Predictor: Emotional Intelligence, Moderator= Teaching Experience, Outcome Variable= Professional Commitment						
(R^2=0.964, F=5535.853, df= (3, 628), P<.001						
Constant	62.090	2.283	27.204	<.001	57.608	66.572
Emotional Intelligence	0.885	0.025	35.637	<.001	0.836	0.934
Teaching Experience	11.968	1.073	11.152	<.001	9.493	14.443
Interaction: EI*TE	0.113	0.012	9.714	<.001	0.090	0.136

Test(s) of highest order unconditional interaction(s)						
	R2-change		**F**	**df1**	**df2**	**p**
EI*TE	0.006		94.367	1	628	<.001
Effect size (f square)*= 197.495*						
Conditional effect						
Novice Teachers	0.998	0.015	68.715	<.001	0.970	1.026
Experienced Teachers	1.111	0.009	127.970	<.001	1.094	1.1280
Expert Teachers	1.224	0.015	84.438	<.001	1.195	1.252

*Note (for Table 4.38). Unstandardized regression coefficients are reported. Bootstrap sample size = 5000, N= 632, LL: lower limit, UL: upper limit, CI: confidence interval, ***p<.001, **p<.01, *p<.05*

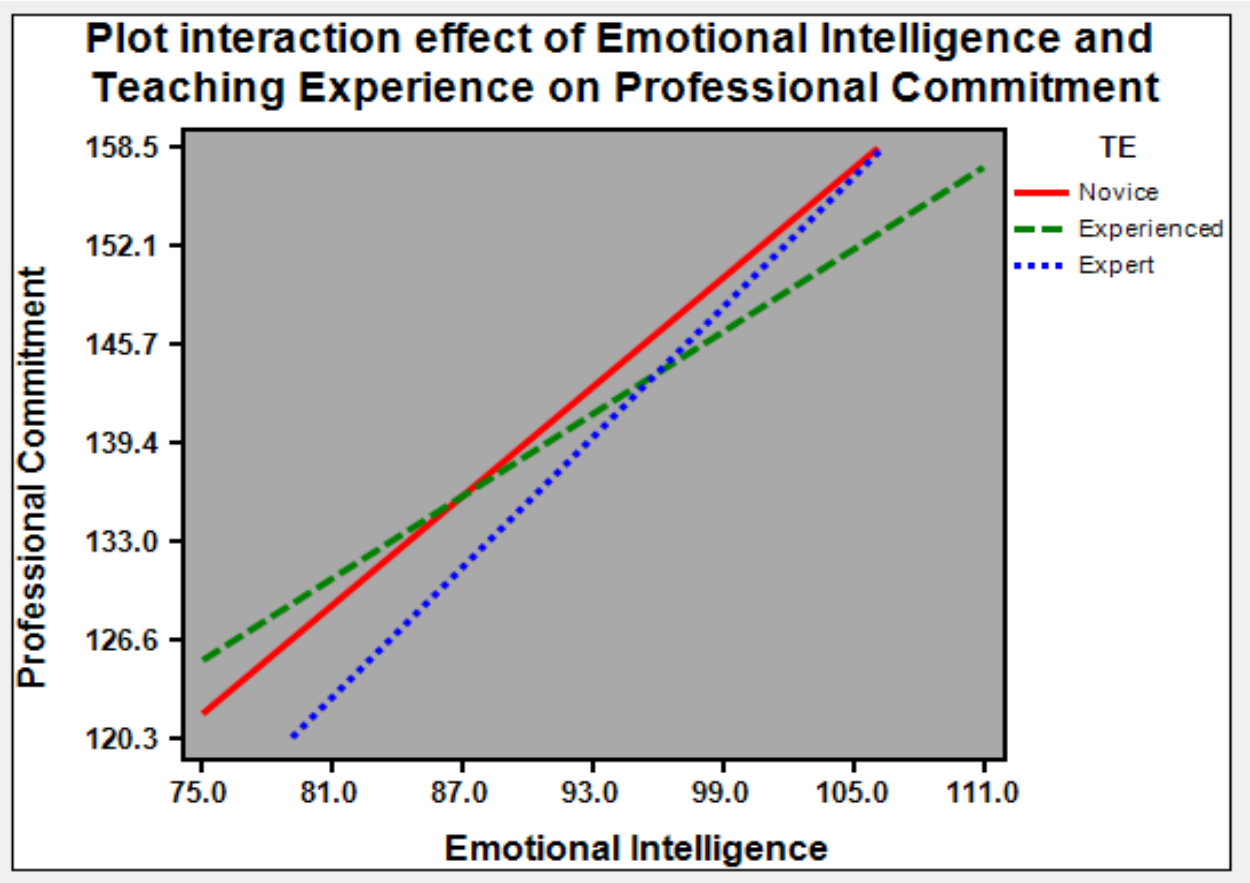
Figure 4.71

Statistical model for the moderation effect of teaching experience on the relationship between emotional intelligence and professional commitment



Graph 4.7

The plots of effect of interaction between emotional intelligence and teaching experience on professional commitment of teachers



4.15 Moderation effect of teaching experience on the relationship between social intelligence and professional commitment of teachers

Objective 14: To study the moderation effect of teaching experience on the relationship between social intelligence and professional commitment of teachers

$H_0$14: There is no significant moderation effect of teaching experience on the relationshipbetween social intelligence and professional commitment of teachers

According to research objective 14, the following null hypothesis was formulated: $H_0$14: _There is no significant moderation effect of teaching experience on the relationship between social intelligence and professional commitment of teachers‘. This null hypothesis deals with four variables that were teaching experience, social intelligence, interaction (i.e. Social intelligence * teaching experience) and professional commitment. Here teaching experience categorical variable however social intelligence and professional commitment is a continuous variable. Teaching experience has three types novice, experienced, expert teachers. So, to check moderation effect of teaching experience on the relationship between social intelligence and professional commitment of teachers, the above null hypothesis $H_0$12 was tested using moderation analysis Model 1 in PROCESS macro for SPSS (developed by Prof. Andrew F. Hayes; Hayes, 2013). PROCESS is based on regression-based path-analytic framework and estimates the interaction (between social intelligence and the moderator variable i.e. teaching experience) effect and bias-corrected confidence intervals.

During conducting moderation analysis, moderation analysis the major aim was to generation of the sample population. Data needs to meet several statistical measures of multiple regressions. Here it was very relevant to check the normality of the data because any ravishing of data will be meaningless for generalizing the conclusion to the targeted population because those results would be biased.

To know the absence of outlier in the dataset the values of Cook‘s distance (Cook, 1977) ranged from 0.000 to 0.050 and never exceeded the threshold value of 1.00 (Cook & Weisberg, 1982). Apart fom this the maximum value of the Mahalanobis (Mahalanobis, 1930) statistic (i.e. M_{Max}=2.994) did not exceeded the critical value (i.e.7.81 with df=3 at 0.05 level) so it can be said that there was absence of any multivariate outlier in the residual. Secondly, the acceptable range of Durbin-Watson test is 1.00 to 3.00 (Field, 2013) and here results of Durbin-Watson statistic is 1.115 that falls within acceptable range. So, there was no problem of ‘Autocorrelation’ with the data. This data also supported by the residual plot (Figure 4.73).

Thirdly, homoscedasticity of the residual as the residual points are not too scattered from the *Fit line* (see Figure 4.73). Further, Breusch-Pagan and Koenker test

was performed using a macro developed by Ahmad Daryanto (Daryanto, 2020). Both tests i.e. Breusch-Pagan test (Lagrange Multiplier (LM) = .732, p= .541) andKoenker test (LM= .827, p= .624) were not significant and thus, so homoskedasticity of data has not been elapsed.

Fourth, the normality of the residual was checked through the visual inspections of the normality plots of the residual that were Histogram plot (Figure 4.72) and Q-Q plot (Figure 4.72) of the unstandardized residual. Further, to check the visual inspection of normality test were performed. However, normality of the unstandardized residual was confirmed from the statistically insignificant results of Kolmogrov-Smirnov test (Statistic= .062, p= .442) and the Shapiro-Wilk test (W= .896, p=.721) (Field, 2009).

Finally, from Table 4.39, it can be seen that the VIF value was 1.908 for social intelligence and 1.002for teaching experience those values were not crossed the limitation VIF<10 (Myers, 1990) and Tolerence value 0.524 for social intelligence and 0.998 for teaching experience and it was within the maximum value of tolerance that was Tolerance>0.2 (Menard, 1995) for all the IVs. Hence, the absence of multicollinearity in the dataset is ensured.

Table 4.39

Collinearity diagnostics of the moderation Model with reference to Variance Inflation Factor (VIF) and Tolerance

Predictor variables in the Model		
Collinearity Statistics	**Tolerance**	**VIF**
Social intelligence	0.524	1.908
Teaching experience	0.998	1.002

Figure 4.72

Histogram (Left), Normal Q-Q plot (Right)

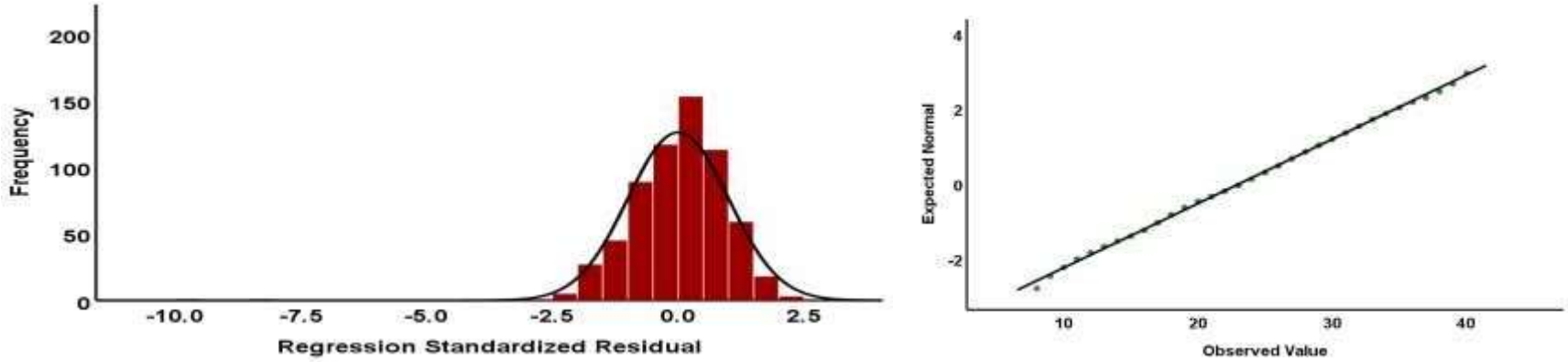
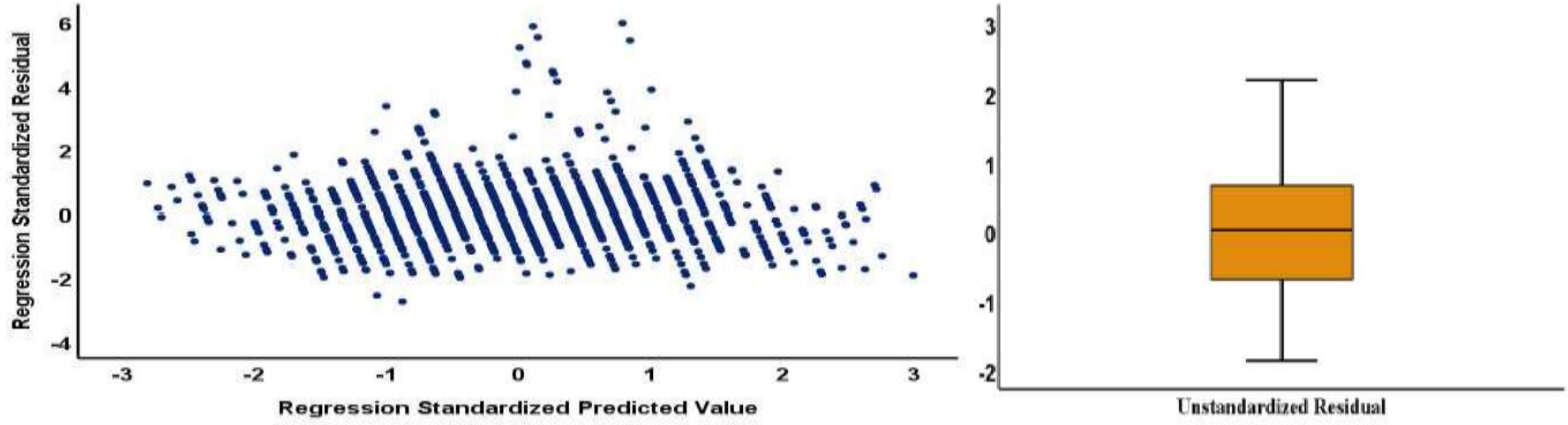


Figure 4.73

The Residual Plot of the dependent variable (teaching style) and Box-plot of the residual (right)

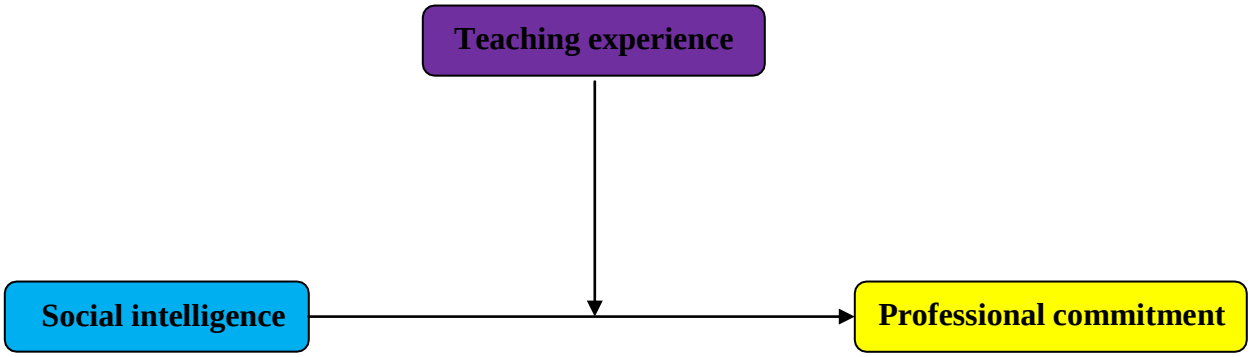


So, the data fulfilled all the statistical assumptions needed for moderation analysis. It can be concluded that the data was absence of any bias. Thus, the findings and conclusions from the moderation analysis may be generalized in the target population.

Here the moderation analysis was run by selecting teaching experience as the moderator variable that might exert differential effect on the relationship between social intelligence and professional commitment. The hypothesized moderation model (see Figure 4.74 and Figure 4.75) was then examined and evaluated (see Figure 4.76). The major focus to check whether teaching experience pretends any differential effect on the relationship between social intelligence and professional commitment and also to estimate the interaction (between the predictor that was social intelligence and the moderator that was teaching experience) effect along with the statistical significance of the differential Bias-corrected Bootstrapping resampling methods were used to test the statistical significance of differential effect. According to Preacher et al. (2007) and Hayes (2013), it can be said that to perform the bootstrapping resampling procedures (on 5,000 Bootstrap sub-samples) that produced 95% bias-corrected confidence intervals. Bias-corrected lower and upper limit of 95% confidence intervals of the effects did not include zero means the differential (moderation) effect was considered statistically significant at α=.05 (Field, 2013). Bootstrapping method did not violate the assumptions of normality as it is a nonparametric resampling procedure (Koopman et al., 2015).

Figure 4.74

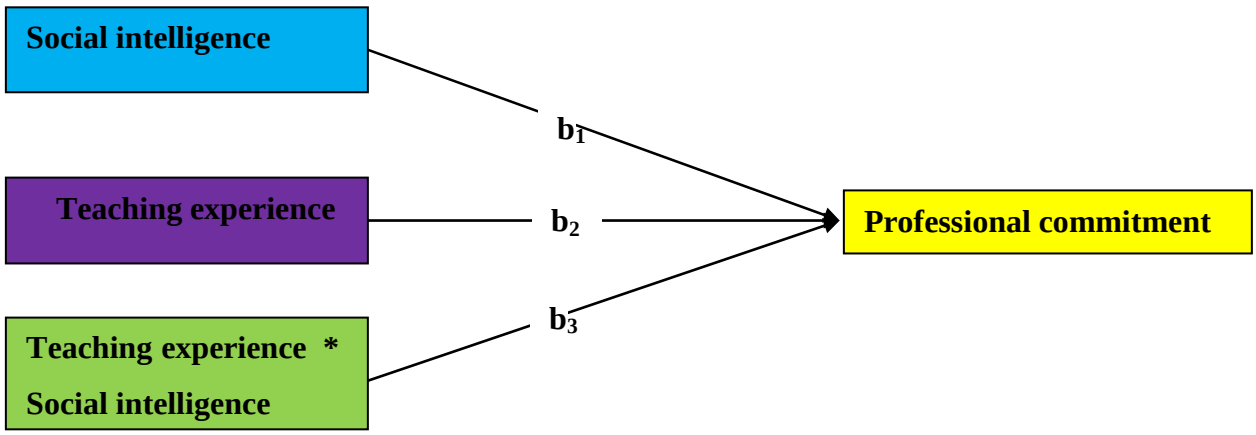
Hypothesized (conceptual) path model for the moderation effect of teaching experience on the relationship between social intelligence and teaching style



Aiken, West, and Reno (1991) prescribed a follow up analysis was done by plotting professional commitment on social intelligence separately for novice, experienced and expert teachers. Apart from this simple slope analysis were performed to check slope of regression lines differ significantly or not in relation to teaching experience. However, moderation interaction effect size was expressed with f-squared (f^2) statistic (Selya, Rose, Dierker, Hedeker, &Mermelstein, 2012): where $f^2 \geq 0.02$ implies small effect, $f^2 \geq 0.15$ implies medium effect, and $f^2 \geq 0.35$ implies a large effect (Cohen, 1988).

Figure 4.75

Statistical model for the moderation effect of teaching experience on the relationship between social intelligence and teaching style



In this model social intelligence was an independent variable professional commitment was a dependent variable and teaching experience was a moderator variable on the relationship between social intelligence and professional commitment was constructed and it was checked by performing moderation analysis (see Figure 4.76). As shown the result bellow the overall moderation model was significant: R^2=0.9847, F= 13468.840,df= (3, 628), p<.001 (see Table 4.40).The effect of social intelligence on professional commitment was positive and significant, (B= 0.818, 95% CI [0.794, 0.842], p<0.001; see Table 1). Then the effect of teaching experience on professional commitment was positive significantly related (B= 4.79, 95% CI [2.071, 7.501], p<0.01; see Table 4.40).

Although, the effect of interaction between social intelligence and teachers teaching experience on professional commitment was found positively significant (B= 0.042, 95% CI [0.031, 0.053], p<.001; see Table 4.40]. However, from the test of highest order unconditional interaction showed that R^2-change for inclusion of the interaction term (Teaching experience *social intelligence) in the moderation model was significant: R^2-change= 0.001, F (1, 628) = 58.354, p<.001. This means interaction moderation model is significant. From the table 1 it can be concluded that teaching experience was considered as a significant moderator on the relationship between social intelligence and professional commitment. So, there was a significant differential effect of teaching experience on the relationship between social intelligence and professional commitment. So, social intelligence influences professional commitment irrespective of teaching experience. Hence, social intelligence was found to be very beneficial for promoting better professional commitment regardless of teaching experience of teachers.

Here interaction effect of social intelligence and teaching experience was statistically significant. But weather effect was practically significant or not calculated through effect size. So, the f^2 effect size measure was considered to describe the effect size of the interaction effect (Selya, Rose, Dierker, Hedeker, &Mermelstein, 2012).The effect size for the moderation effect was found to be 131.819 which is a large effect ($f^2 \geq 0.35$) following the Cohen's (1988) guidelines. The conditional effects of teaching experience on professional commitment shows that for novice, experienced and expert teachers, the effect of teaching experience on professional commitment was significant (for novice teachers B = 0.860, p<.001, for experienced teachers B = 0.902, p<.001, for expert teachers B = 0.944 , p<.001.

Simple slope analysis was performed to compare the degree of interaction effect of social intelligence and teaching experience on professional commitment for novice, experience and expert teachers separately. The simple slopes analysis also shows that slope for social intelligence on professional commitment at each level of teaching experience were: b_{Novice}= 0.860, SE= 0.007. t= 115.922, p<0.001, 95% CIs: [0.846, 0.875] for the novice teachers and $b_{Experienced}$= 0.902, SE= .005, t= 198.793, p<0.001, 95% CIs: [0.893, 0.911] for the experienced teachers. b_{Expert}= 0.944, SE= .007, t=, p<0.001,

95% CIs: [0.931, 0.958] for the expert teachers. So, expert teachers were found to be significantly higher than that of experienced and novice teachers. It can be concluded from here that significant differential effect of teaching experience on the relationship between social intelligence and teaching style. Here it can be found from that bellow table 1 that relationships between social intelligence and professional commitment stronger for expert teacher than that of experienced and novice teachers.

It was found that teaching experience gap in social intelligence is significantly contributed in explaining mechanism for teaching experience gap in professional commitment. So, the teachers who were more socially intelligent are able to adapt with different social situations in their personal and professional life at the same time they can channelize the students who came from different socio-economic backgrounds. Further, the effect was found to be significantly stronger for novice teachers than that of expert and experienced teachers.

After conducting moderation analysis, it was found that interaction effect of teaching experience and social intelligence is significant statistically on the relationship between social intelligence and professional commitment of teachers. Teaching experience was found to be a significant moderator in the relationship between social intelligence and professional commitment. So, it is clear that social intelligence has differential effect on professional commitment with respect to teaching experience of the teachers. That is emotional intelligence affect differently for both male and female teachers. Further, the relationship between social intelligence and professional commitment was found to be significantly stronger for novice teachers than that of expert and experienced teachers. Thus, it can be said that teachers' social intelligence is more beneficial for the novice teachers in attaining higher level of professional commitment.

An interaction graph was plotted to know the interaction between teaching experience and social intelligence on professional commitment of teachers. Further, to know the trend of influence of the interaction between teaching experience and social intelligence on professional commitment, a graph was plotted. Graph 4.8 depicted that irrespective of teachers' teaching experience, professional commitment increases with the increasing of social intelligence. The relationship trend between social intelligence and

professional commitment were similar for novice, experienced and expert teachers. Interaction graph was steeper significantly for novice teachers than that of the expert and experienced teachers. So, effect of social intelligence on professional commitment did not remain same across teaching experience. Effect was significantly stronger for novice teachers than that of expert and experienced teachers. Therefore, it can be concluded that teaching experience gap in social intelligence is significantly contributed in explaining mechanism for teaching experience gap in professional commitment. So, the teachers who were more socially intelligent then they can adapt with different social situation in personal and professional life at the same time they can channelize the students who came from different socio economical background.

Table 4.40

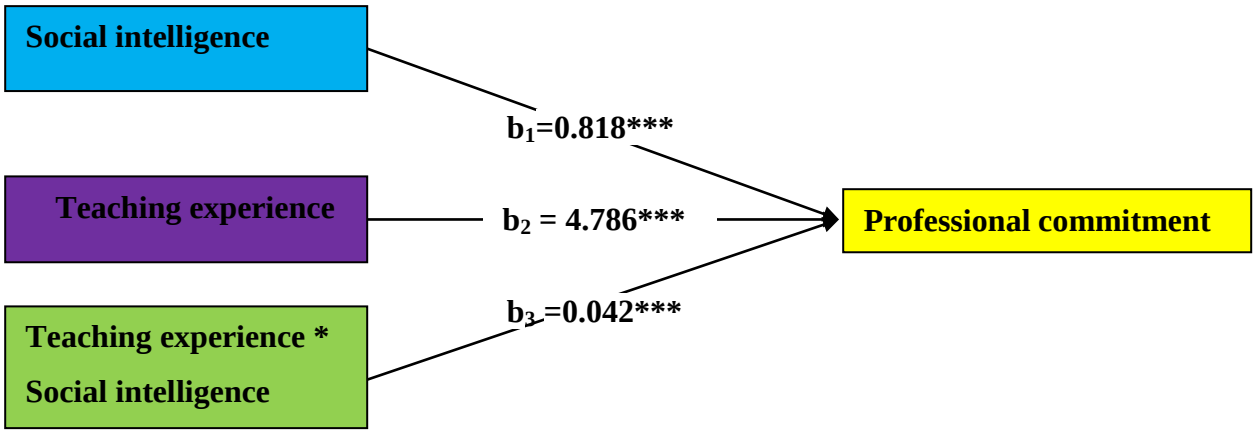
Moderating effect of teaching experience on the relationship between social intelligence and teaching style

Regression path	B	SE	t	p	95% LLCI	95% ULCI
Predictor: social Intelligence, Moderator= Teaching Experience, Outcome Variable= Professional Commitment						
(R^2=.985, F=13468.840, df= (3, 628), P<.001						
Constant	69.459	1.092	63.583	<.001	67.314	71.605
Social Intelligence	0.818	0.012	66.738	<.001	0.794	0.842
Teaching Experience	4.786	0.492	9.727	<.001	2.071	7.501
Interaction: SI*TE	0.042	0.006	7.639	<.001	0.031	0.053
Test(s) of highest order unconditional interaction(s)						
	R2-change	**F**	**df1**	**df2**	**p**	
SI*TE	0.001	58.354	1	628	<.001	
Effect size (f square)=131.819						
Conditional effect						
Novice Teachers	0.860	0.007	115.922	<.001	0.846	0.875
Experienced Teachers	0.902	0.005	198.793	<.001	0.893	0.911
Expert Teachers	0.944	0.007	137.928	<.001	0.931	0.958

*Note (for Table 4.40). Unstandardized regression coefficients are reported. Bootstrap sample size = 5000, N= 632, LL: lower limit, UL: upper limit, CI: confidence interval, ***p<.001, **p<.01, *p<.05*

Figure 4.76

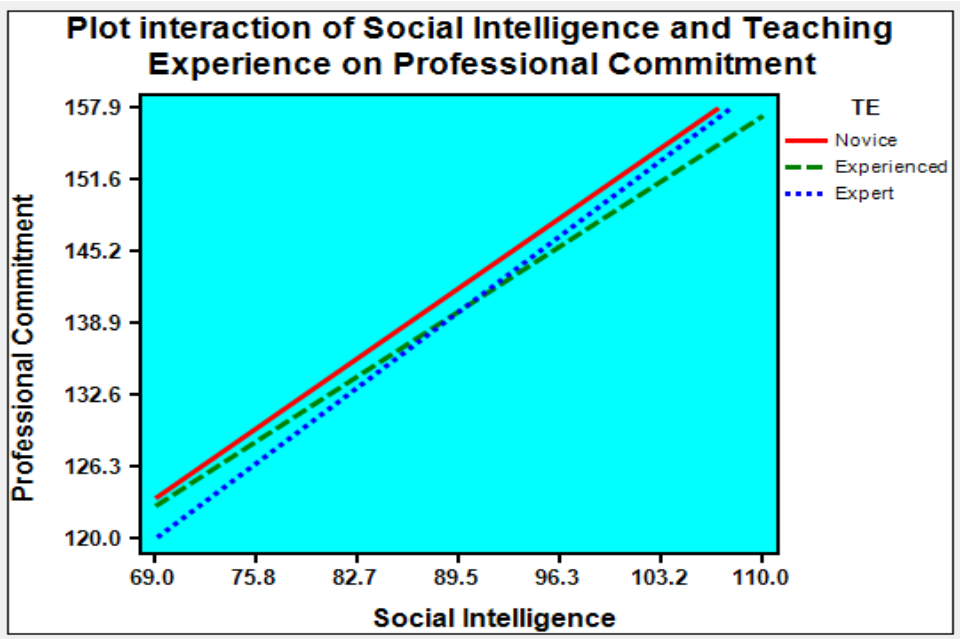
Statistical model for the moderation effect of teaching experience on the relationship between social intelligence and professional commitment



Note: TE = Teaching Experience, SI = Social intelligence, * - Interaction

Graph 4.8

The plots of effect of interaction between social intelligence and teaching experience on professional commitment of teachers



Emotional intelligence of female teachers was found to be significantly higher as compared to the male teachers. Emotional intelligence of experienced teachers was found to be significantly higher than that of novice teachers, but significantly lower than that of expert teachers. Social intelligence of female teachers was found to be significantly higher as compared to the male teachers. Social intelligence of experienced teachers and expert teachers differ significantly in relation to their mean score. It was demonstrated that gender gap in teaching style was accounted for gender gap in emotional intelligence and gender gap in social intelligence. Social intelligence was found to be a better predictor of gender gap in teaching style of teacher. Results show that gender gap in professional commitment was accounted for gender gap in emotional intelligence and gender gap in social intelligence.

It was demonstrated that teaching experience gap in teaching style was accounted for teaching experience gap in emotional intelligence and in social intelligence of teachers as well. It was demonstrated that teaching experience gap in professional commitment was accounted for teaching experience gap in emotional intelligence as well as in social intelligence of teachers. Further, social intelligence of teachers was found to be a better predictor in explaining experience gap in professional commitment. It was found that interaction effect of gender and emotional intelligence is significant statistically on the relationship between emotional intelligence and teaching style of teachers. It can be said that teachers' emotional intelligence is more beneficial for the female teachers in attaining higher level of teaching style.

It was demonstrated that interaction effect of gender and social intelligence is not significant statistically on the relationship between social intelligence and teaching style of teachers. Social Intelligence is equally important for male teachers as well as for the female teachers in attaining higher level of teaching style. It was demonstrated that emotional intelligence has differential effect on professional commitment with respect to gender of the teachers. It was demonstrated that social intelligence of teachers has no differential effect on professional commitment both for male and female teachers. It can be said that social intelligence of teachers was equally related to their professional commitment both for male and female teachers. It was demonstrated that it is clear that emotional intelligence has differential effect on teaching style with respect to teaching

experience of the teachers. That is emotional intelligence affect differently for novice, experience and expert teachers. It was demonstrated that social intelligence has differential effect on teaching style with respect to teaching experience of the teachers. That is social intelligence affect differently for novice, experience and expert teachers.

It was demonstrated that teaching experience was found to be a significant moderator in the relationship between emotional intelligence and teaching style. So, it is clear that emotional intelligence has differential effect on teaching style and professional commitment with respect to teaching experience of the teachers. That is emotional intelligence affect differently for novice, experience and expert teachers. It was demonstrated that teaching experience was found to be a significant moderator in the relationship between social intelligence and professional commitment. So, it is clear that social intelligence has differential effect on professional commitment with respect to teaching experience of the teachers