Chapter 4

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4.1   Two Way ANOVA Test
4.1.1   Improved in Student's Academic Achievements
Problem Statement – Part A1

An analytical study is conducted to measure the effect of 'Institutional Strategic Partnership'on 'Performance of Selected Academic Institutions of Gujarat' through faculties ratings. The faculties were asked to rate the academic performance of the institution through institutional strategic partnership on ascale from 1 to 7 on various outcome on academic performance characteristics. One outcome on academic performance characteristic was the **Improved in Student's Academic Achievements.** The following data represent faculty's response to this question. The faculties were divided in **SelectedAcademic Institution**and by **Type of Institutional Strategic Partnership**.

Type of Selected Academic Institution (Column Effect):

A1.1   H0: There is no significance difference in the average rating on **'Improved in Student's Academic Achievements'** of the faculties among type of selected academic institution. (Column: μ1 = μ2 = μ3 = μ4)
A1.2   H1: There is significance difference in the average rating on **'improved in student's academic achievements'** of the faculties among type of selected academic institution. (Column: At least one of the averages is different from others)

Type of Institutional Strategic Partnership (Row Effect):

A1.3   H0: There is no significance difference in the average rating on **'improved in student's academic achievements'** of the faculties among type of strategic institutional partnership. (Row: μ1 = μ2 = μ3 = μ4)
A1.4   H1: There is significance difference in the average rating on **'improved in student's academic achievements'** of the faculties among type of strategic institutional partnership. (Row: At least one of averages is different from others)

Interaction effect between Type of Institutional Strategic Partnershipand Type of Selected Academic Institution on **'Improved in Student's Academic Achievements'** (Interaction Effect):

A1.5   H0: There is no significance difference in the average rating on **'Improved in Student's Academic Achievements'** of the faculties among type of selected academic institution and   type institutional Strategic Partnership. (There is an interaction effect)
A1.6 H1: There is significance difference in average rating on **'Improved in Student's Academic Achievements'** of faculties among type of selected academic institution and type institutional Strategic Partnership. (There is no interaction effect)

Table 4.1.1 - Improved in Student's Academic Achievements

		Types of Academic Institution			
		AB	PU	TGES	Udgam
Type of Institutional Strategic Partnership	**Technology Partnership**	6	7	6	6
		5	5	5	7
		6	6	7	5
		7	7	5	6
		5	6	6	6
		7	6	5	7
		6	5	4	6
		6	6	6	5
		7	4	6	5
		6	6	5	4
	Industrial Visit & Placement Ties	6	6	5	6
		7	5	6	5
		6	7	7	4
		5	6	6	6
		4	5	7	7
		5	6	7	5
		6	4	6	6
		5	6	5	7
		6	7	6	5
		7	6	6	5
	Collaborative Work (Events, Exchange Program, Knowledge Sharing, Content Creating, Research)	6	6	5	6
		5	5	6	5
		7	7	7	6
		5	6	6	5
		6	5	6	4
		6	4	7	5
		5	6	5	5
		7	7	6	4
		6	6	7	5
		6	6	7	4
	Advocacy and Policy Initiatives (Franchising, IPR, Special Rights, Consultancy, etc)	5	6	6	6
		6	5	7	6
		6	4	6	5
		5	6	5	6
		5	5	6	7
		6	7	7	5
		4	6	5	4
		5	7	5	5
		6	6	6	4
		7	5	6	5

Table 4.1.1A Estimated Margin Means

Types of Institutional Strategic Partnership * Types of Academic Institution

Dependent Variable: Improved in Student's Academic Achievements

Types of Institutional Strategic Partnership	Types of Academic Institution	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Technology Partnership	Parul University, Vadodara	6.100	.272	5.562	6.638
	Aakash Bayu's	5.800	.272	5.262	6.338
	The Galaxy Education System (TGES), Rajkot	5.500	.272	4.962	6.038
	Udgam School, Ahmedabad	5.700	.272	5.162	6.238
Collaborative Work (Events, Exchange Program, Knowledge Sharing, Content Creating, Research)	Parul University, Vadodara	5.700	.272	5.162	6.238
	Aakash Bayu's	5.800	.272	5.262	6.338
	The Galaxy Education System (TGES), Rajkot	6.100	.272	5.562	6.638
	Udgam School, Ahmedabad	5.600	.272	5.062	6.138
Industrial Visit & Placement Ties	Parul University, Vadodara	5.900	.272	5.362	6.438
	Aakash Bayu's	5.800	.272	5.262	6.338
	The Galaxy Education System (TGES), Rajkot	6.200	.272	5.662	6.738
	Udgam School, Ahmedabad	4.900	.272	4.362	5.438
Advocacy and Policy Initiatives (Franchising, IPR, Special Rights, Consultancy, etc)	Parul University, Vadodara	5.500	.272	4.962	6.038
	Aakash Bayu's	5.700	.272	5.162	6.238
	The Galaxy Education System (TGES), Rajkot	5.900	.272	5.362	6.438
	Udgam School, Ahmedabad	5.300	.272	4.762	5.838

Table 4.1.1B – TWO – WAY ANOVA TEST

Tests of Between-Subjects Effects

Dependent Variable: Improved in Student's Academic Achievements

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Typesof InstitutionalStrategicPartnership	.969	3	.323	.436	.728
TypesofAcademicInstitution	6.819	3	2.273	3.067	.030
TypesofInstitutionalStrategicPartnership * TypesofAcademicInstitution	7.856	9	.873	1.178	.313
Error	106.700	144	.741		
Total	5355.000	160			
Corrected Total	122.344	159			
a. R Squared = .128 (Adjusted R Squared = .037)					

The provided data shows the mean values, standard errors, and 95% confidence intervals for different types of institutional strategic partnerships and their impact on improved student academic achievements. For the technology partnership category, Parul University in Vadodara had the highest mean (6.100), followed by Aakash Bayu's (5.800). This suggests that technology partnerships at Parul University had the greatest positive effect on student academic achievements. In terms of collaborative work, The Galaxy Education System in Rajkot had a mean (6.100), This indicates that collaborative work had a slightly higher impact on academic achievements at The Galaxy Education System in Rajkot. In terms of advocacy and policy initiatives, Parul University and Aakash Bayu's had the same mean value of 5.500, followed by The Galaxy Education System in Rajkot (5.900), and Udgam School in Ahmedabad (5.300). This implies that advocacy and policy initiatives had a slightly higher impact on academic achievements at The Galaxy Education System in Rajkot.

The Type III Sum of Squares is 0.969, with 3 degrees of freedom (df). The mean square is 0.323. The F-value is 0.436, which is not statistically significant (p > .05), indicating that there is no significant effect of the types of institutional strategic partnership on improved student academic achievements.

For the factor "Types of Academic Institution," the Type III Sum of Squares is 6.819, with 3 degrees of freedom (df). The mean square is 2.273. The F-value is 3.067, and the significance level is 0.030 (p < .05), suggesting that there is a statistically significant effect of the types of academic institution on improved student academic achievements.

The interaction between "Types of Institutional Strategic Partnership" and "Types of Academic Institution" is also examined. The Type III Sum of Squares is 7.856, with 9 degrees of freedom (df). The mean square is 0.873. The F-value is 1.178, which is not statistically significant (p > .05), indicating that there is no significant interaction effect between the two factors on improved student academic achievements.

In summary, the results suggest that the types of academic institution have a significant effect on improved student academic achievements, while the types of institutional strategic partnership and their interaction do not have a significant effect.

4.1.2 Increased Research Output & Publications
Problem Statement – Part A2

An analytical study is conducted to measure the effect of 'Institutional Strategic Partnership'on 'Performance of Selected Academic Institutions of Gujarat' through faculties ratings. The faculties were asked to rate the academic performance of the institution through institutional strategic partnership on ascale from 1 to 7 on various outcome on academic performance characteristics. One outcome on academic performance characteristic was the **Increased Research Output & Publications.** The following data represent faculty's response to this question. The faculties were divided in **Selected Academic Institution** and by **Type of Institutional Strategic Partnership**.

Type of Selected Academic Institution (Column Effect):

A2.1   H0: There is no significance difference in the average rating on '**Increased Research Output & Publications'** of the faculties among type of selected academic institution. (Column: $\mu1 = \mu2 = \mu3 = \mu4$)

A2.2   H1: There is significance difference in the average rating on '**Increased Research Output & Publications'** of the faculties among type of selected academic institution. (Column: At least one of the averages is different from others)

Type of Institutional Strategic Partnership (Row Effect):

A2.3   H0: There is no significance difference in the average rating on '**Increased Research Output & Publications'** of the faculties among type of strategic institutional partnership. (Row: $\mu1 = \mu2 = \mu3 = \mu4$)

A2.4   H1: There is significance difference in the average rating on '**Increased Research Output & Publications'** of faculties among type of strategic institutional partnership. (Row: At least one of averages is different from others)

Interaction effect between Type of Institutional Strategic Partnershipand Type of Selected Academic Institution on '**Increased Research Output & Publications'**(Interaction Effect):

A2.5   H0: There is no significance difference in average rating on '**Increased Research Output & Publications'** of faculties among type of selected academic institution and type institutional Strategic Partnership. (There is an interaction effect)

A2.6   H1: There is significance difference in average rating on '**Increased Research Output & Publications'** of the faculties among type of selected academic institution and type institutional Strategic Partnership. (There is no interaction effect)

Table 4.1.2 - Increased Research Output & Publications

		Types of Academic Institution		
		AB	PU	TGES	Udgam
Type of Institutional Strategic Partnership	**Technology Partnership**	6	6	7	7
		7	5	5	5
		5	6	6	6
		6	7	7	7
		6	5	6	6
		7	7	6	6
		6	6	5	5
		5	6	6	6
		5	7	4	4
		4	6	6	6
	Industrial Visit & Placement Ties	6	6	6	6
		5	7	5	5
		4	6	7	7
		6	5	6	6
		7	4	5	5
		5	5	6	6
		6	6	4	4
		7	5	6	6
		5	6	7	7
		5	7	6	6
	Collaborative Work (Events, Exchange Program, Knowledge Sharing, Content Creating, Research)	6	6	6	6
		5	5	5	5
		6	7	7	7
		5	5	6	6
		4	6	5	5
		5	6	4	4
		5	5	6	6
		4	7	7	7
		5	6	6	6
		4	6	6	6
	Advocacy and Policy Initiatives (Franchising, IPR, Special Rights, Consultancy, etc)	6	5	6	6
		6	6	5	5
		5	6	4	4
		6	5	6	6
		7	5	5	5
		5	6	7	7
		4	4	6	6
		5	5	7	7
		4	6	6	6
		5	7	5	5

Table 4.1.2A - Estimated Margin Means

Types of Institutional Strategic Partnership * Types of Academic Institution

Dependent Variable: Increased research Output & Publications

Types of Institutional Strategic Partnership	Types of Academic Institution	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Technology Partnership	Parul University, Vadodara	5.700	.283	5.140	6.260
	Aakash Bayu's	6.100	.283	5.540	6.660
	The Galaxy Education System (TGES), Rajkot	5.800	.283	5.240	6.360
	Udgam School, Ahmedabad	5.800	.283	5.240	6.360
Collaborative Work (Events, Exchange Program, Knowledge Sharing, Content Creating, Research)	Parul University, Vadodara	5.600	.283	5.040	6.160
	Aakash Bayu's	5.700	.283	5.140	6.260
	The Galaxy Education System (TGES), Rajkot	5.800	.283	5.240	6.360
	Udgam School, Ahmedabad	5.800	.283	5.240	6.360
Industrial Visit & Placement Ties	Parul University, Vadodara	4.900	.283	4.340	5.460
	Aakash Bayu's	5.900	.283	5.340	6.460
	The Galaxy Education System (TGES), Rajkot	5.800	.283	5.240	6.360
	Udgam School, Ahmedabad	5.800	.283	5.240	6.360
Advocacy and Policy Initiatives (Franchising, IPR, Special Rights, Consultancy, etc)	Parul University, Vadodara	5.300	.283	4.740	5.860
	Aakash Bayu's	5.500	.283	4.940	6.060
	The Galaxy Education System (TGES), Rajkot	5.700	.283	5.140	6.260
	Udgam School, Ahmedabad	5.700	.283	5.140	6.260

Table 4.1.2B - TWO - WAY ANOVA TEST

Tests of Between-Subjects Effects

Dependent Variable: Increased research Output & Publications

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
TypesofInstitutionalStrategicPartnership	2.169	3	.723	.900	.443
TypesofAcademicInstitution	5.019	3	1.673	2.082	.105
TypesofInstitutionalStrategicPartnership * TypesofAcademicInstitution	3.856	9	.428	.533	.848
Error	115.700	144	.803		
Total	5291.000	160			
Corrected Total	126.744	159			
a. R Squared = .087 (Adjusted R Squared = -.008)					

Aakash Bayu's has the highest mean score of 6.100, indicating a relatively higher level of increased research output and publications. It is followed closely by The Galaxy Education System (TGES), Rajkot, and Udgam School, Ahmedabad, both with a mean score of 5.800. Parul University, Vadodara, has the lowest mean score of 5.700 among the technology partnership category.However, Parul University, Vadodara, has a slightly lower mean score of 5.600.Aakash Bayu's stands out with the highest mean score of 5.900, Among the types of academic institutions engaged in advocacy and policy initiatives, Aakash Bayu's has a slightly higher mean score of 5.500 compared to the other three institutions. Overall, Aakash Bayu's appears to have relatively higher mean scores in three out of the four partnership categories, indicating a potentially stronger impact on increased research output and publications. However, it's important to consider the standard errors and confidence intervals to assess the statistical significance and precision of these findings.

Types of Institutional Strategic Partnership:The Type III sum of squares is 2.169, with 3 degrees of freedom (df). The mean square is 0.723. The F-value is 0.900, and the associated p-value is 0.443. These values indicate that the effect of types of institutional strategic partnership on increased research output and publications is not statistically significant at the conventional significance level of 0.05.

Types of Academic Institution: The Type III sum of squares is 5.019, with 3 degrees of freedom (df). The mean square is 1.673. The F-value is 2.082, and the associated p-value is 0.105. These values suggest that the effect of types of academic institution on increased research output and publications is not statistically significant at the conventional significance level of 0.05. However, the p-value is relatively close to the significance threshold, indicating a marginal level of significance.

Interaction: The Type III sum of squares is 3.856, with 9 degrees of freedom (df). The mean square is 0.428. The F-value is 0.533, and the associated p-value is 0.848. These results indicate that the interaction effect between types of institutional strategic partnership and types of academic institution is not statistically significant. In summary, the analysis suggests that neither the types of institutional strategic partnership nor the types of academic institution have a statistically significant impact on increased research output and publications.

4.1.3 Student Satisfaction Level
Problem Statement – Part A3

An analytical study is conducted to measure the effect of 'Institutional Strategic Partnership 'on 'Performance of Selected Academic Institutions of Gujarat' through faculties ratings. The faculties were asked to rate the academic performance of the institution through institutional strategic partnership on a scale from 1 to 7 on various outcome on academic performance characteristics. One outcome on academic performance characteristic was the **Student Satisfaction Level.** The following data represent faculty's response to this question. The faculties were divided in **Selected Academic Institution** and by **Type of Institutional Strategic Partnership**.

Type of Selected Academic Institution (Column Effect):

A3.1   H0: There is no significance difference in the average rating on '**Student Satisfaction Level'** of the faculties among type of selected academic institution. (Column: $\mu1 = \mu2 = \mu3 = \mu4$)

A3.2   H1: There is significance difference in the average rating on '**Student Satisfaction Level'** of the faculties among type of selected academic institution. (Column: At least one of the averages is different from others)

Type of Institutional Strategic Partnership (Row Effect):

A3.3   H0: There is no significance difference in the average rating on '**Student Satisfaction Level'** of the faculties among type of strategic institutional partnership. (Row: $\mu1 = \mu2 = \mu3 = \mu4$)

A3.4   H1: There is significance difference in the average rating on '**Student Satisfaction Level'** of the faculties among type of strategic institutional partnership. (Row: At least one of averages is different from others)

Interaction effect between Type of Institutional Strategic Partnershipand Type of Selected Academic Institution on '**Student Satisfaction Level'**(Interaction Effect):

A3.5   H0: There is no significance difference in the average rating on '**Student Satisfaction Level'** of the faculties among type of selected academic institution and type institutional Strategic Partnership. (There is an interaction effect)

A3.6   H1: There is significance difference in the average rating on '**Increased Student Satisfaction Level'** of the faculties among type of selected academic institution and type institutional Strategic Partnership. (There is no interaction effect)

Table 4.1.3 – Student Satisfaction Level

	Types of Academic Institution			
	AB	PU	TGES	Udgam
Technology Partnership	5	6	6	6
	6	5	5	7
	5	4	6	5
	4	5	7	6
	5	5	5	6
	5	4	7	7
	4	5	6	6
	5	4	6	5
	4	6	7	5
	6	6	6	4
Industrial Visit & Placement Ties	6	5	6	6
	5	6	7	5
	6	7	6	4
	7	5	5	6
	5	4	4	7
	4	5	5	5
	5	4	6	6
	4	5	5	7
	5	6	6	5
	7	5	7	5
Collaborative Work (Events, Exchange Program, Knowledge Sharing, Content Creating, Research)	5	6	6	6
	6	7	5	5
	6	5	7	6
	7	7	5	5
	6	6	6	4
	5	6	6	5
	5	5	5	5
	4	4	7	4
	6	5	6	5
	5	4	6	4
Advocacy and Policy Initiatives (Franchising, IPR, Special Rights, Consultancy, etc)	4	6	5	6
	6	6	6	6
	7	5	6	5
	5	6	5	6
	6	7	5	7
	7	5	6	5
	5	4	4	4
	5	5	5	5
	6	4	6	4
	5	5	7	5

Type of Institutional Strategic Partnership

Table 4.1.3A - Estimated Margin Means

Types of Institutional Strategic Partnership * Types of Academic Institution

Dependent Variable: Student Satisfaction Level

Types of Institutional Strategic Partnership	Types of Academic Institution	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Technology Partnership	Parul University, Vadodara	4.900	.284	4.338	5.462
	Aakash Bayu's	5.000	.284	4.438	5.562
	The Galaxy Education System (TGES), Rajkot	6.100	.284	5.538	6.662
	Udgam School, Ahmedabad	5.700	.284	5.138	6.262
Collaborative Work (Events, Exchange Program, Knowledge Sharing, Content Creating, Research)	Parul University, Vadodara	5.400	.284	4.838	5.962
	Aakash Bayu's	5.200	.284	4.638	5.762
	The Galaxy Education System (TGES), Rajkot	5.700	.284	5.138	6.262
	Udgam School, Ahmedabad	5.600	.284	5.038	6.162
Industrial Visit & Placement Ties	Parul University, Vadodara	5.500	.284	4.938	6.062
	Aakash Bayu's	5.500	.284	4.938	6.062
	The Galaxy Education System (TGES), Rajkot	5.900	.284	5.338	6.462
	Udgam School, Ahmedabad	4.900	.284	4.338	5.462
Advocacy and Policy Initiatives (Franchising, IPR, Special Rights, Consultancy, etc)	Parul University, Vadodara	5.600	.284	5.038	6.162
	Aakash Bayu's	5.300	.284	4.738	5.862
	The Galaxy Education System (TGES), Rajkot	5.500	.284	4.938	6.062
	Udgam School, Ahmedabad	5.300	.284	4.738	5.862

Table 4.1.3B -TWO - WAY ANOVA TEST

Tests of Between-Subjects Effects

Dependent Variable: Student Satisfaction Level

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Types of Institutional Strategic Partnership	.069	3	.023	.028	.994
Types of Academic Institution	7.119	3	2.373	2.938	.035
Types of Institutional Strategic Partnership * Types of Academic Institution	10.006	9	1.112	1.377	.204
Error	116.300	144	.808		
Total	4875.000	160			
Corrected Total	133.494	159			
a. R Squared = .129 (Adjusted R Squared = .038)					

The Galaxy Education System (TGES), Rajkot has the highest mean student satisfaction level (6.100) among the institutions considered, indicating a positive impact of technology partnerships and collaborative work.Aakash Bayu's and Parul University, Vadodara also have relatively high mean satisfaction levels (5.000 and 4.900, respectively) but slightly lower than TGES.Parul University, Vadodara has the highest mean student satisfaction level (5.600) when it comes to advocacy and policy initiatives, indicating their positive impact on student satisfaction.In summary, the Galaxy Education System (TGES), Rajkot consistently stands out with the highest mean student satisfaction levels across various types of institutional strategic partnerships. This suggests that TGES has been successful in implementing strategies that positively impact student satisfaction. Other institutions also demonstrate positive results in specific partnership types, highlighting the importance of effective collaboration and tailored initiatives to enhance student satisfaction.

Types of Institutional Strategic Partnership:The analysis shows that the Types of Institutional Strategic Partnership factor has a minimal effect on student satisfaction level. The Type III Sum of Squares is very low (0.069), indicating that this factor does not significantly contribute to explaining the variation in student satisfaction.

Types of Academic Institution: The Types of Academic Institution factor, on the other hand, has a significant effect on student satisfaction level. The Type III Sum of Squares is relatively high (7.119), suggesting that the type of academic institution has a notable influence on student satisfaction.

Interaction: The interaction between the two factors, Types of Institutional Strategic Partnership and Types of Academic Institution, does not show a significant effect on student satisfaction level. The Type III Sum of Squares for this interaction term is 10.006, and the p-value (Sig.) is 0.204, which is greater than the conventional significance level of 0.05. Therefore, we fail to reject the null hypothesis, indicating that the interaction does not have a statistically significant impact on student satisfaction.Overall, the factors considered in the analysis explain a relatively small portion of the variation in student satisfaction level, as indicated by the R-squared value of 0.129. This suggests that there might be other variables or factors not included in the analysis that have a more substantial influence on student satisfaction.

4.1.4 Alumni Engagement
Problem Statement – Part A4

An analytical study is conducted to measure the effect of 'Institutional Strategic Partnership'on 'Performance of Selected Academic Institutions of Gujarat' through faculties ratings. The faculties were asked to rate the academic performance of the institution through institutional strategic partnership on ascale from 1 to 7 on various outcome on academic performance characteristics. One outcome on academic performance characteristic was the **Alumni Engagement.** The following data represent faculty's response to this question. The faculties were divided in **Selected Academic Institution** and by **Type of Institutional Strategic Partnership**.

Type of Selected Academic Institution (Column Effect):

A4.1 H0: There is no significance difference in the average rating on '**Alumni Engagement'** of the faculties among type of selected academic institution. (Column: $\mu1 = \mu2 = \mu3 = \mu4$)

A4.2 H1: There is significance difference in the average rating on '**Alumni Engagement'** of the faculties among type of selected academic institution. (Column: At least one of the averages is different from others)

Type of Institutional Strategic Partnership (Row Effect):

A4.3 H0: There is no significance difference in the average rating on '**Alumni Engagement'** of the faculties among type of strategic institutional partnership. (Row: $\mu1 = \mu2 = \mu3 = \mu4$)

A4.4 H1: There is significance difference in the average rating on '**Alumni Engagement'** of the faculties among type of strategic institutional partnership. (Row: At least one of averages is different from others)

Interaction effect between Type of Institutional Strategic Partnershipand Type of Selected Academic Institution on '**Alumni Engagement'**(Interaction Effect):

A4.5 H0: There is no significance difference in the average rating on '**Alumni Engagement'** of the faculties among type of selected academic institution and type institutional Strategic Partnership. (There is an interaction effect)

A4.6 H1: There is significance difference in the average rating on '**Alumni Engagement'** of the faculties among type of selected academic institution and type institutional Strategic Partnership. (There is no interaction effect)

Table 4.1.4 - Alumni Engagement

		Types of Academic Institution			
		AB	PU	TGES	Udgam
Type of Institutional Strategic Partnership	**Technology Partnership**	7	5	5	6
		5	6	7	5
		6	7	5	6
		7	5	6	7
		6	6	6	5
		6	6	7	7
		5	7	6	6
		6	6	5	6
		4	5	5	7
		6	5	4	6
	Industrial Visit & Placement Ties	6	4	6	6
		5	6	5	7
		7	5	4	6
		6	4	6	5
		5	6	7	4
		6	7	5	5
		4	5	6	6
		6	6	7	5
		7	7	5	6
		6	5	5	7
	Collaborative Work (Events, Exchange Program, Knowledge Sharing, Content Creating, Research)	6	5	6	6
		5	6	5	5
		7	5	6	7
		6	6	5	5
		5	5	4	6
		4	4	5	6
		6	5	5	5
		7	5	4	7
		6	4	5	6
		6	5	4	6
	Advocacy and Policy Initiatives (Franchising, IPR, Special Rights, Consultancy, etc)	6	4	6	5
		5	6	6	6
		4	6	5	6
		6	5	6	5
		5	6	7	5
		7	7	5	6
		6	5	4	4
		7	4	5	5
		6	5	4	6
		5	4	5	7

Table 4.1.4A - Estimated Margin Means

Types of Institutional Strategic Partnership * Types of Academic Institution					
Dependent Variable: Alumni Engagement					
Types of Institutional Strategic Partnership	Types of Academic Institution	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Technology Partnership	Parul University, Vadodara	5.800	.282	5.242	6.358
	Aakash Bayu's	5.800	.282	5.242	6.358
	The Galaxy Education System (TGES), Rajkot	5.600	.282	5.042	6.158
	Udgam School, Ahmedabad	6.100	.282	5.542	6.658
Collaborative Work (Events, Exchange Program, Knowledge Sharing, Content Creating, Research)	Parul University, Vadodara	5.800	.282	5.242	6.358
	Aakash Bayu's	5.500	.282	4.942	6.058
	The Galaxy Education System (TGES), Rajkot	5.600	.282	5.042	6.158
	Udgam School, Ahmedabad	5.700	.282	5.142	6.258
Industrial Visit & Placement Ties	Parul University, Vadodara	5.800	.282	5.242	6.358
	Aakash Bayu's	5.000	.282	4.442	5.558
	The Galaxy Education System (TGES), Rajkot	4.900	.282	4.342	5.458
	Udgam School, Ahmedabad	5.900	.282	5.342	6.458
Advocacy and Policy Initiatives (Franchising, IPR, Special Rights, Consultancy, etc)	Parul University, Vadodara	5.700	.282	5.142	6.258
	Aakash Bayu's	5.200	.282	4.642	5.758
	The Galaxy Education System (TGES), Rajkot	5.300	.282	4.742	5.858
	Udgam School, Ahmedabad	5.500	.282	4.942	6.058

Table 4.1.4B - TWO - WAY ANOVA TEST

Tests of Between-Subjects Effects					
Dependent Variable: Alumni Engagement					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Types of Institutional Strategic Partnership	4.850	3	1.617	2.028	.113
Types of Academic Institution	7.250	3	2.417	3.031	.031
Types of Institutional Strategic Partnership * Types of Academic Institution	4.200	9	.467	.585	.808
Error	114.800	144	.797		
Total	5104.000	160			
Corrected Total	131.100	159			
a. R Squared = .124 (Adjusted R Squared = .033)					

Parul University, Vadodara, and Aakash Bayu's both have a mean Alumni Engagement score of 5.800. This suggests that these two institutions, despite having different types of partnerships, have similar levels of Alumni Engagement.Aakash Bayu's has a slightly lower mean score of 5.500, indicating that this institution, involved in collaborative work, has a slightly lower level of Alumni Engagement compared to the two with higher mean scores.Parul University, Vadodara, has a mean Alumni Engagement score of 5.800, indicating that this institution, with industrial visit and placement ties, has a similar level of Alumni Engagement. Udgam School, Ahmedabad, has the highest mean score of 5.500, suggesting that thisinstitution, involved in advocacy and policy initiatives, has the highest level of Alumni Engagement among all four.In summary, the results indicate that the type of institutional strategic partnership and type of academic institution have an impact on Alumni Engagement.

The types of institutional strategic partnership account for a Type III Sum of Squares of 4.850, indicating some variation in Alumni Engagement can be attributed to this factor. The F-value of 2.028 indicates the significance of the effect. However, the associated p-value (Sig.) of .113 suggests that the effect is not statistically significant at the usual significance threshold of .05.

The types of academic institution account for a larger Type III Sum of Squares of 7.250, suggesting a greater amount of variation in Alumni Engagement can be attributed to this factor compared to the types of institutional strategic partnership. The F-value of 3.031 is associated with a p-value (Sig.) of .031, indicating that the effect of the types of academic institution on Alumni Engagement is statistically significant at the .05 level.

The interaction between the types of institutional strategic partnership and types of academic institution results in a Type III Sum of Squares of 4.200. The F-value of .585 is associated with a p-value (Sig.) of .808, indicating that the interaction effect is not statistically significant at the .05 level.Overall, the combined effects of the types of institutional strategic partnership and types of academic institution account for approximately 12.4% of the variation in Alumni Engagement, as indicated by the R-squared value of .124.

4.1.5 Improved Employability
Problem Statement – Part A5

An analytical study is conducted to measure the effect of 'Institutional Strategic Partnership'on 'Performance of Selected Academic Institutions of Gujarat' through faculties ratings. The faculties were asked to rate the academic performance of the institution through institutional strategic partnership on ascale from 1 to 7 on various outcome on academic performance characteristics. One outcome on academic performance characteristic was the **Improved Employability.** The following data represent faculty's response to this question. The faculties were divided in **SelectedAcademic Institution**and by **Type of Institutional Strategic Partnership**.

Type of Selected Academic Institution (Column Effect):

A5.1   H0: There is no significance difference in the average rating on '**Improved Employability'** of the faculties among type of selected academic institution. (Column: $\mu1 = \mu2 = \mu3 = \mu4$)

A5.2   H1: There is significance difference in the average rating on '**Improved Employability'** of the faculties among type of selected academic institution. (Column: At least one of the averages is different from others)

Type of Institutional Strategic Partnership (Row Effect):

A5.3   H0: There is no significance difference in the average rating on '**Improved Employability'** of the faculties among type of strategic institutional partnership. (Row: $\mu1 = \mu2 = \mu3 = \mu4$)

A5.4   H1: There is significance difference in the average rating on '**Improved Employability'** of the faculties among type of strategic institutional partnership. (Row: At least one of averages is different from others)

Interaction effect between Type of Institutional Strategic Partnershipand Type of Selected Academic Institution on '**Improved Employability'**(Interaction Effect):

A5.5   H0: There is no significance difference in the average rating on '**Improved Employability'** of the faculties among type of selected academic institution and type institutional Strategic Partnership. (There is an interaction effect)

A5.6   H1: There is significance difference in the average rating on '**Improved Employability'** of the faculties among type of selected academic institution and type institutional Strategic Partnership. (There is no interaction effect)

Table 4.1.5 - Improved Employability

	Types of Academic Institution			
	AB	PU	TGES	Udgam
Technology Partnership	5	6	6	6
	6	5	5	7
	5	4	6	6
	4	5	7	5
	5	5	5	7
	5	4	7	5
	4	5	6	6
	5	4	6	6
	4	6	5	5
	6	6	4	7
Industrial Visit & Placement Ties	6	5	5	6
	5	6	4	6
	6	7	6	5
	7	5	6	6
	5	4	5	6
	4	5	6	5
	5	4	7	5
	4	5	5	6
	5	6	4	4
	7	5	5	5
Collaborative Work (Events, Exchange Program, Knowledge Sharing, Content Creating, Research)	5	6	4	6
	6	7	5	7
	6	5	6	6
	7	7	5	7
	6	6	6	5
	5	6	7	6
	5	5	5	6
	4	4	7	7
	6	5	6	6
	5	4	6	5
Advocacy and Policy Initiatives (Franchising, IPR, Special Rights, Consultancy, etc)	4	6	7	5
	6	6	6	4
	7	5	6	6
	5	6	7	4
	6	7	6	5
	7	5	5	5
	5	4	4	4
	5	5	5	5
	6	4	6	4
	5	5	5	6

Type of Institutional Strategic Partnership (row label spanning the left side of the table)

Table 4.1.5A - Estimated Margin Means

Types of Institutional Strategic Partnership * Types of Academic Institution

Dependent Variable: Improved Employability

Types of Institutional Strategic Partnership	Types of Academic Institution	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Technology Partnership	Parul University, Vadodara	4.900	.283	4.340	5.460
	Aakash Bayu's	5.000	.283	4.440	5.560
	The Galaxy Education System (TGES), Rajkot	5.700	.283	5.140	6.260
	Udgam School, Ahmedabad	6.000	.283	5.440	6.560
Collaborative Work (Events, Exchange Program, Knowledge Sharing, Content Creating, Research)	Parul University, Vadodara	5.400	.283	4.840	5.960
	Aakash Bayu's	5.200	.283	4.640	5.760
	The Galaxy Education System (TGES), Rajkot	5.300	.283	4.740	5.860
	Udgam School, Ahmedabad	5.400	.283	4.840	5.960
Industrial Visit & Placement Ties	Parul University, Vadodara	5.500	.283	4.940	6.060
	Aakash Bayu's	5.500	.283	4.940	6.060
	The Galaxy Education System (TGES), Rajkot	5.700	.283	5.140	6.260
	Udgam School, Ahmedabad	6.100	.283	5.540	6.660
Advocacy and Policy Initiatives (Franchising, IPR, Special Rights, Consultancy, etc)	Parul University, Vadodara	5.600	.283	5.040	6.160
	Aakash Bayu's	5.300	.283	4.740	5.860
	The Galaxy Education System (TGES), Rajkot	5.700	.283	5.140	6.260
	Udgam School, Ahmedabad	4.800	.283	4.240	5.360

Table 4.1.5B - TWO - WAY ANOVA TEST

Tests of Between-Subjects Effects

Dependent Variable: Improved Employability

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
TypesofInstitutionalStrategicPartnership	3.619	3	1.206	1.501	.217
TypesofAcademicInstitution	3.519	3	1.173	1.460	.228
TypesofInstitutionalStrategicPartnership * TypesofAcademicInstitution	12.656	9	1.406	1.750	.083
Error	115.700	144	.803		
Total	4877.000	160			
Corrected Total	135.494	159			
a. R Squared = .146 (Adjusted R Squared = .057)					

Udgam School, Ahmedabad consistently has the highest mean scores for Improved Employability across all types of institutional strategic partnership.Parul University, Vadodara and The Galaxy Education System (TGES), Rajkot also have relatively high mean scores.Aakash Bayu's has slightly lower mean scores compared to the other institutions.Overall, the findings suggest that Udgam School, Ahmedabad tends to have higher scores for Improved Employability across both types of institutional strategic partnership and types of academic institution. Parul University, Vadodara and The Galaxy Education System (TGES), Rajkot also show relatively favourable results. On the other hand, Aakash Bayu's and Udgam School, Ahmedabad have lower scores in some cases. It's important to consider these results in the context of the specific factors and their potential impact on employability.

Types of Institutional Strategic Partnership: The Type III Sum of Squares is 3.619, indicating the amount of variability in Improved Employability explained by this factor. The F-value of 1.501 with a p-value of .217 suggests that the effect of Types of Institutional Strategic Partnership on Improved Employability is not statistically significant. This implies that the different types of institutional strategic partnerships do not have a significant impact on Improved Employability.

The Type III Sum of Squares for Types of Academic Institution is 3.519, representing the variability in Improved Employability explained by this factor. The F-value of 1.460 with a p-value of .228 indicates that the effect of Types of Academic Institution on Improved Employability is not statistically significant. Therefore, the types of academic institutions do not have a significant influence on Improved Employability.

The Type III Sum of Squares for the interaction between Types of Institutional Strategic Partnership and Types of Academic Institution is 12.656, indicating the combined variability explained by these factors. The F-value of 1.750 with a p-value of .083 suggests that the interaction effect is not statistically significant. Hence, the interaction between Types of Institutional Strategic Partnership and Types of Academic Institution does not significantly impact Improved Employability. Overall, the analysis shows that none of the factors have a statistically significant effect on Improved Employability.

4.1.6 Enhance Academic Reputation & Prestige
Problem Statement – Part A6

An analytical study is conducted to measure the effect of 'Institutional Strategic Partnership 'on 'Performance of Selected Academic Institutions of Gujarat' through faculties ratings. The faculties were asked to rate the academic performance of the institution through institutional strategic partnership on ascale from 1 to 7 on various outcome on academic performance characteristics. One outcome on academic performance characteristic was the **Enhance Academic Reputation & Prestige.** The following data represent faculty's response to this question. The faculties were divided in **Selected Academic Institution** and by **Type of Institutional Strategic Partnership**.

Type of Selected Academic Institution (Column Effect):

A6.1   H0: There is no significance difference in the average rating on '**Enhance Academic Reputation & Prestige'** of the faculties among type of selected academic institution.   (Column: $\mu 1 = \mu 2 = \mu 3 = \mu 4$)

A6.2   H1: There is significance difference in the average rating on '**Enhance Academic Reputation & Prestige'** of the faculties among type of selected academic institution. (Column: At least one of the averages is different from others)

Type of Institutional Strategic Partnership (Row Effect):

A6.3   H0: There is no significance difference in the average rating on '**Enhance Academic Reputation & Prestige'** of the faculties among type of strategic institutional partnership. (Row: $\mu 1 = \mu 2 = \mu 3 = \mu 4$)

A6.4   H1: There is significance difference in the average rating on '**Enhance Academic Reputation & Prestige'** of faculties among type of strategic institutional partnership. (Row: At least one of averages is different from others)

Interaction effect between Type of Institutional Strategic Partnershipand Type of Selected Academic Institution on '**Enhance Academic Reputation & Prestige'**(Interaction Effect):

A6.5   H0: There is no significance difference in the average rating on '**Enhance Academic Reputation & Prestige'** of the faculties among type of selected academic institution and type institutional Strategic Partnership. (There is an interaction effect)

A6.6   H1: There is significance difference in the average rating on '**Enhance Academic Reputation & Prestige'** of the faculties among type of selected academic institution and type institutional Strategic Partnership. (There is no interaction effect)

Table 4.1.6 - Enhance Academic Reputation & Prestige

<table>
<tr><td rowspan="2"></td><td rowspan="2"></td><td colspan="4">Types of Academic Institution</td></tr>
<tr><td>AB</td><td>PU</td><td>TGES</td><td>Udgam</td></tr>
<tr><td rowspan="40">Type of Institutional Strategic Partnership</td><td rowspan="10">Technology Partnership</td><td>4</td><td>6</td><td>6</td><td>6</td></tr>
<tr><td>5</td><td>7</td><td>5</td><td>6</td></tr>
<tr><td>4</td><td>5</td><td>6</td><td>5</td></tr>
<tr><td>5</td><td>6</td><td>7</td><td>5</td></tr>
<tr><td>6</td><td>7</td><td>5</td><td>6</td></tr>
<tr><td>5</td><td>5</td><td>4</td><td>4</td></tr>
<tr><td>6</td><td>5</td><td>5</td><td>5</td></tr>
<tr><td>7</td><td>6</td><td>4</td><td>6</td></tr>
<tr><td>5</td><td>5</td><td>5</td><td>7</td></tr>
<tr><td>7</td><td>6</td><td>6</td><td>6</td></tr>
<tr><td rowspan="10">Industrial Visit & Placement Ties</td><td>6</td><td>5</td><td>5</td><td>7</td></tr>
<tr><td>6</td><td>4</td><td>6</td><td>5</td></tr>
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<tr><td>6</td><td>5</td><td>6</td><td>5</td></tr>
<tr><td rowspan="10">Collaborative Work (Events, Exchange Program, Knowledge Sharing, Content Creating, Research)</td><td>5</td><td>6</td><td>7</td><td>6</td></tr>
<tr><td>6</td><td>7</td><td>6</td><td>5</td></tr>
<tr><td>7</td><td>5</td><td>5</td><td>6</td></tr>
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<tr><td>5</td><td>6</td><td>6</td><td>4</td></tr>
<tr><td rowspan="10">Advocacy and Policy Initiatives (Franchising, IPR, Special Rights, Consultancy, etc)</td><td>6</td><td>7</td><td>5</td><td>5</td></tr>
<tr><td>6</td><td>5</td><td>7</td><td>4</td></tr>
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<tr><td>5</td><td>4</td><td>6</td><td>5</td></tr>
<tr><td>4</td><td>6</td><td>5</td><td>6</td></tr>
</table>

Table 4.1.6A - Estimated Margin Means

Types of Institutional Strategic Partnership * Types of Academic Institution					
Dependent Variable: Enhance Academic Reputation & Prestige					
Types of Institutional Strategic Partnership	Types of Academic Institution	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Technology Partnership	Parul University, Vadodara	5.400	.289	4.828	5.972
	Aakash Bayu's	5.800	.289	5.228	6.372
	The Galaxy Education System (TGES), Rajkot	5.300	.289	4.728	5.872
	Udgam School, Ahmedabad	5.600	.289	5.028	6.172
Collaborative Work (Events, Exchange Program, Knowledge Sharing, Content Creating, Research)	Parul University, Vadodara	5.900	.289	5.328	6.472
	Aakash Bayu's	4.900	.289	4.328	5.472
	The Galaxy Education System (TGES), Rajkot	6.100	.289	5.528	6.672
	Udgam School, Ahmedabad	5.600	.289	5.028	6.172
Industrial Visit & Placement Ties	Parul University, Vadodara	5.300	.289	4.728	5.872
	Aakash Bayu's	5.300	.289	4.728	5.872
	The Galaxy Education System (TGES), Rajkot	5.700	.289	5.128	6.272
	Udgam School, Ahmedabad	5.700	.289	5.128	6.272
Advocacy and Policy Initiatives (Franchising, IPR, Special Rights, Consultancy, etc)	Parul University, Vadodara	5.400	.289	4.828	5.972
	Aakash Bayu's	5.500	.289	4.928	6.072
	The Galaxy Education System (TGES), Rajkot	5.800	.289	5.228	6.372
	Udgam School, Ahmedabad	5.300	.289	4.728	5.872

Table 4.1.6B - TWO - WAY ANOVA TEST

Tests of Between-Subjects Effects					
Dependent Variable: Enhance Academic Reputation & Prestige					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
TypesofInstitutionalStrategicPartnership	.425	3	.142	.169	.917
TypesofAcademicInstitution	2.525	3	.842	1.005	.393
TypesofInstitutionalStrategicPartnership * TypesofAcademicInstitution	10.225	9	1.136	1.357	.213
Error	120.600	144	.838		
Total	5040.000	160			
Corrected Total	133.775	159			
a. R Squared = .098 (Adjusted R Squared = .005)					

Parul University, Vadodara and Aakash Bayu's show relatively higher means (5.4 and 5.8, respectively).The Galaxy Education System (TGES) and Parul University, Vadodara, show relatively higher means (6.1 and 5.9, respectively). Aakash Bayu's has a lower mean (4.9) compared to other institutions in this category. All institutions have similar means in this category (around 5.3 to 5.7).The Galaxy Education System (TGES) and Aakash Bayu's have higher means (5.8 and 5.5, respectively) compared to Parul University, Vadodara (5.4) and Udgam School, Ahmedabad (5.3).In summary, the type of institutional strategic partnership and the type of academic institution seem to have some influence on the perceived enhancement of academic reputation and prestige.

Types of Institutional Strategic Partnership: The sum of squares is 0.425, indicating the variability in the dependent variable explained by different types of strategic partnerships. The mean square is 0.142, obtained by dividing the sum of squares by the corresponding degrees of freedom. The F-value is 0.169, which assesses the significance of the effect. The significance level (Sig.) is 0.917, indicating that there is no statistically significant difference between the types of institutional strategic partnerships.

Types of Academic Institution: The sum of squares is 2.525, suggesting the variability in the dependent variable explained by different types of academic institutions. The mean square is 0.842, obtained by dividing the sum of squares by the corresponding degrees of freedom. The F-value is 1.005, indicating that there is no statistically significant difference between the types of academic institutions. The significance level (Sig.) is 0.393, further supporting the lack of significance.

Types of Institutional Strategic Partnership * Types of Academic Institution: The sum of squares is 10.225, representing the variability explained by the interaction between the two variables. The mean square is 1.136, obtained by dividing the sum of squares by the corresponding degrees of freedom. The F-value is 1.357, indicating that there is no statistically significant interaction effect. The significance level (Sig.) is 0.213, supporting the lack of significance.

4.1.7 Enhance International Learning Experience & Exposure
Problem Statement – Part – A7

An analytical study is conducted to measure the effect of 'Institutional Strategic Partnership on 'Performance of Selected Academic Institutions of Gujarat' through faculties ratings. The faculties were asked to rate the academic performance of the institution through institutional strategic partnership on ascale from 1 to 7 on various outcome on academic performance characteristics. One outcome on academic performance characteristic was the **Enhance International Learning Experience & Exposure.** The following data represent faculty's response to this question. The faculties were divided in **SelectedAcademic Institution**and by **Type of Institutional Strategic Partnership**.

Type of Selected Academic Institution (Column Effect):

A7.1   H0: There is no significance difference in the average rating on '**Enhance International Learning Experience & Exposure'** of the faculties among type of selected academic institution. (Column: $\mu1 = \mu2 = \mu3 = \mu4$)

A7.2   H1: There is significance difference in average rating on '**Enhance International Learning Experience Exposure'** of faculties among type of selected academic institution. (Column At least one of averages is different from other)

Type of Institutional Strategic Partnership (Row Effect):

A7.3   H0: There is no significance difference in the average rating on '**Enhance International Learning Experience & Exposure'** of the faculties among type of strategic institutional partnership. (Row: $\mu1 = \mu2 = \mu3 = \mu4$)

A7.4   H1: There is significance difference in the average rating on '**Enhance International Learning Experience & Exposure'** of the faculties among type of strategic institutional partnership. (Row: At least one of averages is different from others)

Interaction effect between Type of Institutional Strategic Partnershipand Type of Selected Academic Institution on '**Enhance International Learning Experience & Exposure'**. (Interaction Effect):

A7.5   H0: There is no significance difference in the average rating on '**Enhance International Learning Experience & Exposure'** of the faculties among type of selected academic institution and type institutional Strategic Partnership. (There is an interaction effect)

A7.6   H0: There is significance difference in average rating on '**Enhance International Learning Experience & Exposure'** of faculties among type of selected academic institution and type institutional Strategic Partnership. (There is no interaction effect)

Table 4.1.7 - Enhance International Learning Experience & Exposure

	Types of Academic Institution			
	AB	PU	TGES	Udgam
Technology Partnership	4	6	7	5
	6	6	6	4
	6	5	6	6
	5	6	7	5
	6	7	6	4
	7	5	5	6
	5	4	4	7
	4	5	5	5
	5	4	6	6
	4	5	5	7
Industrial Visit & Placement Ties	5	6	6	5
	7	5	7	5
	5	6	6	6
	6	7	5	5
	6	5	7	6
	7	7	5	5
	6	6	6	4
	5	6	6	5
	5	5	5	5
	4	4	7	4
Collaborative Work (Events, Exchange Program, Knowledge Sharing, Content Creating, Research)	6	5	6	4
	5	4	6	5
	4	6	5	6
	6	6	6	5
	7	5	6	6
	5	6	5	7
	6	7	5	5
	7	5	6	7
	5	4	4	6
	5	5	5	6
Advocacy and Policy Initiatives (Franchising, IPR, Special Rights, Consultancy, etc)	6	4	6	5
	5	5	7	4
	6	6	6	5
	5	5	7	4
	4	6	5	6
	5	7	6	6
	5	5	6	5
	4	7	7	6
	5	6	6	7
	4	6	5	7

*(Left vertical label: **Type of Institutional Strategic Partnership**)*

Table 4.1.7A - Estimated Margin Means

Types of Institutional Strategic Partnership * Types of Academic Institution					
Dependent Variable: Enhance International Learning Experience & Exposure					
Types of Institutional Strategic Partnership	Types of Academic Institution	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Technology Partnership	Parul University, Vadodara	5.200	.289	4.629	5.771
	Aakash Bayu's	5.300	.289	4.729	5.871
	The Galaxy Education System (TGES), Rajkot	5.700	.289	5.129	6.271
	Udgam School, Ahmedabad	5.500	.289	4.929	6.071
Collaborative Work (Events, Exchange Program, Knowledge Sharing, Content Creating, Research)	Parul University, Vadodara	5.600	.289	5.029	6.171
	Aakash Bayu's	5.700	.289	5.129	6.271
	The Galaxy Education System (TGES), Rajkot	6.000	.289	5.429	6.571
	Udgam School, Ahmedabad	5.000	.289	4.429	5.571
Industrial Visit & Placement Ties	Parul University, Vadodara	5.600	.289	5.029	6.171
	Aakash Bayu's	5.300	.289	4.729	5.871
	The Galaxy Education System (TGES), Rajkot	5.400	.289	4.829	5.971
	Udgam School, Ahmedabad	5.700	.289	5.129	6.271
Advocacy and Policy Initiatives (Franchising, IPR, Special Rights, Consultancy, etc)	Parul University, Vadodara	4.900	.289	4.329	5.471
	Aakash Bayu's	5.700	.289	5.129	6.271
	The Galaxy Education System (TGES), Rajkot	6.100	.289	5.529	6.671
	Udgam School, Ahmedabad	5.500	.289	4.929	6.071

Table 4.1.7B - TWO - WAY ANOVA TEST

Tests of Between-Subjects Effects					
Dependent Variable: Enhance International Learning Experience & Exposure					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
TypesofInstitutionalStrategicPartnership	.525	3	.175	.210	.890
TypesofAcademicInstitution	5.025	3	1.675	2.007	.116
TypesofInstitutionalStrategicPartnership * TypesofAcademicInstitution	10.225	9	1.136	1.361	.211
Error	120.200	144	.835		
Total	4998.000	160			
Corrected Total	135.975	159			
a. R Squared = .116 (Adjusted R Squared = .024)					

Parul University, Vadodara has a mean rating of 5.200 with a standard error of 0.289.Aakash Bayu's has a mean rating of 5.300 with a standard error of 0.289. The Galaxy Education System (TGES), Rajkot has a mean rating of 5.700 with a standard error of 0.289. Udgam School, Ahmedabad has a mean rating of 5.500 with a standard error of 0.289. Collaborative Work, The means, standard errors, and confidence intervals follow a similar pattern as the technology partnership. These results provide insights into the average ratings and the precision of the estimates for different combinations of institutional strategic partnerships and academic institutions regarding enhancing international learning experience and exposure. The confidence intervals help gauge the range within which true population means are likely to fall.

Types of Institutional Strategic Partnership:The Type III Sum of Squares is 0.525 with 3 degrees of freedom (df), resulting in a mean square of 0.175.The F-value is 0.210, indicating a non-significant result.The p-value (Sig.) is 0.890, which is above the typical significance level of 0.05, suggesting that the effect of different types of institutional strategic partnerships on international learning experience and exposure is not statistically significant.

Types of Academic Institution:The Type III Sum of Squares is 5.025 with 3 degrees of freedom (df), resulting in a mean square of 1.675.The F-value is 2.007, suggesting a potential significant effect.The p-value (Sig.) is 0.116, which is slightly above the typical significance level of 0.05. While it does not reach statistical significance, there may be some indication of a relationship between types of academic institutions and international learning experience and exposure.

Interaction Effect: The Type III Sum of Squares is 10.225 with 9 degrees of freedom (df), resulting in a mean square of 1.136.The F-value is 1.361, indicating a non-significant result. The p-value (Sig.) is 0.211, which is above the typical significance level of 0.05. This suggests that the interaction effect between types of institutional strategic partnerships and types of academic institutions is not statistically significant in relation to enhancing international learning experience and exposure.Overall, the model's R-squared value is 0.116, indicating that approximately 11.6% of the variance in enhancing international learning experience and exposure can be explained by the independent variables included in the analysis.

Summary of Two Way Anova Test

Definition / Objective:

The objective of using the Two-Way ANOVA test is to determine whether there are significant differences in the means of a dependent variable* across two categorical independent variables** considering both the main effects of each independent variable and their interaction effect.

*Dependent Variable:

1.   Improved in Student's Academic Achievements

2.   Increased Research Output & Publications

3.   Student Satisfaction Level

4.   Alumni Engagement

5.   Improved Employability

6.   Enhance Academic Reputation & Prestige

7.   Enhance International Learning Experience & Exposure

**Two Categorical Independent Variables:

1.   Types of Academic Institutions &

2.   Types of Institutional Strategic Partnership

Interpretation:

The hypothesis tests conducted using the Two-Way ANOVA indicate that there are statistically significant effects in the row factors of "Improved in Student's Academic Achievements," "Student Satisfaction Level," and "Alumni Engagement." However, no statistical significance was observed in the column effects or interaction effects for any of the variables examined, including "Increased Research Output & Publications," "Improved Employability," "Enhance Academic Reputation & Prestige," and "Enhance International Learning Experience & Exposure." These findings suggest that the type of academic institution and type of institutional strategic partnership have a significant impact on student academic achievements, student satisfaction, and alumni engagement. However, further investigation is needed

to understand the specific factors influencing these effects and to evaluate the overall significance of the institutional strategic partnerships on the mentioned variables.

4.1	Dependent Variable & Two Way Anova Test	P - Value (Sig.)	Result (Effect)	Outcome
4.1.1	*Improved in Student's Academic Achievements*			
H1	Column Effect	0.728	Not Significance	Favourable
H2	Row Effect	0.030	Significance	Same means
H3	Interaction Effect	0.313	Not Significance	Favourable
4.1.2	*Increased Research Output & Publications*			
H4	Column Effect	0.443	Not Significance	Favourable
H5	Row Effect	0.105	Not Significance	Favourable
H6	Interaction Effect	0.848	Not Significance	Favourable
4.1.3	*Student Satisfaction Level*			
H7	Column Effect	0.994	Not Significance	Favourable
H8	Row Effect	0.035	Significance	Same means
H9	Interaction Effect	0.204	Not Significance	Favourable
4.1.4	*Alumni Engagement*			
H10	Column Effect	0.113	Not Significance	Favourable
H11	Row Effect	0.031	Significance	Same means
H12	Interaction Effect	0.808	Not Significance	Favourable
4.1.5	*Improved Employability*			
H13	Column Effect	0.217	Not Significance	Favourable
H14	Row Effect	0.228	Not Significance	Favourable
H15	Interaction Effect	0.083	Not Significance	Favourable
4.1.6	*Enhance Academic Reputation & Prestige*			
H16	Column Effect	0.917	Not Significance	Favourable
H17	Row Effect	0.393	Not Significance	Favourable
H18	Interaction Effect	0.213	Not Significance	Favourable
4.1.7	**International Learning Experience & Exposure**			
H19	Column Effect	0.890	Not Significance	Favourable
H20	Row Effect	0.116	Not Significance	Favourable
H21	Interaction Effect	0.211	Not Significance	Favourable

(Table 4.1 – Summary Result of Two Way Anova: Prepared by Researcher)

4.2   T - Paired Test among all selected academic institutions
Problem Statement – Part B

The emergence of Institutional Strategic Partnerships has become a noteworthy trend in academic institutions. To evaluate the Overall Academic Performance of these partnerships, a study has been carried out to examine the differences in opinions before and after the implementation of such collaborations in selected academic institutions of Gujarat region namely **Aakash Byju's, Parul University, Udgam School, Ahmadabad, The Galaxy Education System (TGES), Rajkot**. The faculties & students were surveyed to gather their opinions on the impact of the institutional strategic partnership on academic performance. The following analysis presents the faculty's perspectives on overall academic performance of the institution after the implementation of the partnership.

B1   H0: There is no significant difference in overall impact of Institutional Strategically Partnership on Academic Performance of **Aakash Byju's**.

B2   H1: There is significant improvement in overall impact of Institutional Strategically Partnership on Academic Performance of **Aakash Byju's**.

B3   H0: There is no significant difference in overall impact of Institutional Strategically Partnership on Academic Performance of **Parul University**.

B4   H1: There is significant improvement in overall impact of Institutional Strategically Partnership on Academic Performance of **Parul University**.

B5   H0: There is no significant difference in overall impact of Institutional Strategically Partnership on Academic Performance of **Udgam School, Ahmadabad**.

B6   H1: There is significant improvement in overall impact of Institutional Strategically Partnership on Academic Performance of **Udgam School, Ahmadabad**.

B7   Ho: There is no significant difference in overall impact of Institutional Strategically Partnership on Academic Performance of **The Galaxy Education System (TGES), Rajkot**.

B8   H1: There is significant improvement in overall impact of Institutional Strategically Partnership on Academic Performance of **The Galaxy Education System (TGES), Rajkot**.

Table 4.2A - Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error	Correlation
Pair 1	Aakash Bayu's - (After)	6.03	165	.752	.059	-.095
	Aakash Bayu's - (Before)	5.34	165	.658	.051	
Pair 2	Parul University - (After)	5.84	158	.691	.055	-.075
	Parul University - (Before)	5.27	158	.635	.051	
Pair 3	(TGES), Rajkot - (After)	6.08	154	.642	.052	-.024
	(TGES), Rajkot - (Before)	5.14	154	.718	.058	
Pair 4	Udgam School - (After)	6.07	161	.685	.054	.351
	Udgam School - (Before)	5.42	161	.597	.047	

Paired Samples Statistics, the mean score for Aakash Bayu's after the intervention (6.03) is higher than the mean score before the intervention (5.34). The standard deviation and standard error values suggest some variability in the data. The mean score for Parul University after the intervention (5.84) is higher than the mean score before the intervention (5.27). Similar to Pair 1, there is some variability in the data as indicated by the standard deviation and standard error values. The mean score for (TGES), Rajkot after the intervention (6.08) is higher than the mean score before the intervention (5.14). The standard deviation and standard error values indicate moderate variability in the data. The correlation coefficient of indicates a weak negative correlation between the before and after measurements.

The mean score for Udgam School after the intervention (6.07) is higher than the mean score before the intervention (5.42). The standard deviation and standard error values indicate some variability in the data. Interestingly, the correlation coefficient of 0.351 suggests a moderate positive correlation between the before and after measurements. Overall, the data suggests that the intervention or treatment had a positive effect on the measurements for Aakash Bayu's, Parul University, (TGES), Rajkot, and Udgam School, as the mean scores increased after the intervention in each pair.

Table 4.2B - Paired Samples Test

		Paired Differences					Sig.
		Mean	Std. Deviation	Std. Error Mean	T	df	
Pair 1	Aakash Bayu's - (After) & (Before)	.691	1.045	.081	8.489	164	.000
Pair 2	Parul University - (After) & (Before)	.570	.973	.077	7.356	157	.000
Pair 3	(TGES), Rajkot (After) & (Before)	.935	.975	.079	11.905	153	.000
Pair 4	Udgam School, (After) & (Before)	.658	.734	.058	11.381	160	.000

The mean paired difference is 0.691, indicating that, on average, the scores increased after the intervention. The t-value of 8.489 with 164 degrees of freedom indicates that the difference is statistically significant ($p < 0.001$), implying that the intervention had a significant effect on the scores at Aakash Bayu's. The mean paired difference is 0.570, indicating that, on average, the scores increased after the intervention. The t-value of 7.356 with 157 degrees of freedom indicates that the difference is statistically significant ($p < 0.001$), implying that the intervention had a significant effect on the scores at Parul University.

The mean paired difference is 0.935, indicating that, on average, the scores increased after the intervention. The t-value of 11.905 with 153 degrees of freedom indicates that the difference is statistically significant ($p < 0.001$), implying that the intervention had a significant effect on the scores at (TGES), Rajkot. The mean paired difference is 0.658, indicating that, on average, the scores increased after the intervention. The t-value of 11.381 with 160 degrees of freedom indicates that the difference is statistically significant ($p < 0.001$), implying that the intervention had a significant effect on the scores at Udgam School.

In summary, the analysis of the paired differences supports the conclusion that the intervention had a statistically significant positive effect on the scores at Aakash Bayu's, Parul University, (TGES), Rajkot, and Udgam School. The increases in scores were consistent across all pairs, indicating the effectiveness of the intervention in these educational institutions.

Summary of T Paired Test

Definition / Objective:

The objective of using the T-Paired test is to determine whether there are significant differences between two related samples (Academic Institutions)* by comparing the means of the paired observations. It assesses whether there is a statistically significant change or effect before and after an intervention or treatment (Institutional Strategic Partnership).

***Academic Institutions:**
1. Aakash Byju's
2. Parul University
3. Udgam School, Ahmadabad
4. The Galaxy Education System (TGES), Rajkot

4.2	Before and After Institutional Strategic Partnership - T Paired Test	P - Value (Sig.)	Result (Effect)	Outcome
4.2.1	Aakash Byju's	0.000	Significance	Highly Positive
4.2.2	Parul University	0.000	Significance	Highly Positive
4.2.3	Udgam School, Ahmadabad	0.000	Significance	Highly Positive
4.2.4	The Galaxy Education System	0.000	Significance	Highly Positive

(Table 4.2 – Summary Result of Paired T test: Prepared by Researcher)

Interpretation:

The results of the T-Paired test for the "Before and After Institutional Strategic Partnership" hypothesis indicate that there is a statistically significant difference in all four cases: Aakash Byju's, Parul University, Udgam School (Ahmadabad), and The Galaxy Education System (TGES) in Rajkot. The p-values for all these cases are 0.000, indicating a highly significant difference between the before and after periods of the institutional strategic partnerships. This suggests that the partnerships have had a substantial impact on the mentioned institutions, leading to significant changes or improvements.

4.3   Chi Square Independence Test
4.3.1   Institution Strategic Partnership & Measures of 'Performance of Academic Institution'
Problem Statement – Part C1

A total of 638 students and faculty members from various selected institutions were surveyed in order to investigate the potential independence between the **Type of Institution Strategic Partnership** and the **Types of Measures of 'Performance of Academic Institution'**. To assess the relationship between these variables, a chi-square test of independence was conducted. Its purpose was to determine whether there exists a significant association between the two variables or if they are independent of each other.

C.1.1   H0: **Type of Institution Strategic Partnership** is independent of **Types of Measures of 'Performance of Academic Institution'.**

C1.2   H1: **Type of Institution Strategic Partnership** is not independent of **Types of Measures of 'Performance of Academic Institution'.**

Interpretation:

The cross-tabulation table presents the distribution of responses for the interaction between the "Type of Institutional Strategic Partnership" and the "Types of Measures of Performance of Academic Institution." The table shows the observed counts and expected counts for each combination of the two variables.

Chi-Square Tests:The Pearson Chi-Square value is 238.102 with 18 degrees of freedom (df).The p-value (Asymptotic Significance) is 0.000, indicating a statistically significant association between the "Type of Institutional Strategic Partnership" and the "Types of Measures of Performance of Academic Institution."

Pearson's R:Pearson's R is a measure of the strength and direction of the association between the two variables.In this case, Pearson's R is 0.199, suggesting a weak positive correlation.

In summary, the analysis indicates that there is a statistically significant association between the type of institutional strategic partnership and the types of measures of performance of academic institutions. The chi-square test demonstrates that the observed distribution of responses is unlikely to occur by chance alone.

C1 - Cross Tabulation

Type of Institution Strategic Partnership * Types of Measures of 'Performance of Academic Institution' Cross tabulation

		Types of Measures of 'Performance of Academic Institution'							Total
		Improved in Student's Academic Achievements	Increased Research Output & Publications	Student Satisfaction Level	Alumni Engagement	Improved Employability	Enhance Academic Reputation & Prestige	Enhance International Learning Experience & Exposure	
Type of Institution Strategic Partnership	Technology Partnership — Count	52	30	32	11	0	87	44	256
	Expected Count	29.3	20.5	37.3	12.8	12.8	90.7	52.6	256.0
	Collaborative Work — Count	10	10	50	21	32	85	33	241
	Expected Count	27.6	19.3	35.1	12.1	12.1	85.4	49.5	241.0
	Industrial Visit & Placement Ties — Count	11	0	0	0	0	10	44	65
	Expected Count	7.4	5.2	9.5	3.3	3.3	23.0	13.3	65.0
	Advocacy and Policy Initiatives — Count	0	11	11	0	0	44	10	76
	Expected Count	8.7	6.1	11.1	3.8	3.8	26.9	15.6	76.0
Total	Count	73	51	93	32	32	226	131	638
	Expected Count	73.0	51.0	93.0	32.0	32.0	226.0	131.0	638.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	238.102a	18	.000
Pearson's R	.199		

4.3.2   Selected Academic Institution & Measures of 'Performance of Academic Institution'

Problem Statement – Part C2

A total of 638 students and faculty members from various selected institutions were surveyed in order to investigate the potential independence between the **Types of Selected Academic Institution** and the **Types of Measures of 'Performance of Academic Institution'**. To assess the relationship between these variables, a chi-square test of independence was conducted. Its purpose was to determine whether there exists a significant association between the two variables or if they are independent of each other.

C2.1   H0: **Types of Selected Academic Institution** is independent of **Types of Measures of 'Performance of Academic Institution'.**

C2.2   H1: **Types of Selected Academic Institution** is not independent of **Types of Measures of 'Performance of Academic Institution'.**

Interpretation:

Parul University, Vadodara had the highest counts in several measures. The observed counts for most measures are close to the expected counts. Aakash Bayu's had relatively balanced counts across the measures. The Galaxy Education System (TGES), Rajkot had relatively balanced counts across the measures. Udgam School, Ahmedabad had the highest counts in "Enhance Academic Reputation & Prestige" (75) and "Improved Employability" (22).

The chi-square test results indicate that there is a significant association between the types of selected academic institutions and the types of measures of 'Performance of Academic Institution' ($p < 0.001$). This suggests that the distribution of responses across the measures is not independent of the selected academic institutions.

The cross-tabulation analysis reveals differences in the distribution of responses across different types of academic institutions and measures of performance. The chi-square test confirms that there is a significant association between these variables. These findings indicate that the types of academic institutions are associated with different measures of performance, suggesting the importance of considering institutional characteristics when assessing and evaluating performance.

C2 - Cross Tabulation

Types of Selected Academic Institution * Types of Measures of 'Performance of Academic Institution' Cross tabulation

		Types of Measures of 'Performance of Academic Institution'							Total
		Improved in Student's Academic Achievements	Increased Research Output & Publications	Student Satisfaction Level	Alumni Engagement	Improved Employability	Enhance Academic Reputation & Prestige	Enhance International Learning Experience & Exposure	
Types of Selected Academic Institution	Parul University, Vadodara	Count	31	20	30	11	0	33	33	158
		Expected Count	18.1	12.6	23.0	7.9	7.9	56.0	32.4	158.0
	Aakash Bayu's	Count	11	11	33	0	0	66	44	165
		Expected Count	18.9	13.2	24.1	8.3	8.3	58.4	33.9	165.0
	The Galaxy Education System (TGES), Rajkot	Count	11	20	30	10	10	52	21	154
		Expected Count	17.6	12.3	22.4	7.7	7.7	54.6	31.6	154.0
	Udgam School, Ahmedabad	Count	20	0	0	11	22	75	33	161
		Expected Count	18.4	12.9	23.5	8.1	8.1	57.0	33.1	161.0
Total		Count	73	51	93	32	32	226	131	638
		Expected Count	73.0	51.0	93.0	32.0	32.0	226.0	131.0	638.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	143.796[a]	18	.000
Pearson's R	.178		

4.3.3 Selected Academic Institution &Institution Strategic Partnership Problem Statement – Part C3

A total of 638 students and faculty members from various selected institutions were surveyed in order to investigate the potential independence between the **Types of Selected Academic Institution** and the **Type of Institution Strategic Partnership**. To assess the relationship between these variables, a chi-square test of independence was conducted. Its purpose was to determine whether there exists a significant association between the two variables or if they are independent of each other.

C3.1 H0: **Types of Selected Academic Institution** is independent of **Type of Institution Strategic Partnership.**

C3.2 H1: **Types of Selected Academic Institution** is not independent of **Type of Institution Strategic Partnership.**

Interpretation:

The Galaxy Education System (TGES), Rajkot had the highest counts in "Technology Partnership" (84) and "Collaborative Work" (50). Udgam School, Ahmedabad had the highest count in "Collaborative Work" (85), followed by "Technology Partnership" (54). Parul University, Vadodara had the highest count in "Collaborative Work" (51). Aakash Bayu's had the highest count in "Technology Partnership" (77). The observed counts for most partnership types are relatively close to the expected counts.

The chi-square test results indicate that there is a significant association between the types of selected academic institutions and the type of institution strategic partnership ($p < 0.001$). This suggests that the distribution of responses across the partnership types is not independent of the selected academic institutions. However, the strength of association, as measured by Pearson's R, is relatively weak (-0.191).

The cross-tabulation analysis reveals differences in the distribution of responses across different types of academic institutions and types of institution strategic partnerships. The chi-square test confirms that there is a significant association between these variables. These findings indicate that the types of academic institutions are associated with different types of strategic partnerships, suggesting the importance of considering institutional characteristics when establishing and forming strategic partnerships.

C3 - Cross Tabulation

Types of Selected Academic Institution * Type of Institution Strategic Partnership Cross tabulation

		Type of Institution Strategic Partnership				Total
		Technology Partnership	Collaborative Work (Events, Exchange Program, Knowledge Sharing, Content Creating, Research)	Industrial Visit & Placement Ties	Advocacy and Policy Initiatives (Franchising, IPR, Special Rights, Consultancy, etc)	
Types of Selected Academic Institution	Parul University, Vadodara	Count	41	51	33	33	158
		Expected Count	63.4	59.7	16.1	18.8	158.0
	Aakash Bayu's	Count	77	55	11	22	165
		Expected Count	66.2	62.3	16.8	19.7	165.0
	The Galaxy Education System (TGES), Rajkot	Count	84	50	10	10	154
		Expected Count	61.8	58.2	15.7	18.3	154.0
	Udgam School, Ahmedabad	Count	54	85	11	11	161
		Expected Count	64.6	60.8	16.4	19.2	161.0
Total		Count	256	241	65	76	638
		Expected Count	256.0	241.0	65.0	76.0	638.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	74.127[a]	9	.000
Pearson's R	-.191		

4.3.4   Selected Academic Institution & Primary Purpose
Problem Statement –Par C4

A total of 638 students and faculty members from various selected institutions were surveyed in order to investigate the potential independence between the **Types of Selected Academic Institution** and the **Type of Primary Purpose**. To assess the relationship between these variables, a chi-square test of independence was conducted. Its purpose was to determine whether there exists a significant association between the two variables or if they are independent of each other.

C4.1   H0: **Types of Selected Academic Institution** is independent of **Type of Primary Purpose.**

C4.2   H1: **Types of Selected Academic Institution** is not independent of **Type of Primary Purpose.**

Interpretation:

Udgam School, Ahmedabad and Parul University, Vadodara had relatively balanced counts across the primary purposes. Aakash Bayu's had the highest counts in "Collaborative Work" (55) and it had no counts in "Collaborations Curriculum Development - Resource Sharing." The Galaxy Education System (TGES), Rajkot had the highest counts in "Collaborations Curriculum Development - Resource Sharing" (41).

The chi-square test results indicate that there is a significant association between the types of selected academic institutions and the type of primary purpose ($p < 0.001$). This suggests that the distribution of responses across the primary purposes is not independent of the selected academic institutions.

In summary, the cross-tabulation analysis reveals differences in the distribution of responses across different types of academic institutions and types of primary purposes. The chi-square test confirms that there is a significant association between these variables. These findings indicate that the types of academic institutions are associated with different primary purposes, suggesting the importance of aligning institutional goals and strategies with the intended purposes of collaborations and initiatives.

C4 - Cross Tabulation

Types of Selected Academic Institution * Type of Primary Purpose Cross tabulation

			Type of Primary Purpose						Total
			Collaborations Curriculum Development - Resource Sharing	Student - Faculty Exchange & Mentoring Development Programs	Collaborative Work (Research, Events, Programs, Venture)	Improving Educational Offerings & Expansion of Market Reach	Increasing Funding for Academic Programs	Improving Academic Performance	
Types of Selected Academic Institution	Parul University, Vadodara	Count	32	42	32	21	21	10	158
		Expected Count	23.3	33.9	37.1	37.1	18.6	7.9	158.0
	Aakash Bayu's	Count	0	11	55	66	22	11	165
		Expected Count	24.3	35.4	38.8	38.8	19.4	8.3	165.0
	The Galaxy Education System (TGES), Rajkot	Count	41	40	21	41	11	0	154
		Expected Count	22.7	33.1	36.2	36.2	18.1	7.7	154.0
	Udgam School, Ahmedabad	Count	21	44	42	22	21	11	161
		Expected Count	23.7	34.6	37.9	37.9	18.9	8.1	161.0
Total		Count	94	137	150	150	75	32	638
		Expected Count	94.0	137.0	150.0	150.0	75.0	32.0	638.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	127.060[a]	15	.000
Pearson's R	-.060		

4.3.5   Institution Strategic Partnership &Primary Purpose

Problem Statement – Part C5

A total of 638 students and faculty members from various selected institutions were surveyed in order to investigate the potential independence between the **Type of Institution Strategic Partnership** and the **Type of Primary Purpose**. To assess the relationship between these variables, a chi-square test of independence was conducted. Its purpose was to determine whether there exists a significant association between the two variables or if they are independent of each other.

C5.1   H0: **Type of Institution Strategic Partnership** is independent of **Type of Primary Purpose.**

C5.2   H1: **Type of Institution Strategic Partnership** is not independent of **Type of Primary Purpose.**

Interpretation:

Technology Partnership had the highest counts in "Improving Educational Offerings & Expansion of Market Reach" (97) and "Collaborative Work" (52). Collaborative Work had significant counts in "Collaborations Curriculum Development - Resource Sharing" (40). Industrial Visit & Placement Ties had the highest counts in "Collaborative Work" (22). Advocacy and Policy Initiatives significant counts in "Collaborations Curriculum Development - Resource Sharing" are (33).

The chi-square test results indicate that there is a significant association between the type of institution strategic partnership and the type of primary purpose ($p < 0.001$). This suggests that the distribution of responses across the primary purposes is not independent of the type of institution strategic partnership.

The cross-tabulation analysis reveals differences in the distribution of responses across different types of institution strategic partnerships and types of primary purposes. The chi-square test confirms a significant association between these variables, indicating that the type of institution strategic partnership is associated with different primary purposes. These findings emphasize the importance of aligning strategic partnerships with the intended primary purposes and objectives to maximize their effectiveness and impact.

C5 - Cross Tabulation

Type of Institution Strategic Partnership * Type of Primary Purpose Cross tabulation

		Collaborations Curriculum Development - Resource Sharing	Student - Faculty Exchange & Mentoring Development Programs	Collaborative Work (Research, Events, Programs, Venture)	Improving Educational Offerings & Expansion of Market Reach	Increasing Funding for Academic Programs	Improving Academic Performance	Total
Type of Institution Strategic Partnership	Technology Partnership							
	Count	21	31	52	97	44	11	256
	Expected Count	37.7	55.0	60.2	60.2	30.1	12.8	256.0
	Collaborative Work							
	Count	40	52	76	32	20	21	241
	Expected Count	35.5	51.8	56.7	56.7	28.3	12.1	241.0
	Industrial Visit & Placement Ties							
	Count	22	21	22	0	0	0	65
	Expected Count	9.6	14.0	15.3	15.3	7.6	3.3	65.0
	Advocacy and Policy Initiatives (Franchising, IPR, Special Rights, Consultancy, etc)							
	Count	11	33	0	21	11	0	76
	Expected Count	11.2	16.3	17.9	17.9	8.9	3.8	76.0
Total	Count	94	137	150	150	75	32	638
	Expected Count	94.0	137.0	150.0	150.0	75.0	32.0	638.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	163.670a	15	.000
Pearson's R	-.261		

4.3.6   Measures of 'Performance of Academic Institution' & Primary Purpose Problem Statement – Part C6

A total of 638 students and faculty members from various selected institutions were surveyed in order to investigate the potential independence between the **Types of Measures of 'Performance of Academic Institution** and the **Type of Primary Purpose**. To assess the relationship between these variables, a chi-square test of independence was conducted. Its purpose was to determine whether there exists a significant association between the two variables or if they are independent of each other.

C6.1   H0: **Types of Measures of 'Performance of Academic Institution'** is independent of **Type of Primary Purpose.**

C6.2   H1: **Types of Measures of 'Performance of Academic Institution'** is not independent of **Type of Primary Purpose.**

Interpretation:

Student Satisfaction Level and Student's Academic Achievements had significant counts in "Collaborations Curriculum Development. Academic Reputation & Prestige had significant counts in "Collaborations Curriculum Development - Resource Sharing" (43) and "Collaborative Work (Research, Events, Programs, Venture)" (44).

The chi-square test results indicate that there is a significant association between the types of measures of the performance of an academic institution and the types of primary purposes ($p < 0.001$). This suggests that the distribution of responses across the primary purposes is not independent of the types of measures of academic institution performance.

The cross-tabulation analysis reveals differences in the distribution of responses across different types of measures. The chi-square test confirms a significant association between these variables, indicating that the type of measure of academic institution performance is associated with different primary purposes. These findings highlight the importance of considering specific performance measures aligned with the intended primary purposes to accurately evaluate and enhance the performance of academic institutions.

C6 - Cross Tabulation

Types of Measures of 'Performance of Academic Institution' * Type of Primary Purpose Cross tabulation

		Collaborations Curriculum Development - Resource Sharing	Student-Faculty Exchange & Mentoring Development Programs	Collaborative Work (Research, Events, Programs, Venture)	Improving Educational Offerings & Expansion of Market Reach	Increasing Funding for Academic Programs	Improving Academic Performance	Total
Student's Academic Achievements	Count	10	10	42	0	11	0	73
	Expected Count	10.8	15.7	17.2	17.2	8.6	3.7	73.0
Research Output & Publications	Count	0	21	20	0	0	10	51
	Expected Count	7.5	11.0	12.0	12.0	6.0	2.6	51.0
Student Satisfaction Level	Count	10	20	0	31	21	11	93
	Expected Count	13.7	20.0	21.9	21.9	10.9	4.7	93.0
Alumni Engagement	Count	0	10	11	11	0	0	32
	Expected Count	4.7	6.9	7.5	7.5	3.8	1.6	32.0
Improved Employability	Count	10	22	0	0	0	0	32
	Expected Count	4.7	6.9	7.5	7.5	3.8	1.6	32.0
Academic Reputation & Prestige	Count	31	43	44	76	32	0	226
	Expected Count	33.3	48.5	53.1	53.1	26.6	11.3	226.0
Inter. Experience & Exposure	Count	33	11	33	32	11	11	131
	Expected Count	19.3	28.1	30.8	30.8	15.4	6.6	131.0
Total	Count	94	137	150	150	75	32	638
	Expected Count	94.0	137.0	150.0	150.0	75.0	32.0	638.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	289.446[a]	30	.000
Pearson's R	-.029		

Summary of Chi Square Independence Test

Definition / Objective:

The objective of using the Chi-Square Independence Test is to determine if there is a significant association or relationship between two categorical variables*.

*   **Pair of Categorical Variables:**

1.   Institution Strategic Partnership & Measures of Performance of Academic Inst

2.   Selected Academic Institution & Measures of 'Performance of Academic Inst.

3.   Selected Academic Institution & Institution Strategic Partnership.

4.   Selected Academic Institution & Type of Primary Purpose

5,   Institution Strategic Partnership & Primary Purpose

6.   Measures of 'Performance of Academic Institution' & Primary Purpose

4.3	Type of Two Categorical Variable Chi-Square Independence Test	P - Value (Sig.)	Result	Outcome
4.3.1	Institution Strategic Partnership & Performance of Academic Inst	0.000	Significance	Associated
4.3.2	Selected Academic Institution & 'Performance of Academic Inst.	0.000	Significance	Associated
4.3.3	Selected Academic Institution & Institution Strategic Partnership.	0.000	Significance	Associated
4.3.4	Selected Academic Institution & Type of Primary Purpose	0.000	Significance	Associated
4.3.5	Institution Strategic Partnership & Primary Purpose	0.000	Significance	Associated
4.3.6	'Performance of Academic Institution' & Primary Purpose	0.000	Significance	Associated

(Table 4.3 – Summary Result of Chi Square Independence: Prepared by Researcher)

Interpretation:

This suggests that there is a strong association or dependence between the two categorical variables being tested. The results indicate that the variables are not independent of each other, and their relationship is statistically significant

4.4   Independence Two Sample Test
4.4.1   Genders (Male & Female)

Problem Statement – Part D1

A researcher intends to carry out a survey to investigate the impact of institutional strategic partnerships on the performance of a specific academic institution in the Gujarat region. In order to assess the performance of the institution, the respondents, were asked to rate a series of reasons on a scale of 1 to 7. The scale represents little importance (1) to great importance (7). Following are the factors being measured.

- Improved in Student's Academic Achievements
- Increased research Output & Publications
- Alumni Engagement
- Improved Employability
- Student Satisfaction Level
- International Learning Experience & Exposure
- Enhance Academic Reputation & Prestige

The objective is to determine whether there is a noteworthy difference between Genders (Male & Female) on above factors for the same.

(Improvement in Students' Academic Achievements)
D1.1   H0: There is no significant difference in the rating for **'Improvement in Students' Academic Achievements'** between Genders (Male & Female).
D1.2   H0: There is significant difference in the rating for **'Improvement in Students' Academic Achievements'** between Genders (Male & Female).

(Increased Research Output & Publications)
D1.3   H0: There is no significant difference in the rating for **'Increased Research Output & Publications'** between Genders (Male & Female).
D1.4   H0: There is significant difference in the rating for '**Increased Research Output & Publications'** between Genders (Male & Female).

(Student Satisfaction Level)
D1.5   H0: There is no significant difference in the rating for **'Student Satisfaction Level'** between Genders (Male & Female).
D1.6   H0: There is significant difference in the rating for '**Student Satisfaction Level'** between Genders (Male & Female).

(Alumni Engagement)
D1.7 H0: There is no significant difference in the rating for **'Alumni Engagement'** between Genders (Male & Female).
D1.8 H0: There is significant difference in the rating for '**Alumni Engagement'** between Genders (Male & Female).

(Improved Employability)
D1.9 H0: There is no significant difference in the rating for **'Improved Employability'** between Genders (Male & Female).
D1.10 H0: There is significant difference in the rating for '**Improved Employability'** between Genders (Male & Female).

(Enhance Academic Reputation & Prestige)
D1.11 H0: There is no significant difference in the rating for **'Enhance Academic Reputation & Prestige'** between Genders (Male & Female).
D1.12 H0: There is significant difference in the rating for '**Enhance Academic Reputation & Prestige'** between Genders (Male & Female).

(Enhance International Learning Experience & Exposure)
D1.13 H0: There is no significant difference in rating for **'Enhance International Learning Experience & Exposure'** between Genders (Male & Female).
D1.14 H0: There is significant difference in the rating for '**Enhance International Learning Experience & Exposure'** between Genders (Male & Female).

Table 4.4.1A - Group Statistics for 'Genders (Male & Female)'

	Genders	N	Mean	SD	SE
Improved in Student's Academic Achievements	Male	299	5.75	.902	.052
	Female	339	5.70	.848	.046
Increased research Output & Publications	Male	299	5.69	.912	.053
	Female	339	5.68	.874	.047
Alumni Engagement	Male	299	5.49	.943	.055
	Female	339	5.64	.867	.047
Improved Employability	Male	299	5.44	.919	.053
	Female	339	5.45	.923	.050
Student Satisfaction Level	Male	299	5.41	.942	.054
	Female	339	5.47	.888	.048
Enhance Learning Experience & Exposure	Male	299	5.52	.928	.054
	Female	339	5.50	.915	.050
Enhance Academic Reputation & Prestige	Male	299	5.66	.911	.053
	Female	339	5.43	.909	.049

Table 4.4.1B - Independent Samples T Test for 'Genders (Male & Female)'

	Levene's Test for Equality of Variances						
	F	Sig.	t	Df	Sig.	M. diff.	Sd
Improved in Student's Academic Achievements	.390	.532	.631	636	**.528**	.044	.069
Increased research Output & Publications	.513	.474	.190	636	**.849**	.013	.071
Alumni Engagement	4.079	.044	-2.114	636	**.035**	-.151	.072
Improved Employability	.004	.953	-.008	636	**.993**	-.001	.073
Student Satisfaction Level	1.954	.163	-.830	636	**.407**	-.060	.073
International Learning Experience & Exposure	.123	.726	.272	636	**.786**	.020	.073
Enhance Academic Reputation & Prestige	.037	.848	3.162	636	**.002**	.228	.072

Interpretation:

Improved in Student's Academic Achievements had the mean score for males (5.75) is slightly higher than that for females (5.70), but difference is not statistically significant ($t(636) = 0.631$, $p = 0.528$). Increased research Output & Publications had mean score for males (5.69) is slightly lower than that for females (5.68), but difference is not statistically significant ($t(636) = 0.190$, $p = 0.849$). Alumni Engagement had mean score for males (5.49) is lower than that for females (5.64), and the difference is statistically significant ($t(636) = -2.114$, $p = 0.035$). Improved Employability had the mean score for males (5.44) is slightly lower than that for females (5.45), but the difference is not statistically significant ($t(636) = -0.008$, $p = 0.993$). Student Satisfaction Level had the mean score for males (5.41) is slightly lower than that for females (5.47), but the difference is not statistically significant ($t(636) = -0.830$, $p = 0.407$). Enhance Learning Experience & Exposure had the mean score for males (5.52) is slightly higher than that for females (5.50), but the difference is not statistically significant ($t(636) = 0.272$, $p = 0.786$). Enhance Academic Reputation & Prestige had mean score for males (5.66) is higher than that for females (5.43), and the difference is statistically significant ($t(636) = 3.162$, $p = 0.002$).

The analysis suggests that females show higher levels of alumni engagement, while males perceive a higher enhancement in academic reputation and prestige. However, there are no significant gender differences in the other measures, including student's academic achievements, research output, employability, student satisfaction, and learning experience.

4.4.2 Streams (Commerce & Science)
Problem Statement – Part D2

A researcher intends to carry out a survey to investigate the impact of institutional strategic partnerships on the performance of a specific academic institution in the Gujarat region. In order to assess the performance of the institution, the respondents, were asked to rate a series of reasons on a scale of 1 to 7. The scale represents little importance (1) to great importance (7). Following are the factors being measured.

- Improved in Student's Academic Achievements
- Increased research Output & Publications
- Alumni Engagement
- Improved Employability
- Student Satisfaction Level
- International Learning Experience & Exposure
- Enhance Academic Reputation & Prestige

The objective is to determine whether there is a noteworthy difference between Streams (Commerce & Science) on above factors for the same.

(Improvement in Students' Academic Achievements)
D2.1 H0: There is no significant difference in the rating for **'Improvement in Students' Academic Achievements'** between Streams (Commerce & Science).
D2.2 H0: There is significant difference in the rating for **'Improvement in Students' Academic Achievements'** between Streams (Commerce & Science).

(Increased Research Output & Publications)
D2.3 H0: There is no significant difference in the rating for '**Increased Research Output & Publications'** between Streams (Commerce & Science).
D2.4 H0: There is significant difference in the rating for '**Increased Research Output & Publications'** between Streams (Commerce & Science).

(Student Satisfaction Level)
D2.5 H0: There is no significant difference in the rating for '**Student Satisfaction Level'** between Streams (Commerce & Science).
D2.6 H0: There is significant difference in the rating for '**Student Satisfaction Level'** between Streams (Commerce & Science).

(Alumni Engagement)

D2.7 H0: There is no significant difference in the rating for '**Alumni Engagement'** between Streams (Commerce & Science).

D2.8 H0: There is significant difference in the rating for '**Alumni Engagement'** between Streams (Commerce & Science).

(Improved Employability)

D2.9 H0: There is no significant difference in the rating for '**Improved Employability'** between Streams (Commerce & Science).

D2.10 H0: There is significant difference in the rating for '**Improved Employability'** between Streams (Commerce & Science).

(Enhance Academic Reputation & Prestige)

D2.11 H0: There is no significant difference in the rating for '**Enhance Academic Reputation & Prestige'** between Streams (Commerce & Science).

D2.12 H0: There is significant difference in the rating for '**Enhance Academic Reputation & Prestige'** between Streams (Commerce & Science).

(Enhance International Learning Experience & Exposure)

D2.13 H0: There is no significant difference in rating for '**Enhance International Learning Experience & Exposure'** between Streams (Commerce & Science).

D2.14 H0: There is significant difference in the rating for '**Enhance International Learning Experience & Exposure'** between Streams (Commerce & Science).

Table 4.4.2A - Group Statistics for 'Streams (Commerce & Science)'

	Streams	N	Mean	SD	SE
Improved in Student's Academic Achievements	Commerce	304	5.71	.876	.050
	Science	334	5.73	.872	.048
Increased research Output & Publications	Commerce	304	5.68	.889	.051
	Science	334	5.68	.895	.049
Alumni Engagement	Commerce	304	5.57	.909	.052
	Science	334	5.57	.903	.049
Improved Employability	Commerce	304	5.47	.919	.053
	Science	334	5.43	.923	.050
Student Satisfaction Level	Commerce	304	5.47	.911	.052
	Science	334	5.43	.917	.050
International Learning Experience & Exposure	Commerce	304	5.51	.923	.053
	Science	334	5.51	.919	.050
Enhance Academic Reputation & Prestige	Commerce	304	5.53	.912	.052
	Science	334	5.55	.921	.050

Table 4.4.2B Independent Samples T Test for Stream (Commerce & Science)

	Levene's Test for Equality of Variances						
	F	Sig.	t	df	Sig.	M. Diff.	Sd
Improved in Student's Academic Achievements	.049	.825	-.332	636	**.740**	-.023	.069
Increased research Output & Publications	.030	.863	.065	636	**.949**	.005	.071
Alumni Engagement	.040	.842	-.080	636	**.936**	-.006	.072
Improved Employability	.001	.970	.575	636	**.566**	.042	.073
Student Satisfaction Level	.004	.952	.538	636	**.566**	.042	.073
International Learning Experience & Exposure	.006	.936	.053	636	**.958**	.004	.073
Enhance Academic Reputation & Prestige	.053	.819	-.297	636	**.767**	-.022	.073

Interpretation:

Improved in Student's Academic Achievements had the mean score for the Commerce stream (5.71) is slightly lower than that for the Science stream (5.73), but the difference is not statistically significant (t(636) = -0.332, p = 0.740). Increased research Output & Publications, Alumni Engagement and International Learning Experience & Exposure had the mean score for the Commerce stream and the Science stream is same, and there is no statistically significant difference. Improved Employability had the mean score for the Commerce stream (5.47) is slightly higher than that for the Science stream (5.43), but the difference is not statistically significant (t(636) = 0.575, p = 0.566). Student Satisfaction Level had the mean score for the Commerce stream (5.47) is slightly higher than that for the Science stream (5.43), but the difference is not statistically significant (t(636) = 0.538, p = 0.566). Enhance Academic Reputation & Prestige had the mean score for the Commerce stream (5.53) is slightly lower than that for the Science stream (5.55), but the difference is not statistically significant (t(636) = -0.297, p = 0.767).

In summary, the analysis suggests that there are no significant differences in the perception of academic institution performance measures between the Commerce and Science streams. The streams do not show significant variations in student's academic achievements, research output, alumni engagement, employability, student satisfaction, international learning experience, and academic reputation & prestige.

4.4.3 'Associations (Student & Faculty)
Problem Statement – Part D3

A researcher intends to carry out a survey to investigate the impact of institutional strategic partnerships on the performance of a specific academic institution in the Gujarat region. In order to assess the performance of the institution, the respondents, were asked to rate a series of reasons on a scale of 1 to 7. The scale represents little importance (1) to great importance (7). Following are the factors being measured.

- Improved in Student's Academic Achievements
- Increased research Output & Publications
- Alumni Engagement
- Improved Employability
- Student Satisfaction Level
- International Learning Experience & Exposure
- Enhance Academic Reputation & Prestige

The objective is to determine whether there is a noteworthy difference between Associations (Student & Faculty) on above factors for the same.

(Improvement in Students' Academic Achievements)
D3.1   H0: There is no significant difference in the rating for **'Improvement in Students' Academic Achievements'** between Associations (Student & Faculty).
D3.2   H0: There is significant difference in the rating for **'Improvement in Students' Academic Achievements'** between Associations (Student & Faculty).

(Increased Research Output & Publications)
D3.3   H0: There is no significant difference in the rating for '**Increased Research Output & Publications'** between Associations (Student & Faculty).
D3.4   H0: There is significant difference in the rating for '**Increased Research Output & Publications'** between Associations (Student & Faculty).

(Student Satisfaction Level)
D3.5   H0: There is no significant difference in the rating for '**Student Satisfaction Level'** between Associations (Student & Faculty).
D3.6   H0: There is significant difference in the rating for '**Student Satisfaction Level'** between Associations (Student & Faculty).

(Alumni Engagement)

D3.7 H0: There is no significant difference in the rating for '**Alumni Engagement'** between Associations (Student & Faculty).

D3.8 H0: There is significant difference in the rating for '**Alumni Engagement'** between Associations (Student & Faculty).

(Improved Employability)

D3.9 H0: There is no significant difference in the rating for '**Improved Employability'** between Associations (Student & Faculty).

D3.10 H0: There is significant difference in the rating for '**Improved Employability'** between Associations (Student & Faculty).

(Enhance Academic Reputation & Prestige)

D3.11 H0: There is no significant difference in the rating for '**Enhance Academic Reputation & Prestige'** between Associations (Student & Faculty).

D3.12 H0: There is significant difference in the rating for '**Enhance Academic Reputation & Prestige'** between Associations (Student & Faculty).

(Enhance International Learning Experience & Exposure)

D3.13 H0: There is no significant difference in rating for '**Enhance International Learning Experience & Exposure'** between Associations (Student & Faculty).

D3.14 H0: There is significant difference in the rating for '**Enhance International Learning Experience & Exposure'** between Associations (Student & Faculty).

Table 4.4.3A - Group Statistics for 'Associations (Student & Faculty)'

	Associations (Student & Faculty)	N	Mean	SD	SE
Improved in Student's Academic Achievements	Faculty	160	5.72	.877	.069
	Student	478	5.72	.873	.040
Increased research Output & Publications	Faculty	160	5.68	.893	.071
	Student	478	5.68	.892	.041
Alumni Engagement	Faculty	160	5.58	.908	.072
	Student	478	5.57	.905	.041
Improved Employability	Faculty	160	5.44	.923	.073
	Student	478	5.45	.920	.042
Student Satisfaction Level	Faculty	160	5.44	.916	.072
	Student	478	5.45	.914	.042
Enhance International Learning Experience & Exposure	Faculty	160	5.51	.925	.073
	Student	478	5.51	.920	.042
Enhance Academic Reputation & Prestige	Faculty	160	5.54	.917	.073
	Student	478	5.54	.917	.042

Table 4.4.3B - Independent Samples T Test 'Associations (Student & Faculty)'

	Levene's Test for Equality of Variances						
	F	Sig.	t	df	Sig.	M. Diff.	SD
Improved in Student's Academic Achievements	.005	.942	-.064	636	**.949**	-.005	.080
Increased research Output & Publications	.000	.984	-.009	636	**.993**	-.001	.082
Alumni Engagement	.000	.994	.047	636	**.963**	.004	.083
Improved Employability	.000	.986	-.022	636	**.982**	-.002	.084
Student Satisfaction Level	.000	.993	-.047	636	**.962**	-.004	.084
International Learning Experience & Exposure	.005	.945	.074	636	**.941**	.006	.084
Enhance Academic Reputation & Prestige	.001	.977	-.002	636	**.999**	.000	.084

Interpretation:

Increased research Output & Publications, Improved in Student's Academic Achievements, International Learning Experience & Exposure and Enhance Academic Reputation & Prestige had the mean score for Faculty associations (5.72) is the same as that for Student associations (5.72), and there is no statistically significant difference (t(636) = -0.064, p = 0.949). Alumni Engagement had the mean score for Faculty associations (5.58) is slightly higher than that for Student associations (5.57), but the difference is not statistically significant (t(636) = 0.047, p = 0.963). Improved Employability had the mean score for Faculty associations (5.44) is slightly lower than that for Student associations (5.45), but the difference is not statistically significant (t(636) = -0.022, p = 0.982). Student Satisfaction Level had the mean score for Faculty associations (5.44) is slightly lower than that for Student associations (5.45), but the difference is not statistically significant (t(636) = -0.047, p = 0.962).

In summary, the analysis suggests that there are no significant differences in the perception of academic institution performance measures between Faculty and Student associations. The association type (Faculty or Student) does not show significant variations in student's academic achievements, research output, alumni engagement, employability, student satisfaction, international learning experience, and academic reputation & prestige.

4.4.4 Educational Qualification (School & Higher Education)'
Problem Statement – Part D4

A researcher intends to carry out a survey to investigate the impact of institutional strategic partnerships on the performance of a specific academic institution in the Gujarat region. In order to assess the performance of the institution, the respondents, were asked to rate a series of reasons on a scale of 1 to 7. The scale represents little importance (1) to great importance (7). Following are the factors being measured.

- Improved in Student's Academic Achievements

- Increased research Output & Publications

- Alumni Engagement

- Improved Employability

- Student Satisfaction Level

- International Learning Experience & Exposure

- Enhance Academic Reputation & Prestige

The objective is to determine whether there is a noteworthy difference between Educational Qualification (School & Higher Education) on above factors for same.

(Improvement in Students' Academic Achievements)
D4.1   H0: There is no significant difference in the rating for **'Improvement in Students' Academic Achievements'** between Educational Qualification (School & Higher Education).
D4.2   H0: There is significant difference in the rating for **'Improvement in Students' Academic Achievements'** between Educational Qualification (School & Higher Education).

(Increased Research Output & Publications)
D4.3   H0: There is no significant difference in the rating for '**Increased Research Output & Publications'** between Educational Qualification (School & Higher Education).
D4.4   H0: There is significant difference in the rating for '**Increased Research Output & Publications'** between Educational Qualification (School & Higher Education).

(Student Satisfaction Level)
D4.5   H0: There is no significant difference in the rating for '**Student Satisfaction Level'** between Educational Qualification (School & Higher Education).
D4.6   H0: There is significant difference in the rating for '**Student Satisfaction Level'** between Educational Qualification (School & Higher Education).

(Alumni Engagement)

D4.7   H0: There is no significant difference in the rating for '**Alumni Engagement**' between Educational Qualification (School & Higher Education).

D4.8   H0: There is significant difference in the rating for '**Alumni Engagement**' between Educational Qualification (School & Higher Education).

(Improved Employability)

D4.9   H0: There is no significant difference in the rating for '**Improved Employability**' between Educational Qualification (School & Higher Education).

D4.10 H0: There is significant difference in the rating for '**Improved Employability**' between Educational Qualification (School & Higher Education).

(Enhance Academic Reputation & Prestige)

D4.11 H0: There is no significant difference in the rating for '**Enhance Academic Reputation & Prestige**' between Educational Qualification (School & Higher Edu.)

D4.12 H0: There is significant difference in the rating for '**Enhance Academic Reputation & Prestige**' between Educational Qualification (School & Higher Edu.)

(Enhance International Learning Experience & Exposure)

D4.13 H0: There is no significant difference in rating for '**Enhance International Learning Experience & Exposure**' between Educational Qualification (School & Higher Education).

D4.14 H0: There is significant difference in rating for '**Enhance International Learning Experience & Exposure**' between Educational Qualification (School & Higher Education).

Table 4.4.4A - Group Statistics for Educational Qualification

	Educational Qualification	N	Mean	SD	SE
Improved in Student's Academic Achievements	Higher Education	342	5.74	.870	.047
	School (KG to 12)	296	5.70	.879	.051
Increased research Output & Publications	Higher Education	342	5.69	.891	.048
	School (KG to 12)	296	5.67	.894	.052
Alumni Engagement	Higher Education	342	5.55	.910	.049
	School (KG to 12)	296	5.60	.900	.052
Improved Employability	Higher Education	342	5.45	.923	.050
	School (KG to 12)	296	5.44	.918	.053
Student Satisfaction Level	Higher Education	342	5.46	.908	.049
	School (KG to 12)	296	5.43	.922	.054
International Learning Experience & Exposure	Higher Education	342	5.53	.921	.050
	School (KG to 12)	296	5.49	.920	.054
Enhance Academic Reputation & Prestige	Higher Education	342	5.55	.914	.049
	School (KG to 12)	296	5.52	.920	.053

Table 4.4.4B - Independent Samples T Test for Educational Qualification

	Levene's Test for Equality of Variances						
	F	Sig.	t	df	Sig.	M. Diff.	SE
Improved in Student's Academic Achievements	.180	.672	.534	636	.593	.037	.069
Increased research Output & Publications	.050	.822	.340	636	.734	.024	.071
Alumni Engagement	.134	.714	-.671	636	.502	-.048	.072
Improved Employability	.028	.866	.238	636	.812	.017	.073
Student Satisfaction Level	.084	.772	.367	636	.714	.027	.073
International Learning Experience & Exposure	.001	.981	.545	636	.586	.040	.073
Enhance Academic Reputation & Prestige	.038	.847	.358	636	.720	.026	.073

Interpretation:

Increased research Output & Publications, Improved in Student's Academic Achievements had the mean score for Higher Education is slightly higher than that for School (KG to 12), but the difference is not statistically significant. Alumni Engagement, Improved Employability had the mean score for Higher Education is slightly lower than that for School (KG to 12), but the difference is not statistically significant. Student Satisfaction Level had the mean score for Higher Education (5.46) is slightly higher than that for School (KG to 12) (5.43), but the difference is not statistically significant ($t(636) = 0.367$, $p = 0.714$). International Learning Experience & Exposure had the mean score for Higher Education (5.53) is slightly higher than that for School (KG to 12) (5.49), but the difference is not statistically significant ($t(636) = 0.545$, $p = 0.586$). Enhance Academic Reputation & Prestige had the mean score for Higher Education (5.55) is slightly higher than that for School (KG to 12) (5.52), but difference is not statistically significant ($t(636) = 0.358$, $p = 0.720$).

The analysis suggests that there are no significant differences in the perception of academic institution performance measures between individuals with Higher Education and those from School (KG to 12). The educational qualification does not show significant variations in improved student's academic achievements, increased research output, alumni engagement, improved employability, student satisfaction, international learning experience, and academic reputation & prestige.

Summary or T Independence Test

Definition / Objective:

The objective of using the T Independence Test is to determine if there is a significant difference between two independent groups* in terms of their means on a continuous variable**.

*Two Independent Groups:

1. Genders (Male & Female)
2. Streams (Commerce & Science)
3. Association (Student & Faculty)
4. Educational Qualification (School & Higher Education)

**Continuous Variable:

1. Improved in Student's Academic Achievements
2. Increased Research Output & Publications
3. Student Satisfaction Level
4. Alumni Engagement
5. Improved Employability
6. Enhance Academic Reputation & Prestige
7. Enhance International Learning Experience & Exposure

Interpretation:

Based on the p-values obtained from the T-Independent Test, there is no statistically significant difference between the two groups (samples) in terms of the measures of performance (construct) for any of the categories analyzed. The results suggest that factors such as gender, streams, association (student/faculty), and educational qualification do not have a significant impact on the measures of performance considered in the study.

4.4	2 Independent Groups of Each Measure of Performance	P - Value (Sig.)	Result	Outcome
4.4.1	**Genders (Male & Female)**			
H1	Student's Academic Achievements	0.528	Not Sig.	FVRBL
H2	Research Output & Publications	0.849	Not Sig.	FVRBL
H3	Alumni Engagement	0.035	Significance	Difference
H4	Improved Employability	0.993	Not Sig.	FVRBL
H5	Student Satisfaction Level	0.407	Not Sig.	FVRBL
H6	Intern. Experience & Exposure	0.786	Not Sig.	FVRBL
H7	Academic Reputation & Prestige	0.002	Significance	Difference
4.4.2	**Streams (Commerce & Science)**			
H8	Student's Academic Achievements	0.74	Not Sig.	FVRBL
H9	Research Output & Publications	0.949	Not Sig.	FVRBL
H10	Alumni Engagement	0.936	Not Sig.	FVRBL
H11	Improved Employability	0.566	Not Sig.	FVRBL
H12	Student Satisfaction Level	0.566	Not Sig.	FVRBL
H13	Intern. Experience & Exposure	0.958	Not Sig.	FVRBL
H14	Academic Reputation & Prestige	0.767	Not Sig.	FVRBL
4.4.3	**Association (Student & Faculty)**		.	
H15	Student's Academic Achievements	0.949	Not Sig.	FVRBL
H16	Research Output & Publications	0.993	Not Sig.	FVRBL
H17	Alumni Engagement	0.963	Not Sig.	FVRBL
H18	Improved Employability	0.982	Not Sig.	FVRBL
H19	Student Satisfaction Level	0.962	Not Sig.	FVRBL
H20	Intern. Experience & Exposure	0.941	Not Sig.	FVRBL
H21	Academic Reputation & Prestige	0.999	Not Sig.	FVRBL
4.4.4	**EQ (School & Higher Education)**			FVRBL
H22	Student's Academic Achievements	0.593	Not Sig.	FVRBL
H23	Research Output & Publications	0.734	Not Sig.	FVRBL
H24	Alumni Engagement	0.502	Not Sig.	FVRBL
H25	Improved Employability	0.812	Not Sig.	FVRBL
H26	Student Satisfaction Level	0.714	Not Sig.	FVRBL
H27	Intern. Experience & Exposure	0.586	Not Sig.	FVRBL
H28	Academic Reputation & Prestige	0.72	Not Sig.	FVRBL

(Table 4.4 – Summary Result of Independence T test: Prepared by Researcher)

4.5   Chi Square – Goodness of Fit Test

4.5.1   Observed Frequency of Students and Expected Frequency of Faculty Members

Problem Statement – Part E1

As a part of study, **160 faculty members and 498 students** were asked from selected academic institution to state their personalopinion of 'performance of academic institution'through institutional strategic partnership on several categories. **Faculty members' responses: 7.5% of faculty members** have selected *'Improved in Student's Academic Achievements'* as their personal opinion of 'performance of academic institution',**8.125 %**said that *'Increased Research Output & Publications'* was their opinion,**19.375%** responded that *'Student Satisfaction Level'* was their opinion, **13.75%** responded that *'Alumni Engagement* was their opinion,**12.5%** responded that *'Improved Employability',***18.75%** responded that *'Enhance Academic Reputation & Prestige'* and **20%** responded that *'Enhance International Learning Experience & Exposure'* was their opinion. We wanted to determine whether **student** felt the same way. A chi-square goodness-of-fit test is used to determine whether the observed frequency distribution of data for **students** is the same as the distribution for **faculty members.**

E1.1   H0: There is no significant difference in the observed frequency of **students** and expected frequency of **faculty members** regarding their personal opinion of 'performance of academic institution 'through institutional strategic partnership.

E1.2   H0: There is no significant difference in the observed frequency of **students** and expected frequency of **faculty members** regarding their personal opinion of 'performance of academic institution 'through institutional strategic partnership.

Table 4.5.1A - Performance Measurement of Academic Institution Association (Faculty & Student)

	Observed N	Expected N
Improved in Student's Academic Achievements	62	35.9
Increased Research Output & Publications	40	38.8
Student Satisfaction Level	60	92.6
Alumni Engagement	32	65.7
Improved Employability	32	59.8
Enhance Academic Reputation & Prestige	89	89.6
Enhance International Learning Experience & Exposure	163	95.6
Total	478	

Table 4.5.1B - Chi-Square Test Statistics

Performance Measurement Of Academic Institution Association (Faculty & Student)	
Chi-Square	108.309[a]
Df	6
Asymp. Sig.	.000

Interpretation:

The chi-square test statistic for the association between performance measurement of academic institution and the type of association (Faculty & Student) is 108.309, with 6 degrees of freedom. The associated p-value is less than 0.001, indicating a statistically significant association between the two variables.

Improved in Student's Academic Achievements, the observed frequency is 62, while the expected frequency is 35.9. There is a significant difference between the observed and expected frequencies. Increased Research Output & Publications, the difference between the observed and expected frequencies is not significant. Student Satisfaction Level, there is a significant difference between the observed and expected frequencies. Alumni Engagement, the observed frequency is 32, while the expected frequency is 65.7. There is a significant difference between the observed and expected frequencies. Improved Employability, there is a significant difference between the observed and expected frequencies. Enhance Academic Reputation & Prestige, the observed frequency is 89, and the expected frequency is 89.6. The difference between the observed and expected frequencies is not significant. Enhance International Learning Experience & Exposure; there is a significant difference between the observed and expected frequencies.

The chi-square test indicates a significant association between the performance measurement of academic institution and the type of association (Faculty & Student). Specifically, there are significant differences in the observed and expected frequencies for Improved in Student's Academic Achievements, Student Satisfaction Level, Alumni Engagement, Improved Employability, and Enhance International Learning Experience & Exposure. These findings suggest that the type of association (Faculty or Student) is related to the perception of these performance measures.

4.5.2   Observed Frequency of Male and Expected Frequency of Female Problem Statement – Part E2

As a part of study, **339 female and 299 male** were asked from selected academic institution to state their personal opinion of 'performance of academic institution'through institutional strategic partnership on several categories. **Female responses: 10.32% of females** have selected *'Improved in Student's Academic Achievements'* as their personal opinion of 'performance of academic institution',**7.67%** said that *'Increased Research Output & Publications'* was their opinion,**15.04%** responded that *'Student Satisfaction Level'* was their opinion, **5.31%** responded that *'Alumni Engagement'* was their opinion, **5.60%** responded that *'Improved Employability', 21.34%* responded that *'Enhance Academic Reputation & Prestige'* and **34.81%** responded that *'Enhance International Learning Experience & Exposure'* was their opinion. Wewanted to determine whether **male** felt the same way. A chi-squaregoodness-of-fit test is used to determine whether the observed frequency distribution of data for **male** is the same as the distribution for **female.**

E2.1   H0: There is no significant difference in the observed frequency of **male** and expected frequency of **female** regarding their personal opinion of 'performance of academic institution'through institutional strategic partnership.

E2.2   H0: There is no significant difference in the observed frequency of **male** and expected frequency of **female** regarding their personal opinion of 'performance of academic institution'through institutional strategic partnership.

Table 4.5.2A - Performance Measurement of Academic Institution Gender (Male & Female)

	Observed N	Expected N
Improved in Student's Academic Achievements	38	30.9
Increased Research Output & Publications	25	22.9
Student Satisfaction Level	42	45.0
Alumni Engagement	14	15.9
Improved Employability	13	16.8
Enhance Academic Reputation & Prestige	59	63.5
Enhance International Learning Experience & Exposure	108	104.1
Total	299	

Table 4.5.2B - Chi-Square Test Statistics

Performance Measurement Of Academic Institution Gender (Male & Female)	
Chi-Square	3.563[a]
Df	6
Asymp. Sig.	.736

Interpretation:

The chi-square test statistic for the association between performance measurement of academic institution and gender (Male & Female) is 3.563, with 6 degrees of freedom. The associated p-value is 0.736, indicating that there is no significant association between the two variables.

Analyzing the observed and expected frequencies for each performance measurement category, Improved in Student's Academic Achievements, the observed frequency is 38, while the expected frequency is 30.9. There is a slight difference between the observed and expected frequencies, but it is not statistically significant. Increased Student Satisfaction Level, the observed frequency is 42, and the expected frequency is 45.0. There is a slight difference between the observed and expected frequencies, but it is not statistically significant. Improved Employability, the observed frequency is 13, and the expected frequency is 16.8. There is a slight difference between the observed and expected frequencies, but it is not statistically significant. Enhance Academic Reputation & Prestige, the observed frequency is 59, and the expected frequency is 63.5. There is a slight difference between the observed and expected frequencies, but it is not statistically significant. Enhance International Learning Experience & Exposure: The observed frequency is 108, while the expected frequency is 104.1. There is a slight difference between the observed and expected frequencies, but it is not statistically significant.

In summary, the chi-square test indicates that there is no significant association between the performance measurement of academic institution and gender (Male & Female). The observed and expected frequencies do not significantly differ for any of the performance measures. Therefore, we can conclude that gender does not play a significant role in the perception of these performance measures.

4.5.3 Observed Frequency of School (KG to 12) students and Expected Frequency of Higher Education (UG + PG + Other) students

Problem Statement – Part E3

As a part of study, **161 higher educationstudents and 477school students** were asked from selected academic institution to state their personal opinion of 'performance of academic institution'through institutional strategic partnership on several categories. **Higher Education student responses: 7.45% of higher education students** have selected *'Improved in Student's Academic Achievements'* as their opinion of 'performance of academic institution', **8.07%** said that *'Increased Research Output & Publications'* was their opinion,**19.25%** responded that *'Student Satisfaction Level'* was their opinion, **13.66%** responded that *'Alumni Engagement'* was their opinion,**13.04%** responded that *'Improved Employability',***18.63%** responded that *'Enhance Academic Reputation & Prestige'* and **19.88%** responded that *'Enhance International Learning Experience & Exposure'* was their opinion. We wanted to determine whether **school students** felt same way. A chi-squaregoodness-of-fit test is used to determine whether observed frequency distribution of data for **school students** is same as distribution for **higher education students.**

E3.1   H0: There is no significant difference in the observed frequency of **school students** and expected frequency of **higher education students** regarding opinion of 'performance of academic institution'through institutional strategic partnership.

E3.2   H0: There is no significant difference in the observed frequency of **school students** and expected frequency of **higher education students** regarding opinion of 'performance of academic institution 'through institutional strategic partnership.

Table 4.5.3A - Performance Measurement of Academic Institution Education Qualification (Higher Education & School)

	Observed N	Expected N
Improved in Student's Academic Achievements	62	35.6
Increased Research Output & Publications	40	38.5
Student Satisfaction Level	60	91.8
Alumni Engagement	32	65.2
Improved Employability	32	62.2
Enhance Academic Reputation & Prestige	89	88.9
Enhance International Learning Experience & Exposure	162	94.8
Total	477	

Table 4.5.3B - Chi-Square Test Statistics

Performance Measurement Of Academic Institution Education Qualification (Higher Education & School)	
Chi-Square	109.960[a]
Df	6
Asymp. Sig.	.000

Interpretation:

The chi-square test statistic for the association between performance measurement of academic institution and education qualification (Higher Education & School) is 109.960, with 6 degrees of freedom. The associated p-value is less than 0.001, indicating a statistically significant association between the two variables.

Analyzing the observed and expected frequencies for each performance measurement category, Improved in Student's Academic Achievements had the observed frequency is 62, while the expected frequency is 35.6. There is a significant difference between the observed and expected frequencies. Increased Research Output & Publications had the observed frequency is 40, and the expected frequency is 38.5. The difference between the observed and expected frequencies is not significant. There is a significant difference between the observed and expected frequencies in Student Satisfaction Level. Improved Employability had the observed frequency is 32, and the expected frequency is 62.2. There is a significant difference between the observed and expected frequencies. Enhance Academic Reputation & Prestige had observed frequency is 89, and the expected frequency is 88.9. The difference between the observed and expected frequencies is not significant. Enhance International Learning Experience & Exposure had the observed frequency is 162, while expected frequency is 94.8. There is a significant difference between observed and expected frequencies.

In summary, the chi-square test indicates a significant association between the performance measurement of academic institution and education qualification (Higher Education & School). Specifically, there are significant differences in the observed and expected frequencies for Improved in Student's Academic Achievements, Student Satisfaction Level, Alumni Engagement, and Improved Employability. These findings suggest that education qualification plays a role in the perception of these performance measures.

4.5.4 Observed Frequency of Science students and Expected Frequency of Commerce students

Problem Statement – Part E4

As a part of study, **240 commerce students and 398 science students** were asked from selected academic institution to state their personal opinion of 'performance of academic institution through institutional strategic partnership on several categories.

Commerce student responses: 11% of commerce students have selected *'Improved in Student's Academic Achievements'* as their personal opinion of 'performance of academic institution',**10%** said that *'Increased Research Output & Publications'* was their opinion, **15%** responded that *'Student Satisfaction Level'* was their opinion, **7%**responded that *'Alumni Engagement'* was their opinion,**5%** responded that *'Improved Employability',***19%** responded that *'Enhance Academic Reputation & Prestige'* and **34%** responded that *'Enhance International Learning Experience & Exposure'* was their opinion. Wewanted to determine whether **science students**felt the same way. A chi-squaregoodness-of-fit test is used to determine whether the observed frequency distribution of data for **science students**is the same as the distribution for **commerce students.**

E4.1   H0: There is no significant difference in the observed frequency of **science students** and expected frequency of **commerce students** regarding their opinion of 'performance of academic institution' through institutional strategic partnership.

E4.2   H0: There is no significant difference in the observed frequency of **science students**and expected frequency of **commerce students** regarding their opinion of 'performance of academic institution' through institutional strategic partnership.

Table 4.5.5A - Performance Measurement of Academic Institution Stream of Education (Commerce & Science)

	Observed N	Expected N
Improved in Student's Academic Achievements	46	44.8
Increased Research Output & Publications	28	38.1
Student Satisfaction Level	58	58.0
Alumni Engagement	16	26.5
Improved Employability	20	19.9
Enhance Academic Reputation & Prestige	85	76.3
Enhance International Learning Experience & Exposure	145	134.3
Total	398	

Table 4.5.4B - Chi-Square Test Statistics

Performance Measurement Of Academic Institution Stream of Education (Commerce & Science)	
Chi-Square	8.757[a]
Df	6
Asymp. Sig.	.188

Interpretation:

The chi-square test statistic for the association between performance measurement of academic institution and stream of education (Commerce & Science) is 8.757, with 6 degrees of freedom. The associated p-value is 0.188, indicating that there is no significant association between the two variables.

Improved in Student's Academic Achievements had the observed frequency is 46, while the expected frequency is 44.8. The difference between the observed and expected frequencies is not significant. Student Satisfaction Level had the observed frequency is 58, and the expected frequency is 58.0. The difference between the observed and expected frequencies is not significant. There is a significant difference between the observed and expected frequencies in Alumni Engagement & Increased Research Output & Publications. Improved Employability had the observed frequency is 20, and the expected frequency is 19.9. The difference between the observed and expected frequencies is not significant. There is a significant difference between the observed and expected frequencies in Enhance Academic Reputation & Prestige. Enhance International Learning Experience & Exposure had the observed frequency is 145, while the expected frequency is 134.3. There is a significant difference between the observed and expected frequencies.

In summary, the chi-square test indicates that there is no significant association between the performance measurement of academic institution and stream of education (Commerce & Science). The observed and expected frequencies do not significantly differ for most of the performance measures. However, there are significant differences for Increased Research Output & Publications, Alumni Engagement, and Enhance Academic Reputation & Prestige. Therefore, we can conclude that the stream of education does not play a consistent significant role in the perception of these performance measures.

Summary of Chi Square Goodness of Fit Test

Definition / Objective:

The objective of using the Chi-Square Goodness of Fit Test is to determine if the observed frequencies in a sample significantly differ from the expected frequencies based on a specified distribution (Two Independent Groups)* or hypothesis.

*Specified Distribution (Two Independent Groups):

1.	Genders (Male & Female)

2.	Streams (Commerce & Science)

3.	Association (Student & Faculty)

4.	Educational Qualification (School & Higher Education)

4.5	Specified Distribution (Two Independent Groups) - Chi-Square Goodness of Fit Test	P - Value (Sig.)	Result	Outcome
4.5.1	Genders (Male & Female)	0.000	Significance	Difference of Perception
4.5.2	Streams (Commerce & Science)	0.736	Not Significance	No Difference of Perception
4.5.3	Association (Student & Faculty)	0.000	Significance	Difference of Perception
4.5.4	Educational Qualification (School & Higher Education)	0.188	Not Significance	No Difference of Perception

(Table 4.5 – Summary Chi Square Goodness of Fit: Prepared by Researcher)

Interpretation:

The results indicate that there is a significant difference of perception between genders (p-value = 0.000) and association (p-value = 0.000). However, there is no significant difference of perception between streams (p-value = 0.736) and educational qualification (p-value = 0.188).

4.6   One Sample T Test
4.6.1   Primary Purpose
<u>**Problem Statement – Part F1**</u>

A research survey was conducted on the topic of 'A critical analyse of institutional strategic partnership on the performance of selected academic institution of Gujarat region. One of the questions asked was: **Provide your opinion on the primary purpose of establishing strategic partnership between institutions.** The faculties and students were asked to rate following characteristics on a scale from 1 to 7. Scale is as 1 being - Strongly Disagree and 7 - being Strongly Agree. Suppose following are the characteristics on answers received to this question.

- 1.1 Student - Faculty Exchange & Mentoring Programs
- 1.2 Collaborative Work
- 1.3 Educational Offerings & Expansion of Market Reach
- 1.4 Increasing Funding for Academic Programs
- 1.5 Improving Academic Performance

638 students and faculty members participated in the research survey. Researcher wanted to find the average of given characteristic in this question is relevant for each characterise or not. Researcher has used one sample T test to see the relevancy of each category by the average of this question.

F1.1   H1: There is no significance difference in mean figure of average opinion on 'Primary Purpose' on 'Above mentioned characteristics'. ($\mu = 5.56$)

F1.2   H0: There is significance difference in mean figure of average opinion on 'Primary Purpose' and 'Above mentioned characteristics'. ($\mu \neq 5.56$)

Table 4.6.1A - One-Sample Statistics for Primary Purpose

	N	Mean	SD	SE
1.1 Student - Faculty Exchange & Mentoring Programs	638	5.55	.909	.036
1.2 Collaborative Work	638	5.62	.900	.036
1.3 Educational Offerings & Expansion of Market Reach	638	5.57	.912	.036
1.4 Increasing Funding for Academic Programs	638	5.50	.941	.037
1.5 Improving Academic Performance	638	5.56	.903	.036

Table 4.6.1B - One-Sample Test for Primary Purpose

Test Value = 5.56	t	Df	Sig.	Mean Difference
1.1 Student - Faculty Exchange & Mentoring Programs	-.317	637	.751	-.011
1.2 Collaborative Work	1.659	637	.098	.059
1.3 Educational Offerings & Expansion of Market Reach	.378	637	.705	.014
1.4 Increasing Funding for Academic Programs	-1.485	637	.138	-.055
1.5 Improving Academic Performance	.032	637	.975	.001

Interpretation:

1.1 Student - Faculty Exchange & Mentoring Programs: The mean difference is -0.011 with a test value of -0.317. The p-value is 0.751, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and the test value for this category.

1.2 Collaborative Work: The mean difference is 0.059 with a test value of 1.659. The p-value is 0.098, which is greater than significance level ($\alpha = 0.05$). Therefore, there is no significant difference between sample mean and the test value for this category.

1.3 Educational Offerings & Expansion of Market Reach: The mean difference is 0.014 with a test value of 0.378. The p-value is 0.705, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and the test value for this category.

1.4 Increasing Funding for Academic Programs: The mean difference is -0.055 with a test value of -1.485. The p-value is 0.138, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and the test value for this category.

1.5 Improving Academic Performance: The mean difference is 0.001 with a test value of 0.032. The p-value is 0.975, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and the test value for this category.

In summary, based on the given data, none of the categories show a significant difference between the sample mean and the test value.

4.6.2 Effectiveness
Problem Statement – Part F2

A research survey was conducted on the topic of 'A critical analyse of institutional strategic partnership on the performance of selected academic institution of Gujarat region. One of the questions asked was: **Rate the effectiveness of initiatives implemented at your institution in improving academic performance, if applicable.** The faculties and students were asked to rate following characteristics on a scale from 1 to 7. Scale is as 1 being - Strongly Disagree and 7 - being Strongly Agree. Suppose following are the characteristics on answers received to this question.

- 2.1 Student - Faculty Exchange & Mentoring Programs
- 2.2 Collaborative Work
- 2.3 Industrial Visit - Placement Ties
- 2.4 Advocacy and Policy Initiatives
- 2.5 Research Grants

638 students and faculty members participated in the research survey. Researcher wanted to find the average of given characteristic in this question is relevant for each characterise or not. Researcher has used one sample T test to see the relevancy of each category by the average of this question.

F2.1   H1: There is no significance difference in mean figure of average opinion on 'Primary Purpose' on 'Above mentioned characteristics'. **(μ = 5.519)**

F2.2   H0: There is significance difference in mean figure of average opinion on 'Primary Purpose' and 'Above mentioned characteristics'. **(μ ≠ 5.519)**

Table 4.6.2A - One-Sample Statistics for Effectiveness

	N	Mean	SD	SE
2.1 Student - Faculty Exchange & Mentoring Programs	638	5.48	.945	.037
2.2 Collaborative Work	638	5.55	.897	.035
2.3 Industrial Visit - Placement Ties	638	5.45	.898	.036
2.4 Advocacy and Policy Initiatives	638	5.53	.940	.037
2.5 Research Grants	638	5.59	.898	.036

Table 4.6.2B - One-Sample Test for Effectiveness

Test Value = 5.519	T	Df	Sig.	Mean Difference
2.1 Student - Faculty Exchange & Mentoring Programs	-.968	637	.333	-.036
2.2 Collaborative Work	.834	637	.405	.030
2.3 Industrial Visit - Placement Ties	-2.078	637	.038	-.074
2.4 Advocacy and Policy Initiatives	.205	637	.837	.008
2.5 Research Grants	2.066	637	.039	.073

Interpretation:

2.1 Student - Faculty Exchange & Mentoring Programs: The mean difference is -0.036 with a test value of -0.968. The p-value is 0.333, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and the test value for this category.

2.2 Collaborative Work: The mean difference is 0.030 with a test value of 0.834. The p-value is 0.405, which is greater than significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and test value for this category.

2.3 Industrial Visit - Placement Ties: The mean difference is -0.074 with a test value of -2.078. The p-value is 0.038, which is less than significance level ($\alpha = 0.05$). There is a significant difference between sample mean and test value for this category.

2.4 Advocacy and Policy Initiatives: The mean difference is 0.008 with a test value of 0.205. The p-value is 0.837, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and the test value for this category.

2.5 Research Grants: The mean difference is 0.073 with a test value of 2.066. The p-value is 0.039, which is less than the significance level ($\alpha = 0.05$). Therefore, there is a significant difference between the sample mean and the test value for this category.

In summary, based on the given data, the categories of Industrial Visit - Placement Ties and Research Grants show significant differences between the sample mean and the test value, while the other categories do not show significant differences.

4.6.3 Benefits
Problem Statement – Part F3

A research survey was conducted on the topic of 'A critical analyse of institutional strategic partnership on the performance of selected academic institution of Gujarat region. One of the questions asked was: **Rate the perceived benefits of strategic partnership on performance of academic institutions.** The faculties and students were asked to rate following characteristics on a scale from 1 to 7. Scale is as 1 being - Strongly Disagree and 7 - being Strongly Agree. Suppose following are the characteristics on answers received to this question.

- 3.1 Enhance Academic Reputation & Prestige
- 3.2 Increase Opportunities for Research Collaboration
- 3.3 Enhance International Learning Experience & Exposure
- 3.4 Increase Funding Opportunities
- 3.5 Access to a Wider Resources, Tools & Expertise
- 3.6 Flexibility in Learning i.e. Extracurricular Internship, etc

638 students and faculty members participated in the research survey. Researcher wanted to find the average of given characteristic in this question is relevant for each characterise or not. Researcher has used one sample T test to see the relevancy of each category by the average of this question.

F3.1　H1: There is no significance difference in mean figure of average opinion on 'Primary Purpose' on 'Above mentioned characteristics'. **(μ = 5.587)**

F3.2　H0:　There is significance difference in mean figure of average opinion on 'Primary Purpose' and 'Above mentioned characteristics'. **($\mu \neq$ 5.587)**

Table 4.6.3A - One-Sample Statistics for Benefits

	N	Mean	SD	SE
3.1 Enhance Academic Reputation & Prestige	638	5.57	.918	.036
3.2 Increase Opportunities for Research Collaboration	638	5.62	.898	.036
3.3 Enhance International Learning Experience & Exposure	638	5.67	.893	.035
3.4 Increase Funding Opportunities	638	5.53	.923	.037
3.5 Access to a Wider Resources, Tools & Expertise	638	5.54	.899	.036
3.6 Flexibility in Learning i.e. Extracurricular Internship, etc	638	5.59	.935	.037

Table 4.6.3B - One-Sample Test for Benefits

Test Value = 5.587	t	df	Sig.	Mean Difference
3.1 Enhance Academic Reputation & Prestige	-.496	637	.620	-.018
3.2 Increase Opportunities for Research Collaboration	.991	637	.322	.035
3.3 Enhance International Learning Experience & Exposure	2.239	637	.026	.079
3.4 Increase Funding Opportunities	-1.437	637	.151	-.053
3.5 Access to a Wider Resources, Tools & Expertise	-1.300	637	.194	-.046
3.6 Flexibility in Learning i.e. Extracurricular Internship, etc	.021	637	.983	.001

Interpretation:

3.1 Enhance Academic Reputation & Prestige: The p-value is 0.620, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and the test value for this category.

3.2 Increase Opportunities for Research Collaboration: The p-value is 0.322, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and the test value for this category.

3.3 Enhance International Learning Experience & Exposure: The p-value is 0.026, which is less than the significance level ($\alpha = 0.05$). Therefore, there is a significant difference between the sample mean and the test value for this category.

3.4 Increase Funding Opportunities: The p-value is 0.151, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and the test value for this category.

3.5 Access to a Wider Resources, Tools & Expertise: The p-value is 0.194, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and the test value for this category.

3.6 Flexibility in Learning i.e. Extracurricular Internship, etc: The p-value is 0.983, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and the test value for this category.

Based on the given data, only the category of Enhance International Learning Experience & Exposure shows a significant difference between the sample mean and the test value, while the other categories do not show significant differences.

4.6.4   Measurement
Problem Statement – Par F4

A research survey was conducted on the topic of 'A critical analyse of institutional strategic partnership on the performance of selected academic institution of Gujarat region. One of the questions asked was: **Show how outcomes of strategic partnership are measured in terms of performance of academic institution?** The faculties and students were asked to rate following characteristics on a scale from 1 to 7. Scale is as 1 being - Strongly Disagree and 7 - being Strongly Agree. Suppose following are the characteristics on answers received to this question.

- 4.1 Improved in Student's Academic Achievements
- 4.2 Increased Research Output & Publications
- 4.3 Student Satisfaction Level
- 4.4 Alumni Engagement
- 4.5 Improved Employability
- 4.6 Enhance Academic Reputation & Prestige
- 4.7 Enhance International Learning Experience & Exposure

638 students and faculty members participated in the research survey. Researcher wanted to find the average of given characteristic in this question is relevant for each characterize or not. Researcher has used one sample T test to see the relevancy of each category by the average of this question.

F4.1   H1: There is no significance difference in mean figure of average opinion on 'Primary Purpose' on 'Above mentioned characteristics'. **(μ = 5.559)**

F4.2   H0: There is significance difference in mean figure of average opinion on 'Primary Purpose' and 'Above mentioned characteristics'. **($\mu \neq 5.559$)**

Table 4.6.4A - One-Sample Statistics for Measurement

	N	Mean	SD	SE
4.1 Improved in Student's Academic Achievements	638	5.72	.873	.035
4.2 Increased Research Output & Publications	638	5.68	.892	.035
4.3 Student Satisfaction Level	638	5.45	.914	.036
4.4 Alumni Engagement	638	5.57	.905	.036
4.5 Improved Employability	638	5.45	.920	.036
4.6 Enhance Academic Reputation & Prestige	638	5.54	.916	.036
4.7 Enhance International Learning Experience & Exposure	638	5.51	.920	.036

Table 4.6.4B - One-Sample Test for Measurement

Test Value = 5.559	T	df	Sig.	Mean Difference
4.1 Improved in Student's Academic Achievements	4.731	637	.000	.164
4.2 Increased Research Output & Publications	3.479	637	.001	.123
4.3 Student Satisfaction Level	-3.105	637	.002	-.112
4.4 Alumni Engagement	.365	637	.715	.013
4.5 Improved Employability	-3.125	637	.002	-.114
4.6 Enhance Academic Reputation & Prestige	-.590	637	.556	-.021
4.7 Enhance International Learning Experience & Exposure	-1.404	637	.161	-.051

Interpretation:

4.1 Improved in Student's Academic Achievements: The p-value is 0.000, which is less than the significance level ($\alpha = 0.05$). Therefore, there is a significant difference.

4.2 Increased Research Output & Publications: The p-value is 0.001, which is less than the significance level ($\alpha = 0.05$). Therefore, there is a significant difference.

4.3 Student Satisfaction Level: The p-value is 0.002, which is less than the significance level ($\alpha = 0.05$). Therefore, there is a significant.

4.4 Alumni Engagement: The p-value is 0.715, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference.

4.5 Improved Employability: The p-value is 0.002, which is less than the significance level ($\alpha = 0.05$). Therefore, there is a significant difference.

4.6 Enhance Academic Reputation & Prestige: The p-value is 0.556, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference.

4.7 Enhance International Learning Experience & Exposure: The p-value is 0.161, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference.

The categories of Improved in Student's Academic Achievements, Increased Research Output & Publications, Student Satisfaction Level, and Improved Employability show significant differences between the sample mean and the test value, while the other categories do not show significant differences.

**4.6.5   Factors for Successful
Problem Statement – Part F5**

A research survey was conducted on the topic of 'A critical analyse of institutional strategic partnership on the performance of selected academic institution of Gujarat region. One of the questions asked was: **Rate the essential factor in establishing successful institutional strategic partnerships.** The faculties and students were asked to rate following characteristics on a scale from 1 to 7. Scale is as 1 being - Strongly Disagree and 7 - being Strongly Agree. Suppose following are the characteristics on answers received to this question.

- 5.1 Geographic Proximity
- 5.2 Similar Administrative Structures
- 5.3 Open Communication & Transparency
- 5.4 Common Research Interest
- 5.5 Address Integration Challenges Promptly

638 students and faculty members participated in the research survey. Researcher wanted to find the average of given characteristic in this question is relevant for each characterise or not. Researcher has used one sample T test to see the relevancy of each category by the average of this question.

F5.1   H1: There is no significance difference in mean figure of average opinion on 'Primary Purpose' on 'Above mentioned characteristics'. **(μ = 5.527)**

F5.2   H0: There is significance difference in mean figure of average opinion on 'Primary Purpose' and 'Above mentioned characteristics'. **(μ ≠ 5.527)**

Table 4.6.5A - One-Sample Statistics - Factors for Successful

	N	Mean	SD	SE
5.1 Geographic Proximity	638	5.65	.896	.035
5.2 Similar Administrative Structures	638	5.59	.907	.036
5.3 Open Communication & Transparency	638	5.48	.963	.038
5.4 Common Research Interest	638	5.53	.903	.036
5.5 Address Integration Challenges Promptly	638	5.39	.948	.038

Table 4.6.5B - One-Sample Test for - Factors for Successful

Test Value = 5.527	t	Df	Sig.	Mean Difference
5.1 Geographic Proximity	3.346	637	.001	.119
5.2 Similar Administrative Structures	1.735	637	.083	.062
5.3 Open Communication & Transparency	-1.201	637	.230	-.046
5.4 Common Research Interest	.034	637	.973	.001
5.5 Address Integration Challenges Promptly	-3.560	637	.000	-.134

Interpretation:

5.1 Geographic Proximity: The mean difference is 0.119 with a test value of 3.346. The p-value is 0.001, which is less than the significance level ($\alpha = 0.05$). Therefore, there is a significant difference between sample mean and test value for this factor.

5.2 Similar Administrative Structures: The mean difference is 0.062 with a test value of 1.735. The p-value is 0.083, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and the test value for this factor.

5.3 Open Communication & Transparency: The mean difference is -0.046 with a test value of -1.201. The p-value is 0.230, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and the test value for this factor.

5.4 Common Research Interest: The mean difference is 0.001 with a test value of 0.034. The p-value is 0.973, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and the test value for this factor.

5.5 Address Integration Challenges Promptly: The mean difference is -0.134 with a test value of -3.560. The p-value is 0.000, which is less than the significance level ($\alpha = 0.05$). Therefore, there is a significant difference between the sample mean and the test value for this factor.

In summary, based on the given data, the factors of Geographic Proximity and Address Integration Challenges Promptly show significant differences between the sample mean and the test value, while the other factors do not show significant differences.

4.6.6   Challenges
Problem Statement - Part F6

A research survey was conducted on the topic of 'A critical analyse of institutional strategic partnership on the performance of selected academic institution of Gujarat region. One of the questions asked was: **Show the level of challenges or obstacles encounters during the implementation of the institutional strategic partnership.** The faculties and students were asked to rate following characteristics on a scale from 1 to 7. Scale is as 1 being - Strongly Disagree and 7 - being Strongly Agree. Suppose following are the characteristics on answers received to this question.

- 6.1 Communication & Coordination
- 6.2 Language, Culture and Academic Practices
- 6.3 Logistics
- 6.4 Resource

638 students and faculty members participated in the research survey. Researcher wanted to find the average of given characteristic in this question is relevant for each characterise or not. Researcher has used one sample T test to see the relevancy of each category by the average of this question.

F6.1   H1: There is no significance difference in mean figure of average opinion on 'Primary Purpose' on 'Above mentioned characteristics'. **(µ = 5.501)**

F6.2   H0: There is significance difference in mean figure of average opinion on 'Primary Purpose' and 'Above mentioned characteristics'. **(µ ≠ 5.501)**

Table 4.6.6A - One-Sample Statistics for Challenges

	N	Mean	SD	SE
6.1 Communication & Coordination	638	5.51	.862	.034
6.2 Language, Culture and Academic Practices	638	5.42	.889	.035
6.3 Logistics	638	5.47	.943	.037
6.4 Resource	638	5.60	.901	.036

Table 4.6.6B - One-Sample Test for Challenges

Test Value = 5.501	T	df	Sig.	Mean Difference
6.1 Communication & Coordination	.246	637	.806	.008
6.2 Language, Culture and Academic Practices	-2.255	637	.024	-.079
6.3 Logistics	-.824	637	.410	-.031
6.4 Resource	2.829	637	.005	.101

Interpretation:

Based on the given statistics for the one-sample test of challenges, we can draw the following conclusions:

6.1 Communication & Coordination: The mean difference is 0.008 with a test value of 0.246. The p-value is 0.806, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and the test value for this challenge.

6.2 Language, Culture and Academic Practices: The mean difference is -0.079 with a test value of -2.255. The p-value is 0.024, which is less than the significance level ($\alpha = 0.05$). Therefore, there is a significant difference between the sample mean and the test value for this challenge.

6.3 Logistics: The mean difference is -0.031 with a test value of -0.824. The p-value is 0.410, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and the test value for this challenge.

6.4 Resource: The mean difference is 0.101 with a test value of 2.829. The p-value is 0.005, which is less than the significance level ($\alpha = 0.05$). Therefore, there is a significant difference between the sample mean and the test value for this challenge.

In summary, based on the given data, the challenges of Language, Culture and Academic Practices and Resource show significant differences between the sample mean and the test value, while the other challenges do not show significant differences.

4.6.7 Potential Risk
Problem Statement – Part F7

A research survey was conducted on the topic of 'A critical analyse of institutional strategic partnership on the performance of selected academic institution of Gujarat region. One of the questions asked was: **Show how potential risk associated with the institutional strategic partnership.** The faculties and students were asked to rate following characteristics on a scale from 1 to 7. Scale is as 1 being - Strongly Disagree and 7 - being Strongly Agree. Suppose following are the characteristics on answers received to this question.

- 7.1 Trust
- 7.2 Autonomy
- 7.3 Distribution of Resources
- 7.4 Individual Identity & Uniqueness
- 7.5 Monopolistic Practices

638 students and faculty members participated in the research survey. Researcher wanted to find the average of given characteristic in this question is relevant for each characterise or not. Researcher has used one sample T test to see the relevancy of each category by the average of this question.

F7.1   H1: There is no significance difference in mean figure of average opinion on 'Primary Purpose' on 'Above mentioned characteristics'. **(μ = 2.479)**

F7.2   H0: There is significance difference in mean figure of average opinion on 'Primary Purpose' and 'Above mentioned characteristics'. **($\mu \neq$ 2.479)**

Table 4.6.7A - One-Sample Statistics for Potential Risk

	N	Mean	SD	SE
7.1 Trust	638	2.39	.948	.038
7.2 Autonomy	638	2.51	.862	.034
7.3 Distribution of Resources	638	2.42	.889	.035
7.4 Individual Identity & Uniqueness	638	2.47	.943	.037
7.5 Monopolistic Practices	638	2.60	.901	.036

Table 4.6.7B- One-Sample Test for Potential Risk

Test Value = 2.479	T	df	Sig.	Mean Difference
7.1 Trust	-2.281	637	.023	-.086
7.2 Autonomy	.891	637	.373	.030
7.3 Distribution of Resources	-1.630	637	.104	-.057
7.4 Individual Identity & Uniqueness	-.235	637	.814	-.009
7.5 Monopolistic Practices	3.446	637	.001	.123

Interpretation:

7.1 Trust: The mean difference is -0.086 with a test value of -2.281. The p-value is 0.023, which is less than the significance level ($\alpha = 0.05$). Therefore, there is a significant difference between the sample mean and the test value for the potential risk of Trust.

7.2 Autonomy: The mean difference is 0.030 with a test value of 0.891. The p-value is 0.373, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and the test value for the potential risk of Autonomy.

7.3 Distribution of Resources: The mean difference is -0.057 with a test value of -1.630. The p-value is 0.104, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between the sample mean and the test value for the potential risk of Distribution of Resources.

7.4 Individual Identity & Uniqueness: The p-value is 0.814, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between sample mean and test value for the potential risk of Individual Identity & Uniqueness.

7.5 Monopolistic Practices: The mean difference is 0.123 with a test value of 3.446. The p-value is 0.001, which is less than the significance level ($\alpha = 0.05$). Therefore, there is a significant difference between the sample mean and the test value for the potential risk of Monopolistic Practices.

In summary, based on the given data, the potential risks of Trust and Monopolistic Practices show significant differences between the sample mean and the test value, while the other potential risks do not show significant differences.

4.6.8 Recommendation
Problem Statement – Part F8

A research survey was conducted on the topic of 'A critical analyse of institutional strategic partnership on the performance of selected academic institution of Gujarat region. One of the questions asked was: **Show level of recommendation for enhance academic performance through institutional strategic partnership.** The faculties and students were asked to rate following characteristics on a scale from 1 to 7. Scale is as 1 being - Strongly Disagree and 7 - being Strongly Agree. Suppose following are the characteristics on answers received to this question.

- 8.1 Regular Evaluation & Monitoring of Partnership
- 8.2 Faculty & Student Exchange Programs &Sharing
- 8.3 Strengthened Communication & Collaboration Channels
- 8.4 Secure Additional Funding for Collaborative Initiatives
- 8.5 Scale Existing Initiatives & Exploring New Opportunities

638 students and faculty members participated in the research survey. Researcher wanted to find the average of given characteristic in this question is relevant for each characterise or not. Researcher has used one sample T test to see the relevancy of each category by the average of this question.

H1: There is no significance difference in mean figure of average opinion on 'Primary Purpose' on 'Above mentioned characteristics'. **(μ = 5.595)**

H0: There is significance difference in mean figure of average opinion on 'Primary Purpose' and 'Above mentioned characteristics'. **(μ ≠ 5.595)**

Table 4.6.8A - One-Sample Statistics for Recommendation

	N	Mean	SD	SE
8.1 Regular Evaluation & Monitoring of Partnership	638	5.57	.936	.037
8.2 Faculty & Student Exchange Programs &Sharing	638	5.72	.879	.035
8.3 Strengthened Communication & Collaboration Channels	638	5.68	.891	.035
8.4 Secure Additional Funding for Collaborative Initiatives	638	5.44	.915	.036
8.5 Scale Existing Initiatives & Exploring New Opportunities	638	5.57	.906	.036

Table 4.6.8B - One-Sample Test for Recommendation

Test Value = 5.595	T	df	Sig.	Mean Difference
8.1 Regular Evaluation & Monitoring of Partnership	-.576	637	.565	-.021
8.2 Faculty & Student Exchange Programs &Sharing	3.488	637	.001	.121
8.3 Strengthened Communication & Collaboration Channels	2.328	637	.020	.082
8.4 Secure Additional Funding for Collaborative Initiatives	-4.223	637	.000	-.153
8.5 Scale Existing Initiatives & Exploring New Opportunities	-.770	637	.442	-.028

Interpretation:

8.1 Regular Evaluation & Monitoring of Partnership: The mean difference is -0.021 with a test value of -0.576. The p-value is 0.565, which is greater than significance level ($\alpha = 0.05$). Therefore there is no significant difference between sample mean and test value for recommendation of Regular Evaluation & Monitoring of Partnership.

8.2 Faculty & Student Exchange Programs & Sharing: The mean difference is 0.121 with a test value of 3.488. The p-value is 0.001, which is less than significance level ($\alpha = 0.05$). Therefore, there is a significant difference between sample mean and test value for the recommendation of Faculty & Student Exchange Programs & Sharing.

8.3 Strengthened Communication & Collaboration Channels: The mean difference is 0.082 with a test value of 2.328. The p-value is 0.020, which is less than significance level ($\alpha = 0.05$). There is a significant difference between sample mean and test value for recommendation of Strengthened Communication & Collaboration Channels.

8.4 Secure Additional Funding for Collaborative Initiatives: The p-value is 0.000, which is less than the significance level ($\alpha = 0.05$). Therefore, there is a significant difference between the sample mean and the test value for the recommendation.

8.5 Scale Existing Initiatives & Exploring New Opportunities: The p-value is 0.442, which is greater than the significance level ($\alpha = 0.05$). Therefore, there is no significant difference between sample mean and the test value for recommendation.

Based on the given data, the recommendations of Faculty & Student Exchange Programs & Sharing, Strengthened Communication & Collaboration Channels, and Secure Additional Funding for Collaborative Initiatives show significant differences between the sample mean and the test value, while the recommendations of Regular Evaluation & Monitoring of Partnership and Scale Existing Initiatives & Exploring New Opportunities do not show significant differences.

4.6.9 Influence on Faculty & Staff
Problem Statement – Part F9

A research survey was conducted on the topic of 'A critical analyse of institutional strategic partnership on the performance of selected academic institution of Gujarat region. One of the questions asked was: **Show how strategic partnership influences faculty and staff development.** The faculties and students were asked to rate following characteristics on a scale from 1 to 7. Scale is as 1 being - Strongly Disagree and 7 - being Strongly Agree. Suppose following are the characteristics on answers received to this question.

- 9.1 Create Opportunities for Career Growth
- 9.2 Enhanced Collaboration and Knowledge Sharing
- 9.3 Improved Faculty & Staff Morale
- 9.4 Improved Work Culture

638 students and faculty members participated in the research survey. Researcher wanted to find the average of given characteristic in this question is relevant for each characterise or not. Researcher has used one sample T test to see the relevancy of each category by the average of this question.

H1: There is no significance difference in mean figure of average opinion on 'Primary Purpose' on 'Above mentioned characteristics'. **(μ = 5.506)**

H0: There is significance difference in mean figure of average opinion on 'Primary Purpose' and 'Above mentioned characteristics'. **($\mu \neq$ 5.506)**

Table 4.6.9A - One-Sample Statistics for Influence on Faculty & Staff

	N	Mean	SD	SE
9.1 Create Opportunities for Career Growth	638	5.45	.922	.037
9.2 Enhanced Collaboration and Knowledge Sharing	638	5.55	.917	.036
9.3 Improved Faculty & Staff Morale	638	5.52	.918	.036
9.4 Improved Work Culture	638	5.50	.937	.037

Table 4.6.9B - One-Sample Test for Influence on Faculty & Staff

Test Value = 5.506	T	df	Sig.	Mean Difference
9.1 Create Opportunities for Career Growth	-1.452	637	.147	-.053
9.2 Enhanced Collaboration and Knowledge Sharing	1.173	637	.241	.043
9.3 Improved Faculty & Staff Morale	.482	637	.630	.018
9.4 Improved Work Culture	-.204	637	.838	-.008

Interpretation:

9.1 Create Opportunities for Career Growth: The mean difference is -0.053 with a test value of -1.452. The p-value is 0.147, which is greater than the significance level (α = 0.05). Therefore, there is no significant difference between the sample mean and the test value for the influence of creating opportunities for career growth on faculty and staff.

9.2 Enhanced Collaboration and Knowledge Sharing: The mean difference is 0.043 with a test value of 1.173. The p-value is 0.241, which is greater than the significance level (α = 0.05). Therefore, there is no significant difference between the sample mean and the test value for the influence of enhanced collaboration and knowledge sharing on faculty and staff.

9.3 Improved Faculty & Staff Morale: The mean difference is 0.018 with a test value of 0.482. The p-value is 0.630, which is greater than the significance level (α = 0.05). Therefore, there is no significant difference between the sample mean and the test value for the influence of improved faculty and staff morale.

9.4 Improved Work Culture: The mean difference is -0.008 with a test value of -0.204. The p-value is 0.838, which is greater than the significance level (α = 0.05). Therefore, there is no significant difference between the sample mean and the test value for the influence of improved work culture on faculty and staff.

In summary, based on the given data, none of the factors show a significant difference between the sample mean and the test value for their influence on faculty and staff.

Summary of One Sample T Test

Definition / Objective:

The objective of using the one-sample T-test is to determine whether the mean of a sample significantly differs from a known or hypothesized population mean of a construct or variable of study*.

*Construct or Variables of Study:

1. Primary Purpose
2. Effectiveness
3. Benefits
4. Measurement
5. Factors for Successful
6. Challenges
7. Potential Risk
8. Recommendation
9. Influence on Faculty & Staff

Interpretation:

In terms of primary purpose, none of the hypotheses showed significance, suggesting that the perceived importance of various purposes did not differ significantly. Similarly, for effectiveness, most hypotheses did not show significance, indicating that the effectiveness of different strategies did not differ significantly.

Regarding benefits, only the hypothesis related to enhancing international learning experience and exposure showed significance, indicating a perceived difference in this aspect. For measurement, hypotheses related to improved student academic achievements, increased research output and publications, student satisfaction level, improved employability, and enhanced academic reputation and prestige showed significance, suggesting a perceived difference in these measures.

Factors for success, challenges, potential risks, recommendations, and influence on faculty and staff generally did not show significant differences. However, some hypotheses related to factors for success, challenges, potential risks, and recommendations did show significance, indicating perceived differences in these areas.

6	Construct or Variable of Study 1- One Sample T Test	Sig.	Result
6.1	*Primary Purpose*		
H1	1.1 Student - Faculty Exchange Mentoring Programs	0.751	NS
H2	1.2 Collaborative Work	0.098	NS
H3	1.3 Educational Offerings & Expansion Market Reach	0.705	NS
H4	1.4 Increasing Funding for Academic Programs	0.138	NS
H5	1.5 Improving Academic Performance	0.975	NS
6.2	*Effectiveness*		
H6	2.1 Student - Faculty Exchange & Mentoring Programs	0.333	NS
H7	2.2 Collaborative Work	0.405	NS
H8	2.3 Industrial Visit - Placement Ties	0.038	S
H9	2.4 Advocacy and Policy Initiatives	0.837	NS
H10	2.5 Research Grants	0.039	
6.3	*Benefits*		
H11	3.1 Enhance Academic Reputation & Prestige	0.620	NS
H12	3.2 Increase Opportunities for Research Collaboration	0.322	NS
H13	3.3 Enhance International Learning Experience & Exposure	0.026	S
H14	3.4 Increase Funding Opportunities	0.151	NS
H15	3.5 Access to a Wider Resources, Tools & Expertise	0.194	NS
H16	3.6 Flexibility in Learning i.e. Extracurricular Internship, etc	0.983	NS
6.4	*Measurement*		
H17	4.1 Improved in Student's Academic Achievements	0.000	S
H18	4.2 Increased Research Output & Publications	0.001	S
H19	4.3 Student Satisfaction Level	0.002	S
H20	4.4 Alumni Engagement	0.715	NS
H21	4.5 Improved Employability	0.002	S
H22	4.6 Enhance Academic Reputation & Prestige	0.556	NS
H23	4.7 Enhance International Learning Experience & Exposure	0.161	NS

(Table 4.6.1 – Summary Result of One Sample T: Prepared by Researcher) Cont…

6.5	Factors for Successful	Sig.	Result
H24	5.1 Geographic Proximity	0.001	S
H25	5.2 Similar Administrative Structures	0.083	S
H26	5.3 Open Communication & Transparency	0.230	NS
H27	5.4 Common Research Interest	0.973	NS
H28	5.5 Address Integration Challenges Promptly	0.000	S
6.6	Challenges		
H29	6.1 Communication & Coordination	0.806	NS
H30	6.2 Language, Culture and Academic Practices	0.024	S
H31	6.3 Logistics	0.410	NS
H32	6.4 Resource	0.005	S
6.7	Potential Risk		
H33	7.1 Trust	0.023	S
H34	7.2 Autonomy	0.373	NS
H35	7.3 Distribution of Resources	0.104	NS
H36	7.4 Individual Identity & Uniqueness	0.814	NS
H37	7.5 Monopolistic Practices	0.001	S
6.8	Recommendation		
H38	8.1 Regular Evaluation & Monitoring of Partnership	0.565	NS
H39	8.2 Faculty & Student Exchange Programs &Sharing	0.001	S
H40	8.3 Strengthened Communication & Collaboration Channels	0.020	S
H41	8.4 Secure Additional Funding for Collaborative Initiatives	0.000	S
H42	8.5 Scale Existing Initiatives & Exploring New Opportunities	0.442	NS
6.9	Influence on Faculty & Staff		
H43	9.1 Create Opportunities for Career Growth	0.147	NS
H44	9.2 Enhanced Collaboration and Knowledge Sharing	0.241	NS
H45	9.3 Improved Faculty & Staff Morale	0.630	NS
H46	9.4 Improved Work Culture	0.838	NS

Cont… (Table 4.6.2 – Summary Result of One Sample T: Prepared by Researcher)