

Chapter-4

RESULTS

AND

ANALYSIS

After following the research methodology, the researcher further processed the data. This chapter explains the test and analysis results for quantitative and qualitative data summaries acquired using appropriate research procedures and instruments. The quantitative data was analyzed using IBM SPSS software. To ensure that the assumptions of normality, linearity, and equality of variance were met, all the data was separated and arranged. The qualitative data was summed up based on the pattern of employee responses. The statistical analysis results are presented in this chapter in relation to the study's objectives, hypothesis, and research questions.

The data was examined using the appropriate statistical tools based on the data's type and aims. To determine outcomes and reach the study's conclusion, data is subjected to frequency distribution, descriptive, chi-square, correlation, and multiple regression tests. The frequency distribution and descriptive statistics showed the data set's overall information, whereas chi-square statistics showed differences in categorical variables, the correlation test showed the relationship between factors, and the regression test showed the impact of predictors on identified dependent factors. To support the quantitative conclusions, the qualitative data results were collected and summarised.

4.1. Analysis of Questionnaire Part A

The tool used to test the theoretical concept, hypothesis, and research questions was a questionnaire. Part A of the questionnaire was created to learn about the demographics of employees working in the BPO sector, as well as effective learning patterns for employees at work.

Table 4.1: Demographic Dimensions of the Data Collected

Levels		Process		Gender		Age		Qualification		No. Of years Working Experience in BPO	
Associates/Lower	37%	Voice	59%	Female	33%	18-22	9%	UG	2%	>1	12%
Supervisors/Middle	34%	Non-Voice	41%	Male	67%	23-27	33%	G	48%	1-5 Years	39%
Mangers/ Upper Middle	29%	-	-	-	-	28-32	22%	PG	32%	6-10 Years	39%
-	-	-	-	-	-	33-37	18%	PD	18%	11-16 Years	7%
-	-	-	-	-	-	38-42	16%	-	-	17-22 Years	3%
-	-	-	-	-	-	43+	2%	-	-	23+	0%
TOTAL	368	368		368		368		368		368	

Table 4.1, shows the demographic distribution of data collected from a calculated sample size of 368 BPO employees. Out of that:

1. Employees working as associates/lower level are 37% (136) respondents, while supervisors or middle level are 34% (125) respondents, and upper middle level employees are 29% (107) respondents.
2. Voice profiles account for 59% (217) of all employees, while non-voice profiles account for 41% (151).
3. Out of the total responses received, 33% (121) are female employees working in BPOs and 67% (247) are male employees.
4. Out of total data collected, 9% (33) employees are from the 18-22 age group, 33% (122) are from the 23-27 age group, 22% (81) are from the 28-32 age group, 18% (67) from the 33-37 age group, 16% (58) belong to the 38-42 age group, and 2% (7) are from the age group of equal to or 43+. It is found that major participation comes from the age group of 18-22 years.

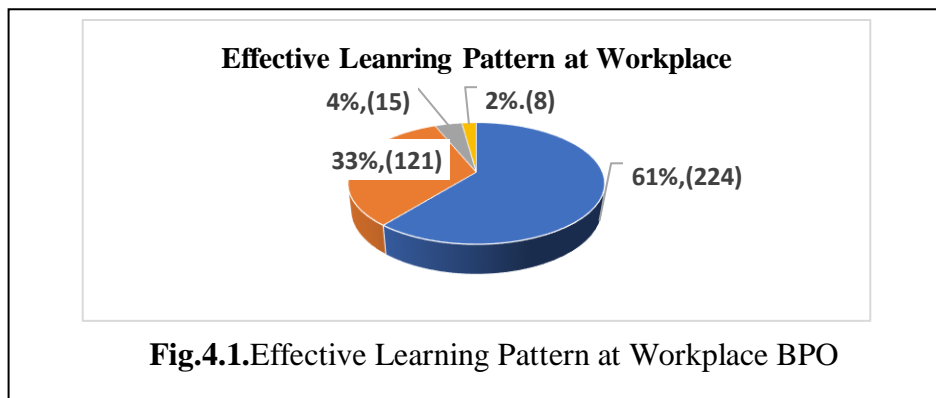
5. From the data collected, out of a total of 2% (7) employees who are undergraduates, 48% (177) are graduating, 32% (118) of employees are holding post-graduate degrees, and 18% (65) have professional degrees. Of the total responses, it is observed that most of the employees are graduates.
6. The category of total working experience in BPO out of total responses 12% (44) employees have less than 1 year of experience, 39% (144) employees have 1 to 5 years' experience, 39% (144) employees are working in BPO from 5-10 years of experience, 7% (26) employees fall into the category of 11-16 years of working experience in BPO, 3% (10) of employees are between 17-22 years of experience, and no (0) response was received from the category equal to or + 23 years of working experience in BPO. It is found that major participation in responses came from the categories of 1–5 years and 5–10 years of experience.

4.1.1. Effective Learning Pattern at Workplace

Statement 1 in the questionnaire designed to determine the opinion of selected BPO employees about the learning pattern is effective, and the result says:

Table 4.2: Effective Learning Pattern at Workplace BPO

S.No.	Pattern	Percentage%
1.	More from Informal Learning & less from Formal Learning.	61%, (224)
2.	Both from Informal & Formal.	33% (121)
3.	Only Informal Learning.	4% (15)
4.	More from Formal Learning & less from Informal Learning.	2% (8)



Based on data collected from 368 employees, Table 4.2 and Fig. 4.1 show that 61 percent (224) of employees believe they learn more from informal learning than formal learning. 33% (121) of employees agree that they learn equally from formal and informal sources; 4% (15) of employees agree that they only learn from informal sources; 2% (8) of employees experience learning that they learn more from formal and less from informal learning.

4.1.2 BPO Employees' Attitude Towards Informal Learning

Table 4.3: Descriptive Statistics for Positive Statements

Statements	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
1. Informal learning is part of my daily routine activities.	3	5	4.54	.589	.511	.127
2. In addition to formal training, I learn at work through informal activities such as conversation with others, self-reading, observations, mentoring, and so on.	2	5	4.38	.657		
3. I feel trial and error is the right approach to doing a task.	2	4	2.35	.483		
4. In my opinion, mentoring is one of the informal ways that can enhance the skills of employees.	1	5	4.15	.953		
5. I have experienced that short meetings on a daily basis are a correct way of learning informally and getting solutions to problems.	3	5	3.94	.836		
6. I am learning while instructing juniors.	3	5	4.46	.580		
7. I learned this while taking advice from co-workers and seniors.	1	5	4.54	.838		
8. I receive feedback and learn while working out loud (explaining how I completed the task).	3	5	4.61	.509		
9. Other employees get benefits and learn when I work out loud.	1	5	4.41	.629		
10. I feel that informal learning activities provided at the workplace are really the right tool to make employees skilled and learn.	2	5	3.79	.861		

Table 4.3, shows that the mean value (\bar{x}) of positive statements about informal learning is greater than ≥ 3.0 , which means that employees agree that they know about informal learning that takes place at the workplace and they also agree that workplace informal learning is the right approach to make employees learn.

Table 4.4: Descriptive Statistics for Negative Statements

Statements	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
11. All I have learned through informal learning is that I am neither recognised nor certified.	1	5	3.63	1.041		
12. When I discuss my work with others, their suggestions create confusion.	2	3	2.34	.475		
13. When I attend or conduct short meetings with team members, it leads to time wastage.	1	5	1.67	.505	.667	.127
14. All informal learning activities create mismanagement in my work.	1	5	1.67	.505		
15. I feel that through informal learning, all the required information does not get revealed.	1	5	1.67	.505		
16. I feel sharing of information through informal learning activities spreads rumours or damages the task.	2	5	2.01	.156		

As shown in Table 4.4, the mean value (\bar{x}) of negative statements about informal learning is less than ≤ 2.0 , indicating that employees do not perceive informal learning to have any negative impact on their learning or work, except that informal learning is not recognised or certified. The standard deviation is less than 2 or less than the mean, which is considered acceptable. The value of skewness is .511, which is within the range of -1 to +1, means the data is normal.

Table 4.5: Informal Learning & Employees Working at Different Levels (Categorical Variable)

			LEVEL			Asymp.sig.
			Lower	Middle	U Middle	
	Neutral	Count	16	28	23	Pearson Chi-Square Sig. Value=.044
		Expected Count	24.8	22.8	19.5	
	Agree	Count	107	87	81	
		Expected Count	101.6	93.4	80.0	
	S. Agree	Count	13	10	3	
		Expected Count	9.6	8.8	7.6	
Total	Count	136	125	107		
	Expected Count	136.0	125.0	107.0		

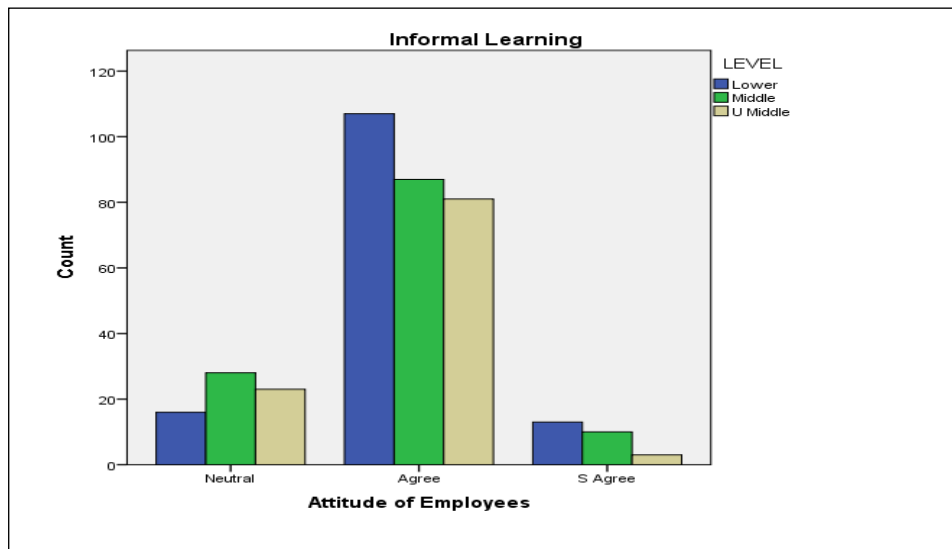


Fig. 4.2. Difference in Level of Attitude of BPO Employees

The Chi-Square Test results are shown in Table 4.5 and Fig. 4.2. A Chi-Square test was used to determine the attitudes of BPO employees at various levels. In comparison to middle and upper middle level employees, lower-level employees show a more positive attitude toward informal learning on several counts. The test's sig. value is .044, which is less than ≤ 0.05 , indicating that there is a significant relationship between informal learning and an employee's working at three different levels (categorical variables).

4.2 Analysis for Hypotheses Test

Questionnaire part C was developed to determine the impact of informal learning ways on BPO employees' skill development and to test the hypothesis are as follows:

Hypothesis 1

H₀= There is no significant impact of workplace informal learning on the technical skills of BPO employees.

Hypothesis 2

H₀= There is no significant impact of workplace informal learning on the soft skills of BPO employees.

4.3.1. Correlation between Informal Learning and Skills of BPO Employees

Table 4.6: Correlation Between Informal Learning and Technical Skills of BPO Employees

Particulars		Informal Learning	Domain Skill	Analytical Skill	Documentation Skill	Communication Skill	Customer Handling Skill
Informal Learning	Coefficient	1.000	.711	.785	.852	.934	.911
	Sig.	.	.000	.000	.000	.000	.000
Domain Skill	Coefficient	.711	1.000	.631	.694	.649	.632
	Sig.	.000	.	.000	.000	.000	.000
Analytical Skill	Coefficient	.785	.631	1.000	.685	.721	.706
	Sig.	.000	.000	.	.000	.000	.000
Documentation Skill	Coefficient	.852	.694	.685	1.000	.823	.805
	Sig.	.000	.000	.000	.000	.000	.000
Communication Skill	Coefficient	.934	.649	.721	.823	1.000	.893
	Sig.	.000	.000	.000	.000	.	.000
Customer Handling Skill	Coefficient	.911	.632	.706	.805	.893	1.000
	Sig.	.000	.000	.000	.000	.000	.000

Table 4.6, shows that the sig. value of the correlation test is ≤ 0.05 , indicating that there is a significant relationship between informal learning and BPO employees' identified technical skills. The coefficient value is also equal to or greater than .60, demonstrating a moderate to high positive correlation between informal learning and technical skills.

Table 4.7: Correlation Between Informal Learning and Soft Skills of BPO Employees

Particulars		Informal Learning	Presentation Skill	Problem Solving Skill	Self-Management Skill	Interpersonal Skill	Ethical Skill
Informal Learning	Coefficient	1.000	.765	.814	.813	.827	.600
	Sig.	.	.000	.000	.000	.000	.000
Presentation Skill	Coefficient	.765	1.000	.662	.669	.672	.652
	Sig.	.000	.	.000	.000	.000	.000
Problem Solving Skill	Coefficient	.814	.662	1.000	.865	.901	.593
	Sig.	.000	.000	.000	.000	.000	.000
Self-Management Skill	Coefficient	.813	.669	.865	1.000	.838	.589
	Sig.	.000	.000	.000	.000	.000	.000
Interpersonal Skill	Coefficient	.827	.672	.901	.838	1.000	.627
	Sig.	.000	.000	.000	.000	.	.000
Ethical Skill	Coefficient	.600	.593	.589	.627	1.000	1.000
	Sig.	.000	.000	.000	.000	.000	.

Table 4.7, shows that the correlation test's sig. value is less than 0.05, which means informal learning and identified soft skills of BPO employees have a significant relationship. The coefficient value is also equal to or greater than .60, indicating a moderate to high positive correlation between informal learning and soft skills.

4.3 Impact of Workplace Informal Learning on Skills of BPO Employees

Run a regression test to see how informal learning affects employee skill enhancement. When a regression test is run, the data must meet several assumptions in order for your analysis to be reliable and valid. The following are the assumptions:

1. There must be a linear relationship between independent variables and responses. The relationship between the mean value of X and Y is the same.
2. The variance of residuals must be the same for any value of X, there should be homogeneity of variance.
3. There should be no correlation between independent variables. Observations are independent of each other.

Table 4.8: Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Constant	.036	368	.200*	.996	368	.515

- a. This is a lower bound of the true significance.
- b. Lilliefors Significance Correction

Table 4.9: Test of Homogeneity of Variance

Table 4.9: Test of Homogeneity of Variance					
		Levene' s Statistic	df1	df2	Sig.
Constant	Based on Mean	.672	2	365	.511
	Based on trimmed mean	.661	2	365	.517

Table 4.10: Test of Independent Observations	
Relation Between Independent Variables (Ways of Informal Learning)	≥ 0.005

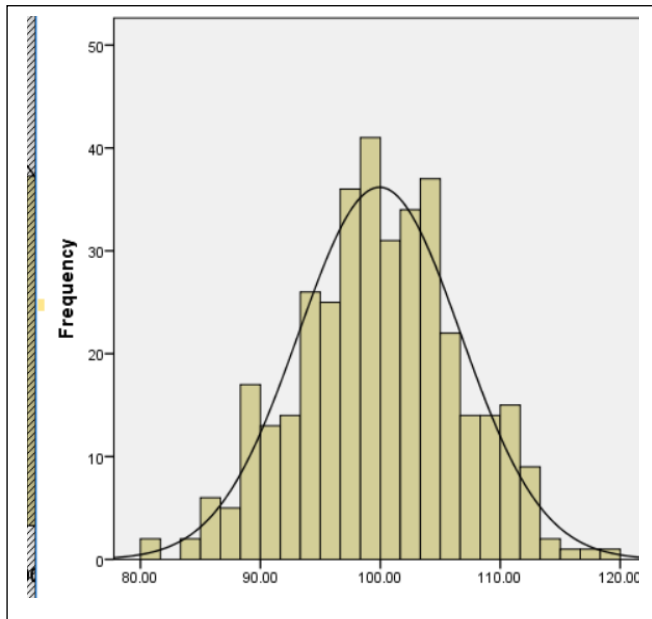


Fig. 4.3. Histogram

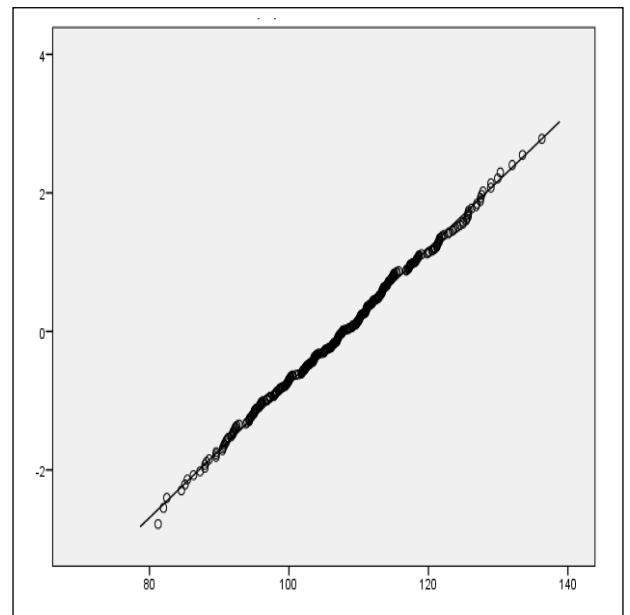


Fig. 4.4. P-P Plots

Tables 4.8, 4.9 & 4.10 shows pre-test results which are conducted to fulfil the assumptions of regression analysis such as Shapiro Wilk, Brown-Forsythe and correlation tests and sig. value of all these tests is ≥ 0.05 , which means that the data is normal, there is equality of variance, no problem of heteroscedasticity, and there is no correlation between independent variables. Figs. 4.3 & 4.4 show the graphical representation of the normal distribution of data.

Table 4.11: Model Summary for Informal Learning Ways & Skills of BPO Employees

Dependents	R Square	Adjusted R Square	St. Error	DF	Durbin Watson
Technical Skills	.726	.725	.267	365	1.934
Soft Skills	.911	.910	.152	365	1.929

Table 4.11 shows the results of a regression test conducted to determine the impact of informal learning on BPO employees' identified technical and soft skills. The sig. value (p) is less than 0.05, indicating that informal learning has a significant impact on employee skill enhancement. The technical skill R square value has been adjusted.725 means that up to 72% of employees have variation in their technical skills if there is a one-unit change in informal learning ways. The soft skill R square value has been adjusted.91, which means that up to 91% there is variation in the soft skills of employees if there is a one-unit change in informal learning ways. The value of the Durbin-Watson test is less than 2.0, which means there is positive autocorrelation between the samples.

4.3.1 Results of Test for Hypothesis 1

H0 = There is no significant impact of workplace informal learning on technical skills of BPO employees.

Table 4.12: Model Summary for Communication Skill & Informal Learning Ways

Model	Adjusted R Square	Std. Error of the Estimate	Change Statistics			Durbin-Watson	
			F Change	df1	df2		Sig. F Change
1	.950	.14524		9	358	.000	1.265

a. Predictors: (Constant), E-Library, Trial & Error, Reading Manuals, Observations, Mentoring & Coaching, Buddy Up, Huddles, Conversation with others, and Offsite Meetings.

b. Dependent Variable: Communication Skill

Table 4.13: ANOVA Table for Communication Skill & Informal Learning Ways

Model 1	Sum of Squares	df	Mean Square	F	Sig.
Regression	146.176	9	16.242	769.898	.000 ^b
Residual	7.552	358	.021		
Total	153.728	367			

Tables 4.12 & 4.13, show the value of a regression test that was conducted to determine the impact of informal learning methods on BPO employees' communication skill. The significance value of the regression and ANOVA tests is less than ≤ 0.05 , it indicates that informal learning methods and communication skills have a significant relationship. The value of adjusted R^2 shows the proportion of variance in a dependent variable (Y) explained by the independent variable (X). The present Model 1, adjusted R^2 value of .950, indicates that additional informal learning ways add value to the model and shows a good impact of predictors on the communication skill of employees.

Table 4.14: Regression Equation Between Communication Skill & Informal Learning Ways

y/x	E-Lib	T & E	RM	OBS	M&C	BU	HUD	CONV	OM
Communication Skill (y)	0.33	-	-	0.057	0.648	-	-	0.089	0.082
	x_1			x^2	x_3			x_4	x_5

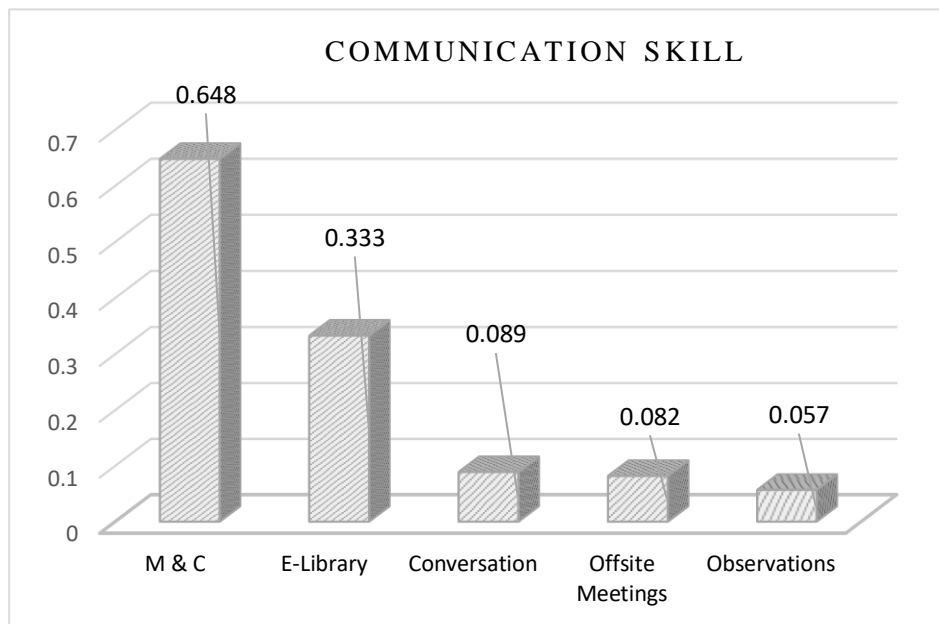


Fig. 4.5. Regression Equation Between Communication Skill & Informal Learning Ways

Tables 4.14 & Fig 4.5 depict the regression equation derived from the coefficient matrix of Model 1 and also state the factors that influence an employee’s communication skill. The value of the coefficient co-matrix of each variable is (+) positive, which means that informal learning methods have a positive impact on communication skill. The informal learning ways that are impacting the communication skill of employees are mentoring & coaching (.648), e-library (.333), conversation with colleagues (0.089), offsite meetings (0.082) and observing others (0.057).

Table 4.15: Model Summary for Customer Handling Skill & Informal Learning Ways

Model	Adjusted R Square	Std. Error of the Estimate	Change Statistics			Durbin-Watson	
			F Change	df1	df2		Sig. F Change
2	.855	.24619	.859	9	358	.000	1.269

a. Predictors: (Constant), E-Library, Trial & Error, Reading Manuals, Observations, Mentoring & Coaching, Buddy Up, Huddles, Conversation with others, and Offsite Meetings.

b. Dependent Variable: Customer Handling Skill

Table 4.16: ANOVA Table for Customer Handling Skill & Informal Learning Ways

MODEL 2	Sum of Squares	df	Mean Square	F	Sig.
Regression	132.030	9	14.670	242.040	.000 ^b
Residual	21.698	358	.061		
Total	153.728	367			

The significance of the tests conducted to determine the impact of informal learning methods on the customer handling skills of BPO employees is shown in Tables 4.5 and 4.16. The value of the regression and ANOVA tests is less than 0.05, which means there is a significant relationship between informal learning ways and customer handling skill. The value of adjusted R² of Model 2 shows that the proportion of variance in the dependent variable (Y) is explained by the independent variable (X). The present Model 2, adjusted R² value of .855, indicates that additional informal learning ways add value to the model and there is a strong impact of predictors on the customer handling skill of employees.

Table 4.17: Regression Equation Between Customer Handlin Skill & Informal Learning Ways

y/x	E-Lib	T & E	RM	OBS	M&C	BU	HUD	CONV	OM
Customer Handling Skill (y)	0.39	-	-	0.172	0.491	-	0.21	-	0.14
	x ₁			x ²	x ₃		x ₄		x ₅

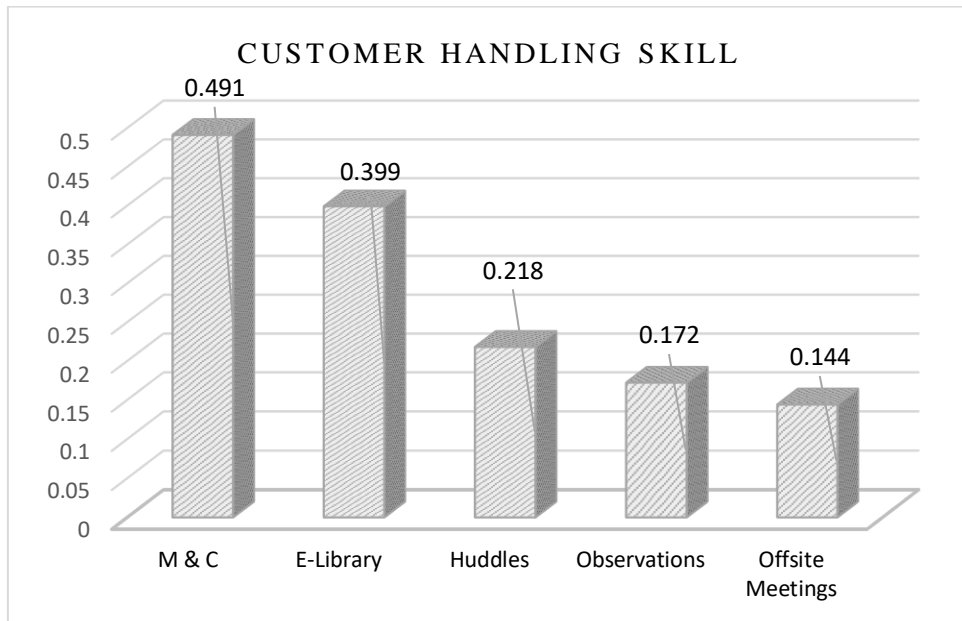


Fig. 4.6. Regression Equation Between Customer Handling Skill & Informal Learning Ways

Table 4.17 & Fig 4.6 state the regression equation of Model 2 and indicate factors which are impacting the customer handling skill of employees. The value of coefficient co-matrix of each variable is (+) positive, which means that informal learning ways have a positive impact on customer handling skill. The informal ways that are impacting on the customer handling skill of employees are mentoring & coaching (0.491), e-library (.399), huddles (.218), observations (.172), and offsite meetings (.144).

Table 4.18: Model Summary for Analytical Skill & Informal Learning Ways

Model	Adjusted R Square	Std. Error of the Estimate	Change Statistics			Durbin-Watson
			df1	df2	Sig. F Change	
3	.779	.40141	9	358	.000	1.852

- a. Predictors: (Constant), E-Library, Trial & Error, Reading Manuals, Observations, Mentoring & Coaching, Buddy Up, Huddles, Conversation with others, and Offsite Meetings.
- b. Dependent Variable: Analytical Skill

Table 4.19: ANOVA Table for Analytical Skill & Informal Learning Ways

Model 3	Sum of Squares	df	Mean Square	F	Sig.
Regression	209.683	9	23.298	144.594	.000 ^b
Residual	57.684	358	.161		
Total	267.367	367			

Tables 4.18 & 4.19 show the results of regression tests that determine the impact of informal learning methods on the analytical skill of BPO employees. The significance value of regression and ANOVA tests is less than ≤ 0.05 , which means there is a relationship between informal learning ways and analytical skill. The value of Adjusted R^2 of Model 3 shows that proportion of variance in dependent variable (Y) analytical skill explained by the independent variable (X) informal learning ways and Model 3, the adjusted R^2 value is .77, which says that additional informal learning ways add more value to the model and predictors have a strong relationship with the analytical skill enhancement of employees.

Table 4.20: Regression Equation Between Analytical Skill & Informal Learning Ways

y/x	E-Lib	T & E	RM	OBS	M&C	BU	HUD	CONV	OM
Analytical Skill (y)	(-0.163)	0.753	0.09	-	0.07	0.132	0.146	-	-
	x ₁	x ₂	7x ₃		x ₄	x ₅	x ₆		

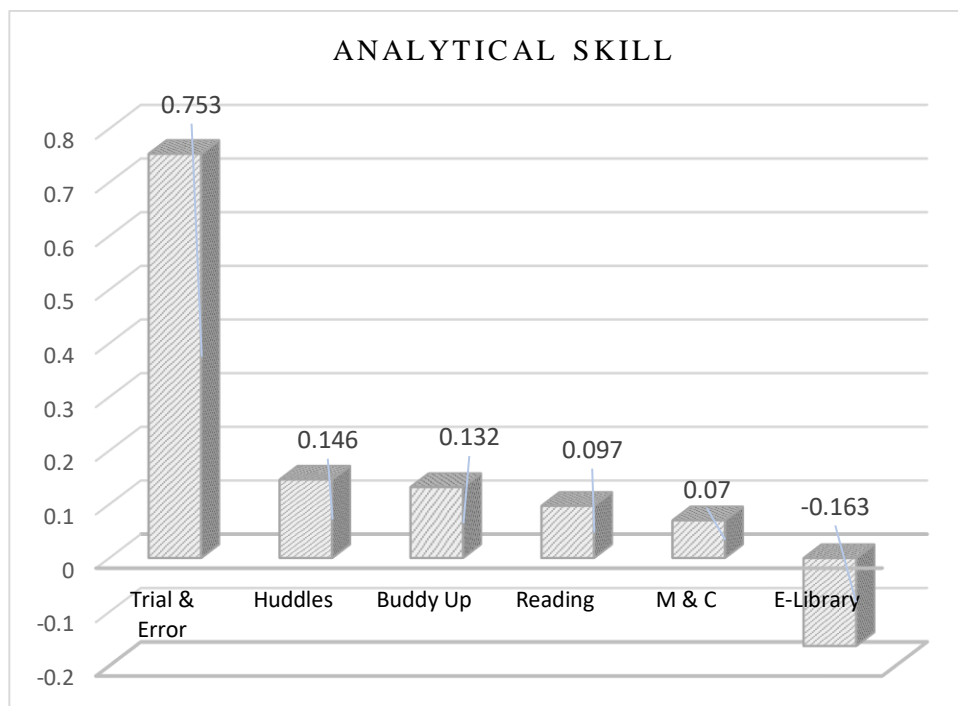


Fig. 4.7. Regression Equation Between Analytical Skill & Informal Learning Ways

Table 4.20 and Fig. 4.7 show the regression equation obtained from the coefficient matrix of Model 3 and which factors influence employees' analytical skill. The value of the coefficient co-matrix of each variable is (+) positive, which means that informal learning methods have a positive impact on analytical skill except for e-library, which has a negative impact on analytical skill. The ways which are impacting on analytical skill are trial & error (0.75), huddles (0.14), buddy up (0.13), reading manuals (0.097), mentoring & coaching (0.07) and e-library (-0.16).

Table 14.21: Model Summary for Domain Skill & Informal Learning Ways

Model	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin-Watson
			F Change	df1	df2	Sig. F Change	
4	.762	.249	131.335	9	358	.000	2.070

- a. Predictors: (Constant), E-Library, Trial & Error, Reading Manuals, Observations, Mentoring & Coaching, Buddy Up, Huddles, Conversation with others, and Offsite Meetings.
- b. Dependent Variable: Domain Skill

Table 14.22: ANOVA Table for Domain Skill & Informal Learning Ways

Model 4	Sum of Squares	df	Mean Square	F	Sig. Value
Regression	73.314	9	8.146	131.335	.000 ^b
Residual	22.205	358	.062		
Total	95.519	367			

Tables 4.21 & 4.22 show the results of a regression test that was conducted to determine the impact of informal learning methods on the domain skill of BPO employees. The significance value of the regression and ANOVA tests is less than ≤ 0.05 . It means there is a significant relationship between informal learning methods and domain skill. The value of adjusted R^2 of Model 4, shows that the proportion of variance in dependent variable (Y) domain skill explained by the independent variable (X) informal learning ways. The present Model 4, adjusted R^2 .76, indicates a positive relationship between predictors and domain skill.

Table 4.23: Regression Equation Between Domain Skill & Informal Learning Ways

y/x	E-Lib	T & E	RM	OBS	M&C	BU	HUD	CONV	OM
Domain Skill (y)	0.15	0.39	0.16	-	0.23	.41	-	0.098	-
	x ₁	x ₂	x ₃		x ₄	x ₅		x ₆	

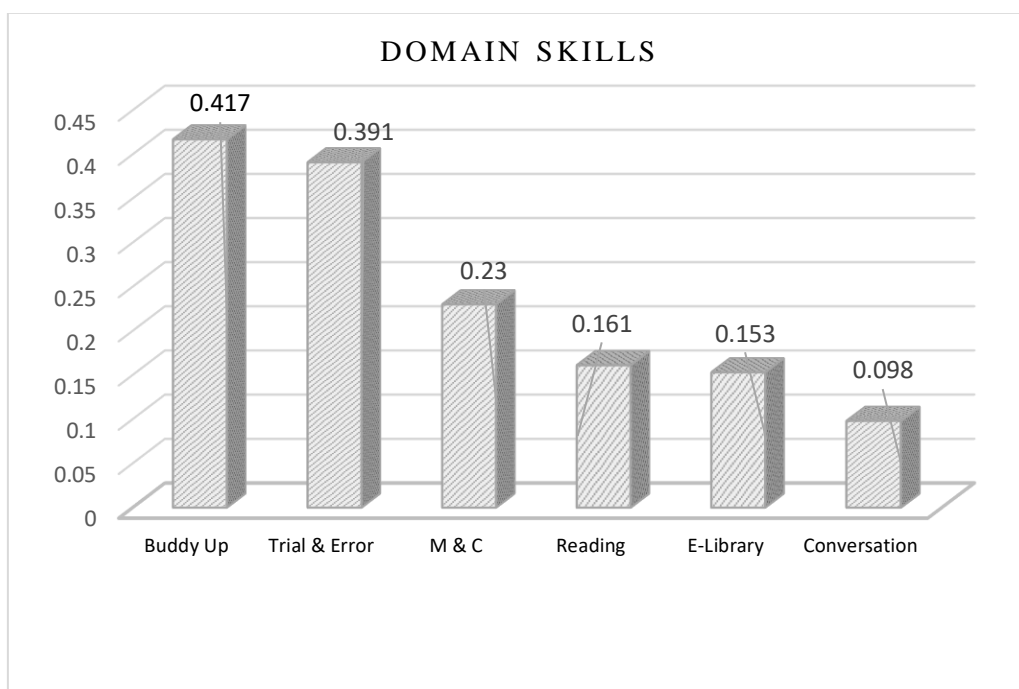


Fig. 4.8. Regression Equation Domain Skill & Informal Learning Ways

Table 4.23 & Fig 4.8 state the regression equation drawn from the coefficient matrix of regression Model 4 and also indicate which particular informal learning ways are impacting the domain skill of employees. The value of the coefficient co-matrix of each variable is (+) positive, which means that informal learning methods have a positive impact on domain skill. The major informal learning ways which are impacting on domain skill such as buddy up (0.417), trial & error (0.391), mentoring & coaching (0.23), reading manuals (0.161), e-library (0.153) and conversation with colleagues (0.098).

Table 4.24: Model Summary for Documentation Skill & Informal Learning Ways

Model	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin-Watson
			F Change	df1	df2	Sig. F Change	
5	.744	.258	119.577	9	358	.000	1.498

- a. Predictors: (Constant), E-Library, Trial & Error, Reading Manuals, Observations, Mentoring & Coaching, Buddy Up, Huddles, Conversation with others, and Offsite Meetings.
- b. Dependent Variable: Documentation Skill

Table 4.25: ANOVA Table for Documentation Skill & Informal Learning Ways

Model 5	Sum of Squares	df	Mean Square	F	Sig.
Regression	71.676	9	7.964	119.577	.000 ^b
Residual	23.843	358	.067		
Total	95.519	367			

Tables 4.24 & 4.25 show the results of the regression test, which determine the impact of informal learning methods on the documentation skill of BPO employees. The significance value of the regression and ANOVA tests is less than ≤ 0.05 , which means there is a significant impact of informal learning ways and documentation skill. The value of adjusted R^2 of Model 5 shows that the proportion of variance in dependent variable (Y) documentation skill is explained by the independent variable (X) informal learning ways. The present Model 5, adjusted R^2 .74, states that there is a positive, strong relationship between documentation skills and predictors.

Table 4.26: Regression Equation Between Documentation Skill & Informal Learning Ways

y/x	E-Lib	T & E	RM	OBS	M&C	BU	HUD	CONV	OM
Documentation Skill (y)	-	-	0.39x 1	-	0.35 x ₂	0.53 x ₃	0.30 x ₄	0.28 x ₅	-

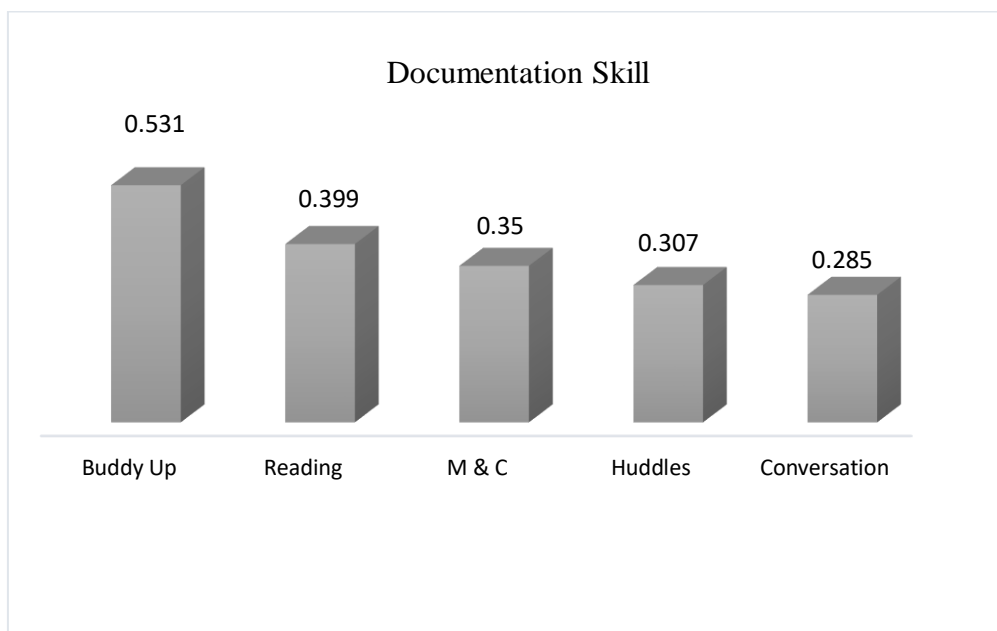


Fig. 4.9. Regression Equation Between Documentation Skill & Informal Learning Ways

Table 4.26 & Fig 4.9, states the regression equation drawn from the coefficient matrix of regression Model 5 and also shows the major factors impacting the documentation skill of employees. Each variable's coefficient co-matrix has a positive value, indicating that informal learning methods have a positive impact on documentation skill. The major informal learning methods at the workplace that are impacting on the domain skill of employees are: buddying up (0.531), reading manuals (0.399), mentoring & coaching (0.35), huddles (0.307), and conversation with colleagues (0.285).

4.3.1.i) Summary of Result for Hypothesis 1

To test hypothesis 1, a regression test was applied to see the impact of informal learning methods that take place at the workplace on the identified technical skills of BPO employees. The results of the analysis show that the mean value of the descriptive test is ≥ 3.50 , which means employees confirm that their identified technical skills get intensified through informal ways of learning. The sig. value (p) is less than $\leq .005$, which means there is a significant impact of informal ways of learning on each identified technical skill of BPO employees.

From the results of the tests, the researcher was able to reject the null hypothesis. The adjusted R square value of each model is above .70, which shows a good impact of informal learning on BPO employees' technical skills. The coefficient values of regression analyses, which determine the strength of the model after adding one, more independent variable (informal ways of learning). The coefficients of significant predictors have a positive value, indicating that informal learning methods have a positive impact on the individual technical skills of BPO employees. However, using an e-library in an informal manner has a negative impact on analytical skills, with a coefficient value of (-0.163).

4.3.2 Result of Test for Hypothesis 2

H0= There is no significant impact of workplace informal learning on soft skills of BPO employees.

Table 4.27: Model Summary for Problem Solving Skill & Informal Learning Ways

Model	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin-Watson
			F Change	df1	df2	Sig. F Change	
6	.761	.45	130.576	9	358	.000	1.771

- a. Predictors: (Constant), E-Library, Trial & Error, Reading Manuals, Observations, Mentoring & Coaching, Buddy Up, Huddles, Conversation with others, and Offsite Meetings.
- b. Dependent Variable: Problem Solving Skill

Table 4.28: ANOVA Table for Problem Solving Skill & Informal Learning Ways

Model 6	Sum of Squares	df	Mean Square	F	Sig.
Regression	193.524	9	21.503	130.576	.000 ^b
Residual	58.954	358	.165		
Total	252.478	367			

Tables 4.27 & 4.28 show the results of the regression test, which predicts the impact of informal learning methods on the problem-solving skill of BPO employees. The significance value of the regression and ANOVA tests is less than 0.05. It means there is a relationship between informal learning ways and problem-solving skill. The value of adjusted R² of **Model 6** shows that the proportion of variance in the dependent variable (Y) problem solving skill is explained by the independent variable (X) informal learning ways. The present Model 6 adjusted R² value is .76. It states the strong relationship between problem-solving skill and predictors.

Table 4.29: Regression Equation Between Problem Solving Skill & Informal Learning Ways

y/x	E-Lib	T & E	RM	OBS	M&C	BU	HUD	CO NV	OM
Problem Solving Skill (y)	-	-	0.119 x ₁	-	-	0.606 x ₂	.0.17 x ₃	-	0.098 x ₄

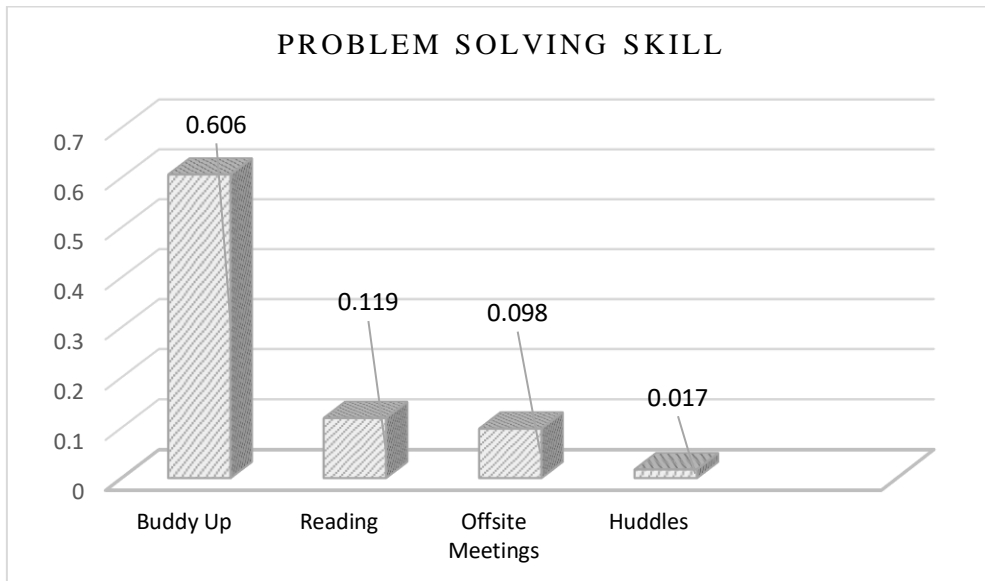


Fig. 4.10. Regression Equation Between Problem Solving Skill & Informal Learning Ways

Table 4.29 and Fig. 4.10 show the regression equation derived from the coefficient matrix of regression Model 6 and also interpret which factors influence employees' problem-solving skill. The value of the coefficient co-matrix of each variable is (+) positive, which means that informal learning methods have a positive impact on problem solving skill. The ways which are impacting on problem solving skills include things like buddy up (0.606), reading manuals (0.119), offsite meetings (0.098) and huddles (0.017).

Table 4.30: Model Summary for Self-Management & Informal Learning Ways

Model	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin-Watson
			F Change	df1	df2	Sig. F Change	
7	.755	.473	126.785	9	358		1.838

- a. Predictors: (Constant), E-Library, Trial & Error, Reading Manuals, Observations, Mentoring & Coaching, Buddy Up, Huddles, Conversation with others, and Offsite Meetings.
- b. Dependent Variable: Self-Management Skill

Table 4.31: ANOVA Table for Self-Management & Informal Learning Ways

Model 7	Sum of Squares	df	Mean Square	F	Sig.
Regression	255.361	9	28.373	126.785	.000 ^b
Residual	80.118	358	.224		
Total	335.478	367			

Tables 4.30 & 4.31 show the results of a regression test that determines the impact of informal learning methods on the self-management skill of BPO employees. The significance value of the regression and ANOVA tests is less than 0.05. It means there is a relationship between informal learning and self-management skill. The value of adjusted R^2 of Model 7 shows that the proportion of variance in dependent variable (Y) self-management skill explained by the independent variable (X) informal learning ways. The present Model 7 adjusted R^2 value of .75 indicates a good positive impact of predictors on self-management skill.

Table 4.32: Regression Equation Between Self-Management Skill & Informal Learning Ways

y/x	E-Lib	T & E	RM	OBS	M&C	BU	HUD	CO NV	OM
Self-Management Skill (y)	-	0.283 x ₁	-	0.059 x ₂	0.148 x ₂	0.072 x ₅	-	0.24 x ₆	-

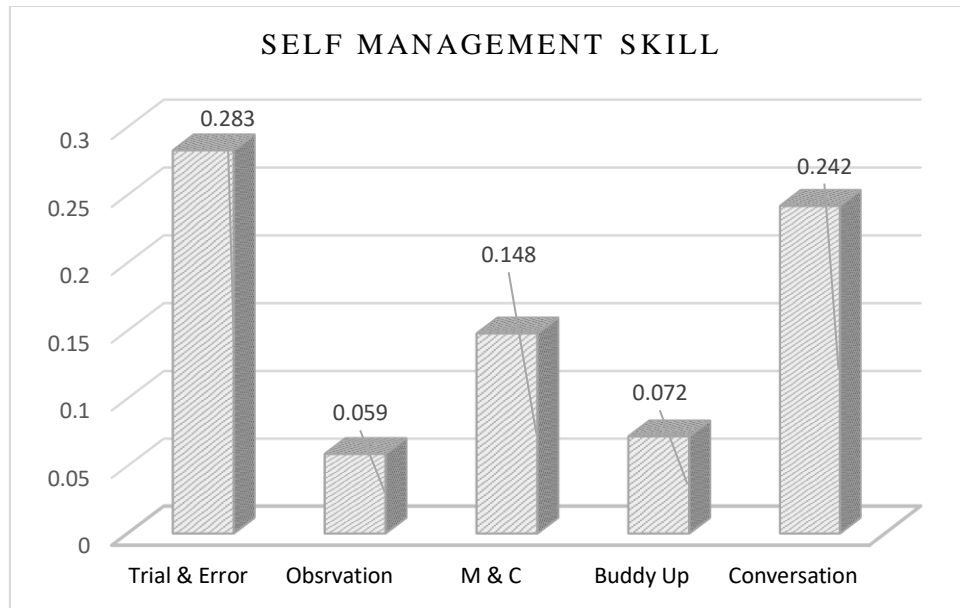


Fig. 4.11: Regression Equation Self-Management Skill & Informal Learning Ways

Table 4.32 & Fig. 4.11 state the regression equation drawn from the coefficient matrix of regression Model 7 and explain the factors impacting the self-management skill of employees. The value of the coefficient co-matrix of each variable is (+) positive, which means that informal learning methods have a positive impact on self-management skill. The ways which are impacting on the problem solving skill of employees are trial & error (0.283), observations (0.059), mentoring & coaching (0.148), buddy up (0.072) and conversation with others.

Table 4.33: Model Summary For Inter Personal Skill & Informal Learning Ways

Model	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin-Watson
			F Change	df1	df2	Sig. F Change	
8	.732	.33530	112.154	9	358	.000	.763

- a. Predictors: (Constant), E-Library, Trial & Error, Reading Manuals, Observations, Mentoring & Coaching, Buddy Up, Huddles, Conversation with others, and Offsite Meetings.
- b. Dependent Variable: Inter Personal Skill

Table 4.34: ANOVA Table For Inter Personal Skill & Informal Learning

Model	8	Sum of Squares	df	Mean Square	F	Sig.
Regression		113.480	9	12.609	112.154	.000 ^b
Residual		40.248	358	.112		
Total		153.728	367			

Tables 4.33 & 4.34 show the results of a regression test that was conducted to determine the impact of informal learning methods on the inter-personal skills of BPO employees. The significance value of the regression and ANOVA tests is less than 0.05. It means there is a relationship between informal learning ways and inter-personal skill. The value of adjusted R² of Model 8, shows that the proportion of variance in dependent variable (Y) inter-personal skill explained by the independent variable (X) informal learning ways. The present Model 8 adjusted R² value of .73, shows the high impact of predictors on inter-personal skill.

Table 4.35: Regression Equation Between Inter Personal Skill & Informal Learning Ways

y/x	E-Lib	T & E	RM	OBS	M&C	BU	HUD	CO NV	OM
Inter Personal Skill (y)	-	-	-	-	0.18 X ₁	0.081 X ₂	-	0.62 X ₃	0.072 X ₄

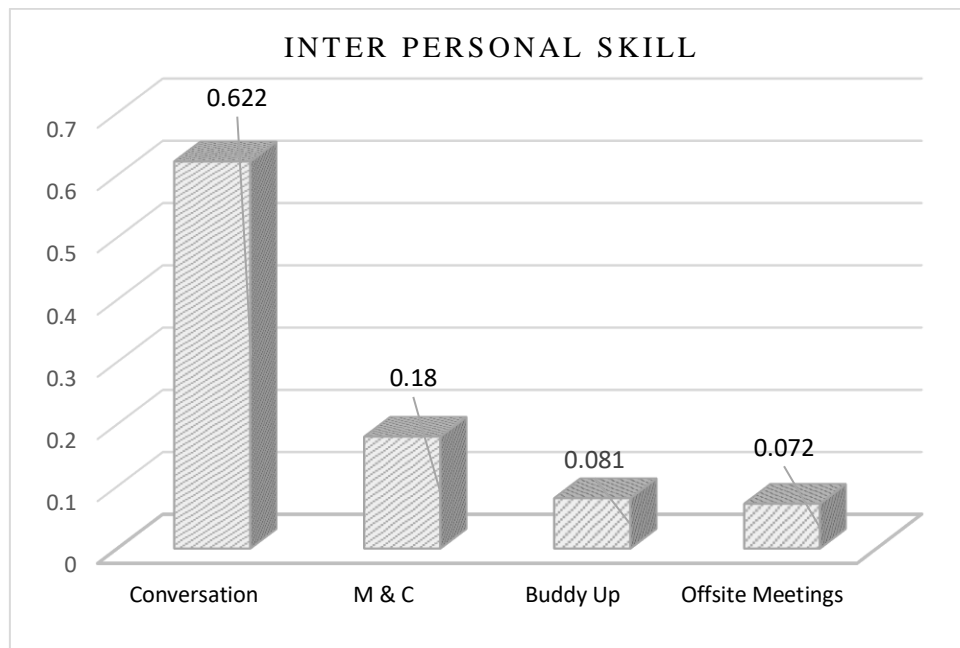


Fig. 4.12. Regression Equation Between Inter Personal Skill & Informal Learning Ways

Table 4.35 & Fig. 4.12 state the regression equation drawn from the coefficient matrix of regression **Model 8** and also indicate factors which are influencing the interpersonal skill of employees. The value of the coefficient co matrix of each variable is (+) positive, which means that informal learning methods have a positive impact on interpersonal skill. The ways in which they are impacting the interpersonal skill of employees, such as conversation with colleagues (0.622), mentoring & coaching (0.18), buddy up (0.081) and offsite meetings (0.072).

Table 4.36: Model Summary for Ethical Skill & Informal Learning Ways

Model	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin-Watson
			F Change	df1	df2	Sig. F Change	
9	.640	.38849	73.395	9	358	.000	.781

- a. Predictors: (Constant), E-Library, Trial & Error, Reading Manuals, Observations, Mentoring & Coaching, Buddy Up, Huddles, Conversation with others, and Offsite Meetings.
- b. Dependent Variable: Ethical Skill

Table 4.37: ANOVA Table for Ethical Skill & Informal Learning Ways

Model	9	Sum of Squares	df	Mean Square	F	Sig.
Regression		99.696	9	11.077	73.395	.000 ^b
Residual		54.032	358	.151		
Total		153.728	367			

The results of a regression test conducted to determine the impact of informal learning methods on the ethical skills of BPO employees are shown in Tables 4.36 and 4.37. value of the regression and ANOVA tests is less than 0.05, which means there is a significant relationship between informal learning ways and ethical skill. The value of adjusted R^2 of Model 9 shows that the proportion of variance in dependent variable (Y) ethical skill explained by the independent variable (x) informal learning ways. The present Model 9 Adjusted R^2 value of .73 indicates a good impact of predictors on ethical skill enhancement.

Table 4.38: Regression Equation Between Ethical Skill & Informal Learning Ways

y/x	E-Lib	T & E	RM	OBS	M&C	BU	HUD	CON V	OM
Ethical Skill (y)	(-0.275) x ₁	-	0.125 x ₂	0.354 x ₂	0.346 x ₄	0.351 x ₅	-	-	-

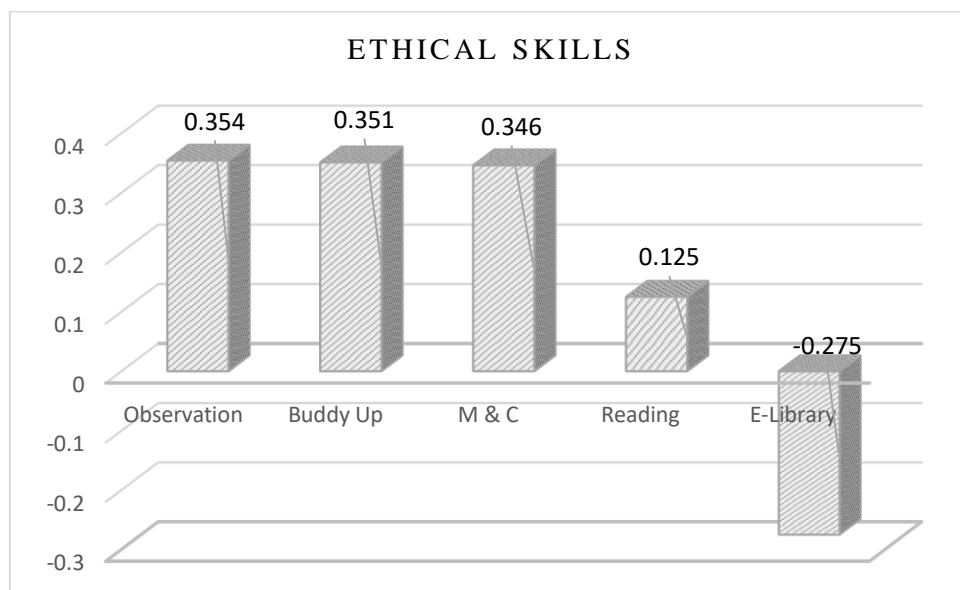


Fig. 4.13. Regression Equation Between Ethical Skill & Informal Learning Ways

Table 4.38 & Fig. 4.13 state the regression equation drawn from the coefficient matrix of regression Model 9 and also interpret the factors which influence the ethical skill of employees. Each variable's coefficient co matrix has a positive value, indicating that informal learning methods, with the exception of e-library, have a positive impact on ethical skill. The ways which are impacting on ethical skill such as observation (0.354), buddy up (0.351), mentoring & coaching (0.346), reading manuals (0.125) and e-library (-0.275).

Table 4.39: Model Summary for Presentation Skill & Informal Learning Ways

Model	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin-Watson
			F Change	df1	df2	Sig. F Change	
10	.616	.40096	66.467	9	358	.000	.897

- a. Predictors: (Constant), E-Library, Trial & Error, Reading Manuals, Observations, Mentoring & Coaching, Buddy Up, Huddles, Conversation with others, and Offsite Meetings.
- b. Dependent Variable: Presentation Skill

Table 4.40: ANOVA Table for Presentation Skill & Informal Learning Ways

Model 10	Sum of Squares	df	Mean Square	F	Sig.
Regression	96.173	9	10.686	66.467	.000 ^b
Residual	57.556	358	.161		
Total	153.728	367			

Table 4.39 & 4.40 shows the significance value of regression and ANOVA tests is less than 0.05, which means there is a relationship between informal learning ways and presentation skill. The value of adjusted R of Model 10 shows that the proportion of variance in dependent variable (Y) presentation skill explained by the independent variable (X) in informal learning ways. The present Model 10 adjusted R² of .61 indicates a good significant impact of predictors on presentation skill.

Table 4.41: Regression Equation Between Presentation Skill & Informal Learning Ways

y/x	E-Lib	T & E	RM	OBS	M&C	BU	HUD	CON V	OM
Presentation Skill(y)	-	-	0.119 x ₁	-	-	0.321 x ₂	-	0.357 x ₃	0.258 x ₄

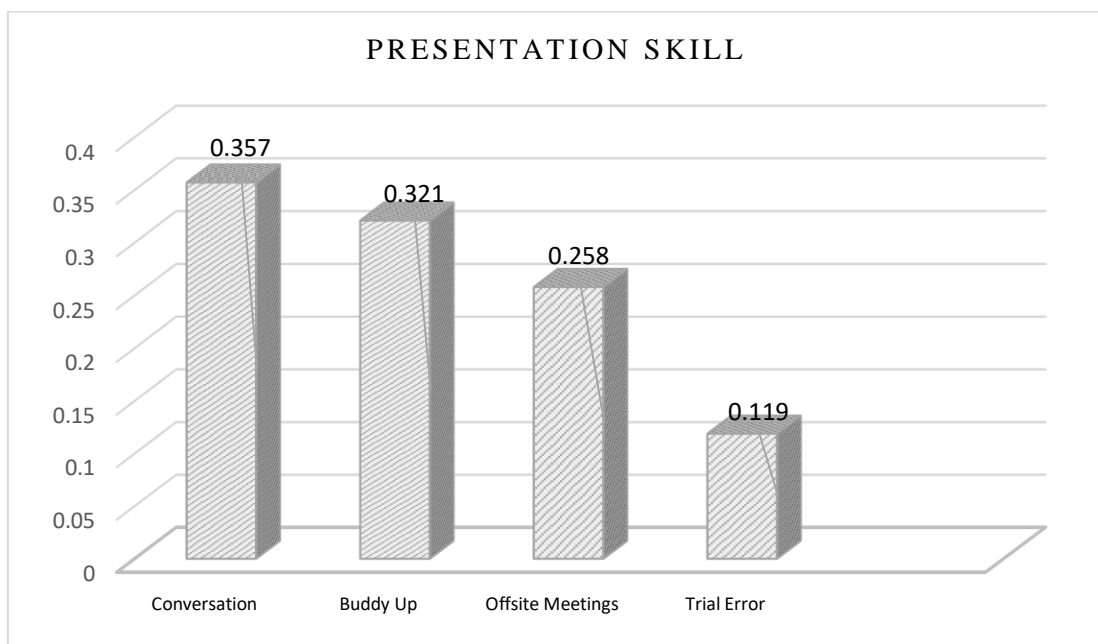


Fig. 4.14.Regression Equation Between Presentation Skill & Informal Learning Ways

Table 4.41 & Fig. 4.14 state the regression equation drawn from the coefficient matrix of Model 10 and also indicate which ways are impacting the presentation skill of employees. The value of the coefficient co matrix of each variable is (+) positive, which means that informal learning methods have a positive impact on presentation skill. The ways which are impacting on the presentation skill of employees are conversation (0.357), buddy up (0.321), offsite meetings (0.258) and trial & error (0.119).

4.3.2. i) Summary of Result for Hypothesis 2

To test hypothesis 2, a regression test was applied to see the impact of informal learning methods that take place at the workplace on the identified soft skills of BPO employees.

The results of the analysis show that the mean value of the descriptive test is ≥ 3.50 , which means employees confirm that their identified soft skills get polished through informal ways of learning. The sig. value (p) is less than $\leq .005$ which means there is a significant impact of informal ways of learning on each identified soft skill of BPO employees.

As per the results of the tests, the researcher is able to reject the null hypothesis. The adjusted R square value of the model is above .60, which shows a good impact of informal learning on BPO employees' soft skills. The value of the coefficients of significant predictors is (+), which means there is a positive impact of informal ways on the individual identified soft skills of BPO employees. But an e-library, informal way is showing a negative impact on ethical skills and the value of the coefficient is (-0.275).

4.4. Results of Other Observations

Apart from the objectives and hypothesis of the study, the researcher had a few other observations too, which complement the study and are followed by the statistical tool as follows:

Significant barriers to informal ways.

Table 4.42: Relationship Between Informal Learning and Barriers to Informal Learning Ways

Barriers to Informal Learning	Mean	Std. Deviation	Correlation
Not Willing to learn (PB)	2.6522	1.0	Sig. Value $\geq .05$
Introvert (PB)	3.0272	1.0	
Fawning/ Obsequiousness) (PB)	3.217	1.0	.000
Non-Participation of Co-Workers (OB)	2.4402	.89	Sig. Value $\geq .05$
No Right Model of Learning (OB)	2.1386	1.1	
Organizational Policies (OB)	2.0436	1.0	

Table 4.42 shows the relationship between informal learning and barriers to informal learning. A few statements are constructed to show that, while learning informally at the workplace, employees face personal and organizational barriers. The mean value of all statements is less than ≤ 3.5 which means that employees don't feel any hindrance while learning informally. The sig.value of correlation is greater than $\geq .05$ which means there is no significant relationship between the informal learning of employees and barriers (personal and organizational) except fawning (use of favour to grow in position).

There is a difference in the preference of learning methods among employees working in different hierarchies.

Table 4.43: Model Summary For Lower-level Employees' Learning & Informal Learning Ways

Model	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin-Watson
			F Change	df1	df2	Sig. F Change	
1	.815	.204	181.037	9	358	.000	.673

a. Predictors: (Constant), E-Library, Trial & Error, Reading Manuals, Observations, Mentoring & Coaching, Buddy Up, Huddles, Conversation with others, and Offsite Meetings.

b. Dependent Variable: Lower Level (Associates)

Table 4.44: ANOVA Table For Lower-Level Employees' Learning & Informal Learning Ways

Model 1	Sum of Squares	df	Mean Square	F	Sig.
Regression	67.672	9	7.519	181.037	.000 ^b
Residual	14.869	358	.042		
Total	82.541	367			

Table 4.43 & Fig. 4.44 show the result of a regression analysis, which is run to know which particular informal learning ways have an impact on the learning of different levels of employees. The sig. value is less than $\leq .05$, indicates that workplace informal learning significantly impacts the learning of employees working at the lower level (Associates).

Table 4.45: Regression Equation Between Lower-Level Employees' Learning & Informal Learning Ways

y/x	E-Lib	T & E	RM	OBS	M&C	BU	HUD	CONV	OM
Lower Level (y)	.122	0.063	0.077	0.246	0.449	0.264	-	-	-
	x ₁	x ₂	x ₃	x ₄	x ₅	x ₅			

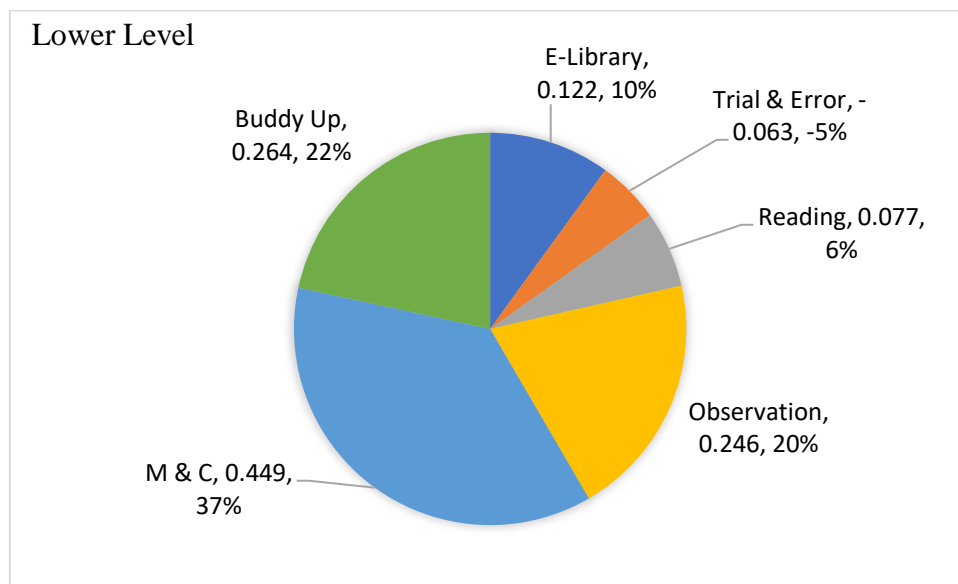


Fig. 4.15. Regression Equation Between Lower-Level Employees' & Informal Learning Ways

Table 4.45 & Fig. 4.15 show the coefficient value of all significant ways, which is (+), mean there is a significant positive impact of informal ways of learning on employees' learning while working at different levels. The ways which are impacting the lower-level staff's learning are mentoring & coaching (0.449), buddy up (0.264), observations (0.246), e-library (0.122), reading manuals (0.077) and trial & error (0.063).

Table 4.46: Model Summary For Middle Level Employees' Learning & Informal Learning Ways

Model	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin-Watson
			F Change	df1	df2	Sig. F Change	
2	.745	.244	120.021	9	358	.000	1.806

- a. Predictors: (Constant), E-Library, Trial & Error, Reading Manuals, Observations, Mentoring & Coaching, Buddy Up, Huddles, Conversation with others, and Offsite Meetings.
- b. Dependent Variable: Middle Level (Supervisors)

Table 4.47: ANOVA Table For Middle -Level Employees' Learning & Informal Learning Ways

Model 1	Sum of Squares	Df	Mean Square	F	Sig.
Regression	64.397	9	7.155	120.021	.000 ^b
Residual	21.343	358	.060		
Total	85.739	367			

The regression test results are shown in Tables 4.46 and 4.47; the sig. value is less than .05, indicating that informal learning methods have a significant impact on the learning of employees working at the middle level (supervisors).

Table 4.48: Regression Equation Between Middle-Level Employees' Learning & Informal Learning Ways

y/x	E-Lib	T & E	RM	OBS	M&C	BU	HUD	CONV	OM
Middle Level (y)	-	0.081	-	0.369	0.267	-	-	0.379	0.099
		x ₁		x ₂	x ₄			x ₅	x ₆

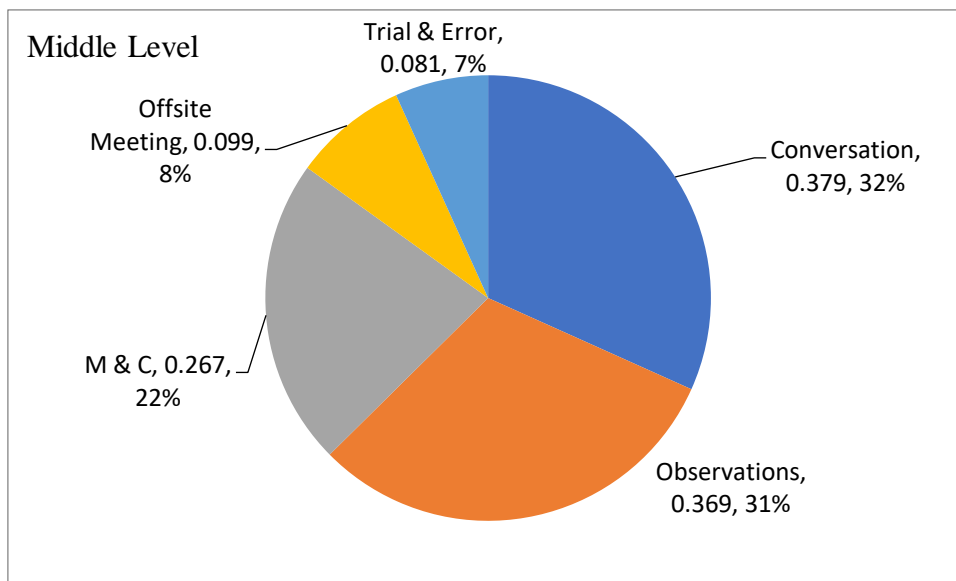


Fig. 4.16.Regression Equation Between Middle Level Employees' & Informal Learning Ways

Table 4.48 & Fig. 4.16 show the coefficient value of all significant ways is (+), which means there is a significant positive impact of informal ways of learning on middle level (supervisors) employees. The ways which are impacting most the middle level staff's learning are: conversation with others (0.379), observations (0.369), mentoring & coaching (0.267), offsite meetings (0.099) and trial and error (0.081).

Table 4.46: Model Summary for Upper Middle Level Employees' Learning & Informal Learning Ways

Model	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin-Watson
			F Change	df1	df2	Sig. F Change	
3	.717	.242	104.189	9	358	.000	2.200

- c. Predictors: (Constant), E-Library, Trial & Error, Reading Manuals, Observations, Mentoring & Coaching, Buddy Up, Huddles, Conversation with others, and Offsite Meetings.
- d. Dependent Variable: Upper-Middle Level (supervisors)

Table 4.50: ANOVA Table for Upper Middle Level Employees' Learning & Informal Learning Ways

Model	Sum of Squares	df	Mean Square	F	Sig.
3					
Regression	54.921	9	6.102	104.189	.000 ^b
Residual	20.968	358	0.59		
Total	75.889	367			

The results of a regression test are shown in Tables 4.49 and 4.50; the sig. value is less than .05, indicating that informal learning methods have a significant impact on the learning of employees working at the upper middle level.

Table 4.51: Regression Equation Between Upper Middle-Level Employees’ Learning & Informal Learning Ways-

y/x	E-Lib	T & E	RM	OBS	M&C	BU	HUD	CONV	OM
Upper Middle Level (y)	0.095 x ₁	-		0.193 x ₂	0.257 x ₃	-	0.062 x ₄	0.454 x ₅	-

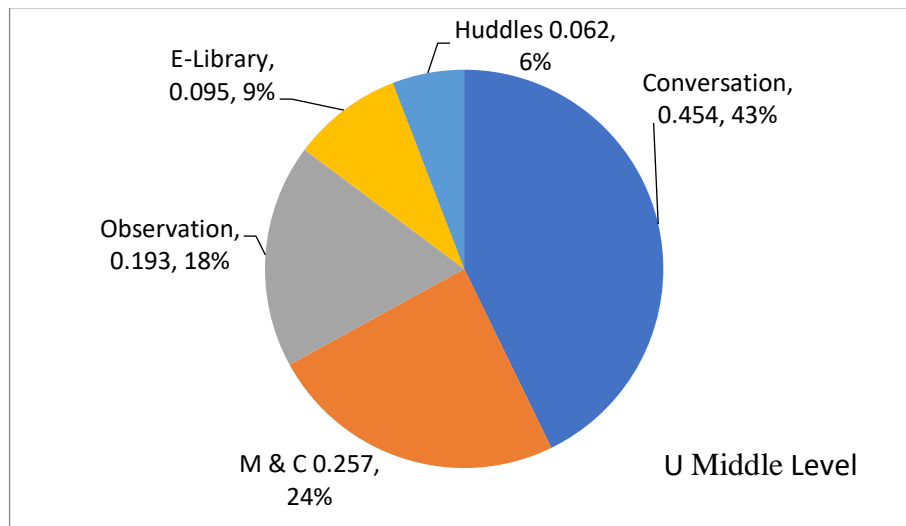


Fig. 4.17.Regression Equation Between Upper Middle Level Employees’ & Informal Learning Ways

Table 4.51 & Fig. 4.17, depict the coefficient value of all significant ways as (+), which means there is a positive impact of different ways of informal learning on employees working at the upper middle level. The ways which are impacting the most on the learning of upper middle level staff are conversation with others (0.454), observations (0.193), mentoring & coaching (0.257), e-library (0.095) and huddles (0.062).

Other participants play a role in assisting employees with their informal learning, or informal learning is 360-degree learning.

Table 4.52: Model Summary For Informal Learning & 360° Learning

Model	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin Watson
			F Change	df1	df2	Sig. F Change	
1	.595	.50	91.038	6	361	0.000	2.396

- a. Predictors: (Constant). Juniors, Self, seniors, Customers, Third Party and Peers
- b. Dependant Variable: Informal Learning

Table 4.53: ANOVA Table For Informal Learning & 360° Learning

Model 1	Sum of Squares	df	Mean Square	F	Sig.
Regression	142.033	6	23.672	91.038	.000 ^b
Residual	93.869	361	.260		
Total	235.902	367			

Tables 4.52 & 4.53 show the relationship between informal learning and facilitators in the workplace. The sig.value of the regression test is $\leq .05$, which means that informal learning is facilitated by self-efforts, juniors, colleagues, seniors, customers, and third-party Informal learning happens all the way around, and informal learning is 360° learning.

Table 4.54: Regression Equation Between Informal Learning & Facilitators at Workplace

y/x	Self	Subordinates	Peers	Seniors	Customers	Third Party
Informal Learning (y)	.114	.118	.182	.149	.055	0.59
	x ₁	x ₂	x ₃	x ₃	x ₄	x ₅

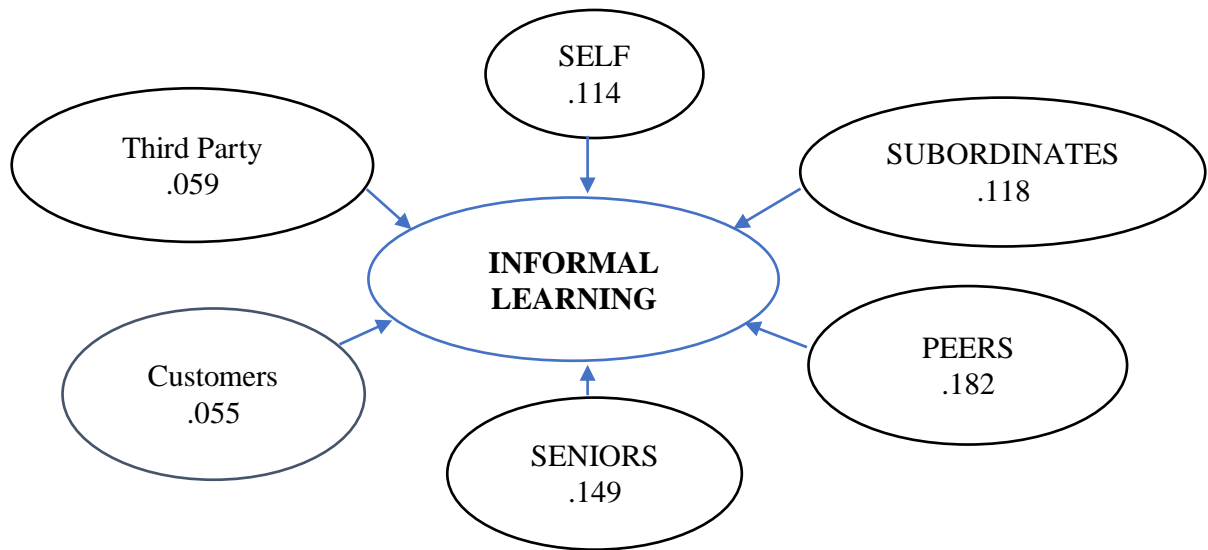


Fig. 4.18. Regression Equation Between Informal Learning & Facilitators at Workplace

Table 4.54 & Fig. 4.18 show the coefficient beta value of significant predictors (+), which means there is a significant positive impact of identified facilitators on informal learning of employees. Informal learning is influenced by the facilitators present at the workplace, such as: self effort (.114), subordinates (.118), peers (.182), seniors (.149), customers (0.55), and third-party (0.059).

4.5. Results of Qualitative Data

During the interview, employees were asked to rate the informal learning as per their learning and skills enhancement taking place through workplace informal learning. Responses are shown in the graph as follows:

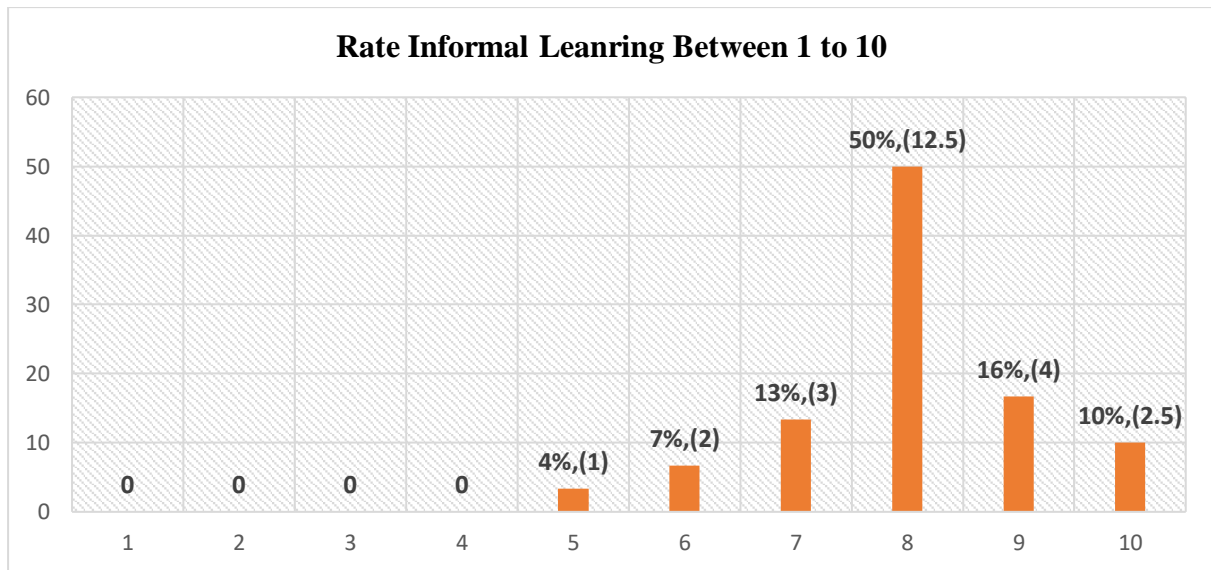


Fig. 4.19.Rating to Informal Learning by BPO Employees

Fig. 4.19 shows the rating given by BPO employees while interviewing; 50% of employees mentioned that their learning and skills enhanced by workplace informal learning. Most employees rate workplace informal learning at 8 out of 10.

Through conducting a statistical test, it has been found that workplace informal learning has an effective impact on an employee's skills and performance, and qualitative data also supports the same. There is a significant relationship between workplace informal learning and the learning of employees, which can be enhanced directly or indirectly. There is no direct relationship between the informal learning of employees and the personal and organizational barriers they face. The results of the test also show that employees working at different levels or profiles learn in different ways. It has also been discovered that informal learning methods can be facilitated by the learner's own and others' participation.