

CHAPTER IV :ANALYSIS AND INTERPRETATION OF THE DATA4.1 INTRODUCTION

In the previous chapter a complete account of the approach to study the main theme of the present investigation was elucidated both by the process of data collection and the methods to be applied in analysing and interpreting data collected through research instrument where it is described and discussed at length. The present chapter is devoted to the analysis and interpretation of the data according to the twenty-one hypotheses as formulated in the previous chapter. The major concern of the present investigation as described in the previous chapter is the study of the attitude of the teacher-educators towards the programmes of non-formal education leading to life-long education in the State of Gujarat. The attitude towards the programmes of non-formal education is studied also in the context of certain biographical variables of the teachers viz., sex, age, teaching experience etc. It is further studied in the context of certain variables related to colleges of education also viz., location of the

college and region of the college. All these facets of the study of attitude of teacher-educators towards the programmes of non-formal education leading to life-long education in the State of Gujarat are specifically organised under certain hypotheses. In the present chapter these hypotheses will be tested through employing suitable statistical techniques and pertinent results will be analysed and interpreted.

4.2 IDENTIFICATION OF ATTITUDE OF TEACHER-EDUCATORS TOWARDS PROGRAMMES OF NON-FORMAL EDUCATION LEADING TO LIFELONG EDUCATION

Hypothesis 1 :

The hypothesis is worded as under :

"The teacher-educators of the education colleges (i.e. B.Ed. colleges) in different regions of the Gujarat State will not show significant variations in their attitude towards the programmes of non-formal education leading to life-long education".

The rationale of the hypothesis is that attitude is conceptualised^a in the study as generated or organised through experience and exerts a directive or dynamic influence upon the individual's response to particular objects and situations with which it is related. Thus attitude makes the individual

behave in characteristic ways towards persons, objects or issues to which they are related. The attitude of teacher-educators of various regions towards programmes of non-formal education leading to life-long education differ from region to region because attitudes are learned in a culture in course of individual development. The kind of environment the views and values prevalent in a sub-culture has an indelible impact on the attitudes which teacher-educators possess towards the programmes of non-formal education leading to life-long education. This invariably happens in all persons working in all social institutions or organisations.

The hypothesis has two main dimensions. Identification of attitude of the teacher-educators of colleges of education situated in various regions of the Gujarat State and then the determination of the extent of variation in the attitude which has been identified. For identifying the attitude the following procedure was adopted by the investigator to classify the sampled teacher-educators on an attitude continuum.

In order to determine significant differences between the attitude of the teacher-educators of various regions the 't' test was used. The result is shown in the Table 4.1 given on the next page.

Table 4.1 : Significant difference between the regions with all the components of non-formal education.

Grand Total	Region				t-value between the groups		
	1	2	3	4			
	Saurashtra-Kutch	North Gujarat	Central Gujarat	South Gujarat			
Mean	364.18	354.78	331.99	351.37	1.46	NS	1&2
					4.44	**	2&3
SD	31.29	39.50	31.32	42.38	2.57	*	3&4
					5.73	**	1&3
					0.39	NS	2&4
					1.49	NS	1&4

Note: ** Significant at .01 level

* Significant at .05 level

NS Not significant

Components of Non-formal Education Leading to

Life-long Education

Region 1 and 2 : Saurashtra-Kutch and North Gujarat.

Table 4.1 sets out the mean scores of the attitude of the teacher-educators of Saurashtra-Kutch region (1) are higher (364.18) than the mean scores of the attitude of teacher-educators of Central Gujarat Region (331.99) which is not significant.

Region 2 and 3 : North Gujarat and Central Gujarat : The result reveals that the mean scores of the attitude of teacher-educators of North Gujarat region are higher (354.78) than those of the Central Gujarat region (331.99) and is further significant at .01 level.

Region 3 & 4 : Central Gujarat and South Gujarat : It appears from the result that the mean scores of the attitude of teacher-educators of South Gujarat region are higher (351.37) than those of the Central Gujarat (331.99) and is further significant at .05 level.

Region 1 & 3 : Saurashtra-Kutch and Central Gujarat : It can be seen from the results of Saurashtra-Kutch and Central-Gujarat that the mean scores of the attitude of teacher-educators of Saurashtra-Kutch region are higher (364.18) than those of Central Gujarat (331.99) and it is significant at .01 level.

Region 2 & 4 : North Gujarat and South Gujarat. Looking to the mean scores of the attitude of teacher-educators of North Gujarat and South Gujarat region, North Gujarat is higher (354.78) than that of South Gujarat (351.37) and the result is not significant at .05 level.

Region 1 & 4 : Saurashtra-Kutch and South Gujarat : From the result, it appears that the mean scores of Saurashtra-Kutch are higher (364.18) than those of South Gujarat (351.57) and further it is not significant.

From the above results of all the four regions of Gujarat it can be seen that the mean scores of the attitude of teacher-educators of Central Gujarat are lower (331.99) than those of

other regions of Gujarat and is significant at .01 or .05 level. The reason for significance of difference may be on account of advancement of Central Gujarāt region. Central Gujarat region consists of three districts viz., the Kheda, Panchmahals and Baroda. The Kheda district is noted for its economic prosperity, social conservatism and of an educational advancement. The Panchmahals district is inhabited by a large section of Scheduled tribes. It is almost a hilly track of land and therefore it is very slowly developing socially, economically and even educationally while Baroda district is industrially rapidly developing and educationally more advanced than its neighbouring district. The three districts together are advanced in education as compared to other regions of Gujarat. Thus the teacher educators of Central Gujarat show less favourable attitude towards non-formal education while the teacher-educators of other three regions show more favourable attitude towards non-formal education as all the three regions possess more backwardness in relation to education and other aspects.

The null hypothesis of no variation in the mean scores of the attitude of teacher-educators of the various regions is partly rejected.

Hypothesis 2 :

The hypothesis is worded as under :

"Teacher Educators of the urban colleges will not differ significantly from the college teachers of semi-urban with respect to their attitude towards the programmes of non-formal education leading to life-long education."

The rationale of the hypothesis is that attitude of the teacher-educators of urban and semi-urban colleges will not differ towards the programmes of non-formal education leading to life-long education. The concept 'attitude' includes mental set task but gradually this concept becomes restricted to mean social attitude. Attitudes can be developed from man's cultural determinants, from parental and group influence and from one's personality. Attitudes are not independent factors. Attitudes imply subject object relationship. Therefore, the attitude of teacher-educators towards the programmes of non-formal education differ in urban and semi-urban areas because the environment, culture, and economic and social factors influence on the attitude which the teacher-educators possess towards the programmes of non-formal education leading to life-long education.

The hypothesis required examination of possible relationship between the situation of a college in terms of urban and

semi-urban location.

The hypothesis formulated on the basis of common assumption that teacher's work with regards to non-formal education programme is same in both urban and semi-urban areas. Urban areas are influenced by the modern means of communications. They possess modern facilities of transport, radio, newspapers, etc. However, semi-urban areas have adequate means for producing agricultural products. Both the areas have similar facilities and equal opportunities due to the advancement of science and technology.

In order to test this part of hypothesis, the sampled colleges were classified into two categories: (1) Urban colleges in big cities and (2) Semi-urban colleges in Taluka/towns.

Table 4.2 : Significant difference between urban and semi-urban with all the components of NFE (GT)
(Grand Total)

Urban		Semi-urban		t-value
Mean	SD	Mean	SD	
325	37.65	345.30	37.78	1.61 NS

NS = Not significant

The result reveals that there is no significant difference between the attitude of the urban and semi-urban teacher-

-educators with regards to the programmes of non-formal education leading to life-long education. So the teacher-educators of both the areas agree with the programmes of non-formal education and their implementation procedure. Teacher-educators may have keen interest in accepting the programmes. However, the mean scores of the attitude of teacher-educators of Semi-urban areas are higher (345.30) than the mean scores of the attitude of teacher-educators of urban areas. It may be due to less educational facilities in semi-urban areas as compared to urban areas.

From the above discussion it can be said that the hypothesis stands

Hypothesis 3 :

The hypothesis is worded as under :

"The attitude of teacher-educators towards the programmes of non-formal education leading to life-long education is independent of certain biographical characteristics of teacher-educators such as (1) age, (2) sex, (3) teaching experiences and (4) visit to a foreign country.

The investigator has discussed with regards to attitude in the hypothesis 1.

The hypothesis further stipulates a relationship between

some biographical variables of teacher-educators and the programmes of non-formal education leading to life-long education. This is examined below in Table 4.3.

Table 4.3 : Significant difference between age-groups with the component (Grand Total)

	Age-Group						't'-value between the groups
	1		2		3		
	Mean	SD	Mean	SD	Mean	SD	
Grand Total	337.89	31.40	354.87	39	356.61	44.93	3.54** 1&2 0.20 2&3 2.45* 1&3

** Significant at .01 level

* Significant at .05 level

Age :

Table 4.3 shows significant difference between the attitude of teacher-educators of the different age-groups towards the programmes of non-formal education.

Biographical variable in the context of which the hypothesis was tested, was the age of the teacher-educators. Age of the teacher-educators is divided into three categories (1) 30-39 age-group (2) 40-49 age-group and (3) 50 years and above.

Age-group 1 & 2 : The table reveals that the mean scores of the attitude of teacher-educators of the age-group 40-49 are higher (354.87) than the mean scores of the attitude of

teacher-educators of the age-group 30-39 (337.89) and is further significant .01 level significance of the difference may be on account of different mental orientations, values and angles to view the components.

Age-group 2 & 3 : It also appears that the mean scores of the attitude of the teacher-educators of the age-group 50 and onwards are slightly higher (356.61) than the mean scores of the attitude of the teacher-educators of the age-group 40 to 49 (354.87) and is further not-significant. So both the teacher-educators of these groups have same type of the favourable attitude towards the programmes of non-formal education leading to life-long education. Age is not a factor influencing the attitude of teacher-educators in these two age-groups.

Age-group 1 & 3 : The result further reveals that the mean-score\$of the attitude of teacher-educators of the age-groups 50 and above are higher (356.61) than the mean scores of the attitude of the teacher-educators of the age-group 30-39 and is further significant at .05 level. The reason for difference may be on account of different conditions and environments of work between these two age-groups.

Sex :

The second biographical variable selected to test the

hypothesis was the sex of the teacher-educators. Due to the difference in sex, the attitude of teacher-educators may differ towards the programmes of non-formal education leading to life-long education. It is commonly believed that male teachers act more with responsibilities than the female teachers due to job awareness. Female teachers, on the other hand, are affected by their domestic problems too.

For testing the hypothesis t-test technique was applied. The result is shown in the Table 4.4.

Table 4.4 : Significant difference between Male and Female with the component (Grand Total)

	Male		Female		t-value
	Mean	SD	Mean	SD	
Grand Total	348.69	35.97	349.42	41.36	0.13 NS

NS = Not significant

It appears from the result that the mean scores of the attitude of male teacher-educators are slightly lower (348.69) than that of the female teacher-educators (349.42) and looking to the t-value the result is not significant at .05 level or .01 level. The reason for no significance may be on account of the equal opportunities in education for both the sexes. Both the sexes may have equal facilities of work in the colleges of education in every aspect.

Teaching Experience :

The third biographical variable selected to test the hypothesis was the teaching experience of the teacher-educators. Like age and sex it is commonly believed that experience adds to the competence of a person. That is why in advertisement for recruiting the college teachers, number of years is stressed. For testing the hypothesis, the t-test technique was applied. The result is shown in the Table 4.5.

Table 4.5 : Significant Difference between below 5 years' and above 5 years' teaching experience with the components(Grand Total)

	<u>Below 5 years'</u>		<u>Above 5 years'</u>		't' value
	Mean	SD	Mean	SD	
Grand Total	342.26	36.37	350.01	38.01	1.22 NS

NS = Not significant

Table 4.5 sets out the mean scores of the attitude of teacher-educators having more than five years' teaching experience are higher (350.01) than those of having less than five years' teaching experience (342.26) of the teacher-educators towards the programmes of non-formal education leading to life-long education. Looking to the t-value it is found that there is no significant difference at either .01 or .05 level between the two groups of the teacher-educators.

Both the groups of the teacher-educators have similar attitude towards the programmes. The reason for no significance may be on account of the satisfaction and at the same time enjoy the sense of doing their jobs with zeal and missionary spirit towards the community and learners. The teaching experience does not influence the attitude towards the programmes of non-formal education.

Visits to foreign countries :

The fourth biographical variable selected to test the hypothesis was the visit of the teacher-educators to a foreign country. It is assumed that varieties of experiences at various levels of the teacher-educators in foreign country may affect the attitude of teacher-educators. They may be affected by the culture, environments, rituals and customs of the foreign country. The educational environment of the foreign country may allow the teacher-educators to change the attitude towards the programmes of non-formal education.

In testing this hypothesis the t-test technique was found to be most appropriate. The following Table 4.6 will show the result of the significance.

Table 4.6 : Significant difference between visit to Foreign and non-visit with the component : Grand Total.

	Visit to ^a foreign country		Not visited to ^b the foreign country		t-value
	Mean	SD	Mean	SD	
Grand Total	356.44	28.36	348.31	38.38	0.88 NS

NS = Not significant

Table 4.6 sets out the mean scores of the attitude of the teacher-educators having their visit to a foreign country are higher (356.44) than those of having not visited a foreign country (348.31) and the difference is not at the significant level. Both the groups of the teacher-educators have the same attitude towards the programmes of non-formal education. The reason for no significance in the attitude of teacher-educators may be due to cooperative efforts in the development of education in the country (India) in general and Gujarat in particular). Good virtues and culture of home, the influence of religion may not allow the teacher-educators who have their visit to a foreign country to change their attitude towards the programmes of non-formal education. Foreign visit of the teacher-educators have no impact to change their attitude towards the programmes of non-formal education leading to life-long education.

Conclusion :

The overall conclusion of the discussing that has been preceded so far is that the attitude of teacher-educators is independent of certain biographical variables such as (1) age (2) sex (3) teaching experiences and (4) visit to a foreign country. But it is significant at .01 level for the age-group 30-39 and 40-49 and also it is significant at .05 level for the 30-39 and 50 and above.

The hypothesis therefore partly stands at it is formulated.

4.3 IDENTIFICATION OF THE ATTITUDE OF TEACHER-EDUCATORS TOWARDS THE VARIOUS COMPONENTS OF THE PROGRAMMES OF NON-FORMAL EDUCATION LEADING TO LIFE LONG EDUCATION

Identification of the components or dimensions underlying the programmes of non-formal education leading to life-long education involved (a) constructing attitudinal questionnaire items covering important aspects of the programmes of non-formal education leading to life-long education is described and discussed at length in the previous chapter. The result showed that six relatively main dimensions of non-formal education programmes leading to life-long education can be measured by the attitude of teacher-educators. The attitude of teacher-educators would

be measured, identified and interpreted. Identification of the attitude of teacher educators is discussed earlier in this chapter. The composition of the important factors implicit in the 100 items. The factors named in non-formal education programmes leading to life-long education were as under :

1. General aspects of non-formal education programmes
2. Need and importance of non-formal education programmes
3. Aims and objectives of non-formal education programmes
4. Programmes of non-formal education
5. Organisational aspects of non-formal education programmes
6. Suggestions of non-formal education programmes.

These factors had been briefly conceptualised in the previous Chapter III.

The data collected was analysed on computer in relation to various factors, viz., Region, Location (Urban, semi-urban), age, sex, teaching experience etc.

In order to determine significant variations of the attitude of teacher-educators towards the dimensions of six major components (as stated above) of non-formal education leading to life-long education the t-test technique was used. The results are tabulated in various tables to test the hypotheses set out in this chapter.

Hypothesis 4 :

The hypothesis is worded as under :

"The teacher-educators of the education colleges in different regions of Gujarat State will not show significant variations in their attitude towards the dimensions of general aspects of non-formal education programmes leading to life-long education".

This hypothesis required examination of possible relationship between the attitude of teacher educators of the education colleges of different regions towards the components of general aspects of non-formal education leading to life-long education.

The hypothesis is formulated on the basis of certain common assumptions. Various regions have their own peculiarities and qualities. They have their own culture, customs, rituals and environments with regards to education. But in educational policy of the government of Gujarat is ^{the} same in each region.

In order to test this hypothesis, four regions were taken into consideration : (1) Saurashtra and Kutch region (2) North Gujarat Region (3) Central Gujarat Region (4) South Gujarat Region.

The mean scores of the attitude of the teacher-educators

of the education colleges on different dimensions of non-formal education programmes were computed. In order to determine whether the difference is in the mean scores of each teacher educator was really significant or merely accidental, the t-test technique was applied. The results are presented in the following table 4.7, on the next page

Components of General aspects :

Region 1 & 2 : Saurashtra-Kutch and North Gujarat :

From the result it reveals that the mean scores of attitude of the teacher-educators of North Gujarat region are higher than those of Saurashtra-Kutch towards all the components of general aspects except 3rd component viz., administration and it is not significant.

Region 2 & 3 : North Gujarat and Central Gujarat : It can be seen from the result that the mean scores of the attitude of teacher-educators of North-Gujarat region are higher than those of Central Gujarat region towards all the components of General aspects and further it is significant at .01 level for the 1, 3, 5 components viz., concept, administration, and general aspects on the whole. It is also significant at .05 level for the component 2nd viz., system. But no significant difference is found for the component 4th viz., Operational aspects.

Table 4.7 : Significant difference between the attitude of teacher educators of the different regions towards the components of general aspects.

No.of cases : 1. Saurashtra-Kutch = 48
 2. North Gujarat = 114
 3. Central Gujarat = 88
 4. South Gujarat = 27

Components		Region				t-value between groups		
		1	2	3	4			
1. Concept	Mean	17.98	18.30	17.04	18.74	0.63	NS	1&2
	SD	2.76	3.06	2.90	3.15	2.96**		2&3
						2.59*		3&4
						1.82	NS	1&3
						0.64	NS	2&4
						1.08	NS	1&4
2. System	Mean	14.08	14.36	13.60	14.48	0.65	NS	1&2
	SD	2.05	2.70	2.15	2.72	2.17*		2&3
						1.73	NS	3&4
						1.26	NS	1&3
						0.20	NS	2&4
						0.72	NS	1&4
3. Admini- stration	Mean	10.54	10.42	9.51	11.11	0.35	NS	1&2
	SD	2.13	2.14	1.95	1.50	3.73	**	1&3
						3.91	**	3&4
						2.84	**	1&3
						1.59	NS	2&4
						1.22	NS	1&4
4. Oper	Mean	11.80	11.58	11.04	12.74	0.54	NS	1&2
	SD	1.92	2.26	2.48	2.14	1.161	NS	2&3
						3.20**		3&4
						1.80	NS	1&3
						2.39*		2&4
						1.96	NS	1&4
5. General	Mean	54.40	54.77	51.15	57.7	0.33	NS	1&2
	SD	5.13	6.99	6.01	5.67	3.86	**	2&3
						4.52	**	3&4
						3.15	**	1&3
						1.58	NS	2&4
						2.08	*	1&4

** Significant at .01 level

* Significant at .05 level

NS Not significant

Region 3 & 4 : Central Gujarat and South Gujarat:

From the result it appears that the mean scores of the attitude of teacher-educators of South Gujarat region are higher than those of the Central Gujarat towards all the components of General aspects and also significant at .01 level towards the components 3,4,5 viz., Administration, Operational and General aspects on the whole and is further significant at .05 level on component 1 viz., Concept. However, component 2 viz., System is concerned, it is not significant.

Region 1 & 3 : Saurashtra-Kutch and Central Gujarat :

From the result it appears that the mean scores of the attitude of teacher-educators of Saurashtra-Kutch region are higher than those of Central Gujarat region towards all the components of General aspects. But significant differences are found at .01 level on the 3rd and 5th components viz., Administration and General aspects on the whole. However, Components 1, 2, and 4 viz., Concept, System and Operational aspects are concerned, it is not significant.

Region 2 & 4 : North Gujarat and South Gujarat : From the result it reveals that the mean scores of the attitude of teacher-educators of South Gujarat region are higher than those the North Gujarat region and further it is not significant on 1, 2, 3 and 5 components viz., Concept, System,

Administration and General aspects on the whole. But significant difference is found at .05 level for the 4th component viz., Operational aspect.

Region 1 & 4 : Saurashtra Kutch and South Gujarat : The result sets out the mean scores of all the components of General aspects of the attitude of teacher-educators of South Gujarat region are higher than those of Saurashtra-Kutch region. Though it is in favour of South Gujarat region, it is not significant for 1, 2, 3, 4 components viz., Concept, System, Administration and Operational Aspects. But with regards to 5th Component viz., General Aspects on the whole the result is indicative of significance at .05 level.

From the above result it appears that only the South Gujarat region has the considerable lead of the mean scores of the attitude of teacher-educators towards general aspect of non-formal education leading to life-long education. While Central Gujarat region shows the lowest mean scores as compared to other regions. South Gujarat region shows more favourable attitude towards non-formal education. It may be because of the efforts of enlightened teaching institutions and department of education of South Gujarat University ^{which} has just started various programmes of non-formal education in Surat and in surrounding areas. The result of Central Gujarat region in

this hypothesis is supported by the previous result in Hypothesis-1. Therefore the hypothesis partly stands as it is formulated.

Hypothesis - 5 :

The hypothesis is worded as under :

"The teacher-educators of the education colleges in different regions of Gujarat State will not show significant variations in their attitude towards the dimensions of Need and Importance of non-formal education programmes leading to life-long education."

The investigator proposes to test this hypothesis by finding out the mean scores of the attitude of teacher-educators on the dimensions of the Need and Importance of non-formal education leading to life-long education with the research instrument. In the previous hypothesis No.4, it has been already shown the mean-scores of the attitude of teacher-educators of the education colleges in different regions of Gujarat State. While testing the Hypothesis-5, the mean scores of the attitude of teacher-educators of all the dimensions of need and importance are computerised. Other procedures are already shown in the previous hypothesis No.4.

The results are presented in the following table No.4.8.

The hypothesis is tested through the t-test technique.

Table 4.8 : Significant difference between the attitude of Teacher-educators of different regions with the components of need and importance.

Components	Region				t-value between the groups	
	1	2	3	4		
1. Need						
Mean	16.87	15.77	15.22	17.77	2.60**	1&2
SD	1.60	2.74	2.12	2.27	1.54 NS	2&3
					5.36**	3&4
					4.68**	1&3
					3.52**	2&4
					2.004*	1&4
2. Importance						
Mean	19.0	19.53	18.15	19.85	0.07 NS	1&2
SD	2.54	4.86	2.71	1.63	1.54 NS	2&3
					3.07**	3&4
					1.75 NS	1&3
					0.84 NS	2&4
					1.56 NS	1&4
3. Need and Importance						
Mean	35.87	34.12	33.88	37.63	2.26*	1&2
SD	3.35	4.88	4.46	3.15	1.10 NS	2&3
					4.59 **	3&4
					3.37**	1&3
					3.55**	2&4
					2.22*	1&4

** Significant at .01 level

* Significant at .05 level

NS Not Significant.

Need and Importance :

1 & 2 : Saurashtra-Kutch and North Gujarat Region : On the

whole the mean scores of the attitude of teacher-educators of Saurashtra-Kutch region are higher (35.87) than those of the North Gujarat region and is further significant at .05 level. It is also significant at .01 level with regards to the component 1 viz., Need.

2 & 3 : North Gujarat and Central Gujarat : The result reveals that the mean scores of the attitude of teacher-educators of North Gujarat region are higher (34.12) than those of the Central Gujarat region (33.88) on the whole and towards all the components of Need and Importance.

3 & 4 : Central Gujarat and South Gujarat Regions : The result indicates that the mean scores of the attitude of teacher-educators of South Gujarat are higher in all components than those of Central Gujarat and is further significant at .01 level towards all the components.

1 & 3 : Saurashtra-Kutch and Central Gujarat : The result sets out the mean scores of the attitude of teacher-educators of Saurashtra-Kutch are higher in all components than those of Central Gujarat and is significant at .01 level except the component 2 viz., Importance.

2 & 4 : North Gujarat and South Gujarat : The result sets out the mean scores of the attitude of teacher-educators of South Gujarat are higher than those of North Gujarat and

further it is significant at .01 level for components 1 and 2 viz., Need and Need and Importance on the whole. Further it is not significant for the component 2 viz., Importance.

Region 1 & 4 : Saurashtra-Kutch and South Gujarat : The result reveals the mean scores of the attitude of the teacher-educators of South Gujarat region are higher than those of Saurashtra-Kutch. It indicates significance at .05 level for the 1st and 3rd components viz., Need and Need and Importance on the whole. However, 2nd component viz., Importance is concerned, though in favour of South Gujarat region, it is not significant.

From the above results of all the four regions of Gujarat with regards to the components of Need and Importance of Non-formal education leading to life-long education it can be said that the same type of results are obtained as compared to earlier results in hypothesis 4th and 5th. So it can be said that South Gujarat region may have the varieties of non-formal programmes to satisfy the minimum learning needs of the learners and may have more dynamic and flexible methods and often helping the learners to meet the learning needs beyond those covered by conventional class-room instruction. Their effectiveness, it may appear heavily on the motivation of the learners.

As a result of this finding the null hypothesis of no variation in mean scores of the attitude of the teacher-educators of various regions is partly rejected.

Hypothesis-6 :

The hypothesis is worded as under :

"The teacher-educators of the education colleges in different regions of Gujarat State will not show significant variations in their attitude towards the component of aims and objectives of the programmes of non-formal education leading to life-long education.

This hypothesis is formulated because in case of some previous hypotheses it was found that teachers' perceptions of the contributory factors differ significantly. This is probably because there is a human tendency to perceive one's own attitude or action in a more favourable light than would be done by others. The data collected to take this hypothesis are organised and classified appropriately in the following table. The other procedures have already been discussed in the earlier hypotheses. With regards to conceptualise the dimensions aims and objectives are concerned, the investigator has already discussed and described at length in the previous chapter-3.

The hypothesis also seeks to examine whether the mean attitude score of teacher-educators of the different regions will show significant differences towards the component aims and objectives of the programmes of non-formal education leading to life-long education or if the difference exists or does not exist what will be the probable reasons?

In testing the hypothesis the t-test technique is used. The results are given in the Table 4.9.

Table 4.9 : Significant difference between the attitude of teacher-educators of different regions with the components of aims and objectives of the programmes of non-formal education leading to life-long education.

Component	Regions				t-value between the groups
	1	2	3	4	
Aims and objectives on the whole					
Mean	39.68	40.07	36.33	36.40	0.37 NS 1&2 4.98** 2&3
SD	5.19	6.16	4.19	5.95	0.07 NS 3&4 4.09 ** 1&3 2.79 ** 2&4 2.48 * 1&4

** Significant at .01 level
* Significant at .05 level
NS Not Significant.

Region 1 & 2 : Saurashtra-Kutch and North Gujarat : It can be seen from the result that the mean scores of the attitude of

teacher-educators of North Gujarat region are slightly higher (40.07) than those of Saurashtra-Kutch (39.68) and further it is not significant.

Region 2 & 3 : North Gujarat and Central Gujarat : Looking to the mean-scores of the attitude of teacher-educators of North Gujarat region are higher (40.07) than those of the Central Gujarat region (36.33) and is further significant at .01 level.

Region 3 & 4 : Central Gujarat and South Gujarat : The result indicates that the mean scores of South Gujarat region are slightly higher (36.40) than those of Central Gujarat region (36.33) and is further not significant.

Region 1 & 3 : Saurashtra-Kutch and Central Gujarat : From the result it reveals that the mean scores of the attitude of teacher-educators of Saurashtra-Kutch region are higher (39.68) than those of Central Gujarat (3.633) and it is significant at .01 level.

Region 2 & 4 : North-Gujarat and South Gujarat : The result shows the significance of difference between the mean-scores of the attitude of the teacher-educators of North Gujarat and South Gujarat regions. The mean scores of the attitude of North Gujarat are significantly higher (40.07) than those of the South Gujarat (36.40). It is significant at .01 level.

Region 1 & 4 : Saurashtra-Kutch and South Gujarat region:

It appeared from the result that the mean scores of the attitude of teacher-educators of Saurashtra-Kutch region are higher (39.68) than those of South Gujarat region (36.40) and it is significant at .05 level.

From the above results of four regions it can be said that North Gujarat region has the higher mean scores than the other three regions of Gujarat towards the aims and objectives of non-formal education. North Gujarat region shows more favourable attitude towards the aims and objectives of non-formal education. It may be because of the backwardness in education. Systematic attempts may have to be undertaken to formulate the educational objectives of non-formal education programmes to satisfy the economic needs of the learner.

While the central Gujarat region has the low mean scores towards the aims and objectives of non-formal education programmes. The earlier results in the previous hypotheses Nos. 1, 4, 5 and also have the same results. The Central Gujarat is more forward in education than other three regions of Gujarat. Therefore the hypothesis partly stands as it is constructed.

Hypothesis - 7 :

The hypothesis is worded as under :

"The teacher-educators of the education colleges in different regions of Gujarat State will not show significant variations in their attitude towards the dimensions of non-formal programmes leading to life-long education".

The hypothesis is formulated on the basis of some common assumptions while planning the dimensions of the programmes of non-formal education, it is necessary to keep in mind the macro-perspective of the educational needs of the individuals and the society of to-day and to-morrow. These needs, in a society as large and complex as ours, are understandably diversified.

From the point of view of learners, they could be stated as :

(a) The need for a large number of men and women, boys and girls of all ages who have never been inside the school system or who have dropped out too early to make use of educational facilities through nonformal education programmes;

(b) the needs of wide masses, both in rural and urban areas, who could be helped to understand better their surroundings and get more involved in solving problems in the close

environment, through a real participation in the life and working practices ;

(c) The programmes should help the individuals to develop the total personality and equip themselves for the world of work ;

(d) The programmes should be further up-grading the knowledge and skill and widening the mental horizons of the individuals.

The other procedure with regards to the attitude of the teacher-educators and dimensions, the investigator had discussed and described in the previous hypotheses.

To test the difference in the mean scores of the attitude of teacher-educators of different regions of the various colleges in the contexts of the dimensions of the programmes of non-formal education was tested by applying t-test technique. The results are presented in the Table 4.10 on the next page.

Non-formal Education Programmes :

Region 1 & 2 : Saurashtra-Kutch and North Gujarat : It can be seen from the result as a whole that there is no significant variation between the mean scores of the attitude of teacher-educators of Saurashtra-Kutch and those of North Gujarat region. The slight inclination (.30) is found towards

Table 4.10 : Significant difference between the attitude of Teacher-educators of different regions with the components of non-formal education programmes leading to life-long education.

Components	Region				t-value between the groups		
	1	2	3	4			
1. Concepts	Mean	22.79	22.42	20.64	20.63	0.43 NS	1&2
	SD	2.78	5.58	3.09	3.15	2.67**	2&3
						0.02 NS	3&4
						3.99**	1&3
						1.60 NS	2&4
						3.07**	1&4
2. Administration	Mean	28.06	28.04	25.75	28.88	0.01 NS	1&2
	SD	3.21	6.37	3.41	4.46	3.05**	2&3
						3.87**	3&4
						3.85**	1&3
						0.65 NS	2&4
						0.92 NS	1'4
3. Agency	Mean	10.27	11.00	11.20	11.44	0.82 NS	1&2
	SD	1.75	6.02	2.27	2.67	1.17 NS	2&3
						2.37*	3&4
						0.17 NS	1&3
						0.37 NS	2&4
						2.28*	1&4
4. Method	Mean	3.12	3.07	2.70	2.66	0.23 NS	1&2
	SD	1.04	1.16	0.97	1.44	2.43*	2&3
						0.15 NS	3&4
						2.34*	1&3
						1.58 NS	2&4
						1.58 NS	1&4
5. Process	Mean	10.27	10.56	9.94	8.85	0.76 NS	1&2
	SD	2.21	2.22	1.81	2.21	2.12*	2&3
						2.59*	3&4
						0.92 NS	1&3
						3.59**	2&4
						2.66**	1&4
6. Agent	Mean	10.62	11.28	10.72	9.03	0.74 NS	1&2
	SD	2.0	6.06	2.16	2.34	0.82 NS	2&3
						3.47**	3&4
						0.27 NS	1&3
						1.89 NS	2&4
						3.09**	1&4

cont...

Table 4.10 (contd.)

Components		Region				t-value between the groups	
		1	2	3	4		
7. Curriculum	Mean	3.77	3.50	1.03	4.0	1.20NS 1&2	
	SD		1.01	1.35	1.12	1.10	2.65** 2&3
							3.90** 3&4
							3.76** 1&3
							1.75NS 2&4
							0.90NS 1&4
8. Progress on the whole	Mean	89.33	89.03	82.96	85.51	0.12NS 1&2	
	SD		8.74	15.38	8.93	10.68	3.29** 2&3
							1.23NS 3&4
							4.0** 1&3
							1.12NS 2&4
							1.62NS 1&4

** Significant at .01 level

* Significant at .05 level

NS Not significant

Saurashtra and Kutch. But no significant difference is found towards all the dimensions of non-formal education programmes.

Region 2 & 3 : North Gujarat and Central Gujarat : From the result it appears that the significant difference exists between the attitude of the teacher-educators of North Gujarat and that of Central Gujarat towards the components 1,2,7 and 8 viz., Concept, administration, Curriculum and Programmes on the whole at .01 level. It also indicates significance of difference for the 4th and 5th components viz., Method and Process at .05 level. However, as far as 3rd and 6th components viz., agency and agents are concerned, the result is not indicative.

Region 3 & 4 : Central Gujarat & South Gujarat : Looking to the t-value, the result indicates that no significant difference is found between the attitude of teacher-educators of Central and that of South Gujarat region towards the components 1,4,8 viz., Concept, Method and the Programmes on the whole. But the result further reveals that the significant difference exists between the components 2, 6 and 7 viz., Administration, Agent and Curriculum aspects of non-formal education programmes at .01 level and is further significant at .05 level for the 3rd and 5th components viz., Agency and Process.

Region 1 & 3 : Saurashtra-Kutch and Central Gujarat region: The result shows that there is no significant difference between the attitude of teacher-educators of Saurashtra-Kutch and those of Central Gujarat towards the components 3, 5 and 6 viz., Agency, Process and Agents. The result further indicates that there is significant difference between them at .01 level for the components 1, 2 and 7 and 8 viz., Concept, Administration, Curriculum and Programmes on the whole.

Region 2 & 4 : North Gujarat and South Gujarat region. It is found from the result that significance of difference is not found between the attitude of teacher-educators of North Gujarat and that of South Gujarat region towards all the components except 5 viz., Process.

Region 1 & 4 : Saurashtra-Kutch and South Gujarat Region:
The result-indicates that there is no significant difference between the attitude of teacher-educators of Saurashtra-Kutch and that of South Gujarat region for the 2, 4, 7 and 8 components viz., Administration, Agency, Curriculum and Programmes on the whole. It further indicates the significance of difference at .01 level for the 1, 5 and 6 components viz., Concept, Process and Agents. With regards to 3rd component viz., Agency is concerned the result is indicative of significance at .05 level.

Conclusion: From the above results of the four regions of Gujarat with regards to the dimensions of non-formal education programmes and on the whole it can be said that the region of Saurashtra-Kutch has higher-mean scores (89.33) than the other three regions of Gujarat and Central Gujarat region has lower mean scores (82.96). It shows marked variation between the two regions with regards to the dimensions non-formal education programmes. The results are in favour of Saurashtra-Kutch region because the region was divided into innumerable States and were always in conflict with each other, for gaining power or ascertaining superiority or sometimes out of seeking revenge on family matters, they were more like fighters. So they are backward in education as compared to Central Gujarat region.

From the above discussion it can be said that there is marked variation in the attitude of teacher-educators between the two regions but with regards to other regions viz., North Gujarat and Saurashtra-Kutch region (on the whole) no variation is found. Therefore the hypothesis is partly rejected.

Hypothesis - 8 :

The hypothesis is stated as under :

"The teacher-educators of the education colleges in different regions of the Gujarat State will not show significant variations in their attitude towards the dimensions of organizational aspects of non-formal education programmes leading to life-long education."

The hypothesis is formulated on the basis of some assumptions. Non-formal education is at present weak in appropriate scientific recording, documentation, data collection, analysis and critical evaluation. A much larger out-put of well-documented information is needed on programmes, methodologies, impact, weaknesses, solutions etc. Voluntary organisations should as an integral part of their various activities, carefully planned and organised simultaneous analysis, functional recording of experiences and data which will be of use to co-workers, planners, administrators and others.

If non-formal education has to gather momentum and make a socio-cultural impact, it is necessary that both Governmental and non-governmental agencies share the responsibility. Educational authorities at the Central, State and District levels have to be involved in promoting and funding non-formal education schemes. Simultaneously, educational institutions as well as enterprises, cooperatives, panchayats, municipalities and the media have to participate more actively than in the past to make the programme successful. Above all, non-formal education will get its real social value only if voluntary organisations fully understand their irreplaceable role in promoting and organizing programmes of non-formal education.

The investigator proposes to test this hypothesis by finding out the mean scores of the attitude of teacher-educators of various colleges of different regions on the dimensions of the organisational aspects of non-formal education programmes leading to life-long education with the research programmes leading to life-long education with the research tool. The mean scores of the attitude of teacher-educators of all the dimensions of the organisational aspects are computerised other procedures are already shown in the previous hypotheses.

In order to test the hypothesis, the investigator applied t-test technique which is presented in the following Table 4.11.

Table 4.11 : Significant difference between the attitude of Teacher-educators of different regions with the Components of Organisational Aspects

Components		Region				t-value between groups
		1	2	3	4	
1. Curri- culum	Mean	48.25	47.27	41.05	41.81	0.67 NS 1&2
	SD	7.39	8.86	8.27	6.68	5.08** 2&3 5.84** 3&4 5.02** 1&3 0.29 NS 2&4 0.24 NS 1&4
2. Process	Mean	22.85	21.80	21.43	2.29	1.96 NS 1&2
	SD	2.60	3.27	2.97	3.86	0.83 NS 2&3 0.19 NS 3&4 2.77** 1&3 0.73 NS 2&4 2.08* 1&4
3. Method	Mean	10.60	10.81	9.61	9.07	0.24 NS 1&2
	SD	2.14	5.86	1.96	2.07	1.84 NS 2&3 1.23 NS 3&4 2.71** 1&3 1.51 NS 2&4 3.00** 1&4
4. Admini- stration	Mean	17.0	16.92	15.27	16.18	0.68 NS 1&2
	SD	3.03	7.78	2.38	3.92	1.91 NS 2&3 1.47 NS 3&4 3.65** 1&3 0.47 NS 2&4 1.00 NS 1&4
5. Agency	Mean	9.39	9.86	8.51	7.77	0.80 NS 1&2
	SD	2.38	3.70	2.02	3.06	3.07** 2&3 1.44 NS 3&4 2.28* 1&3 2.70** 2&4 2.63* 1&4
6. Agent	Mean	7.31	7.62	5.96	7.07	0.27 NS 1&2
	SD	1.56	7.67	1.92	2.41	1.97* 2&3 2.45* 3&4 4.15** 1&3 0.36 NS 2&4 0.51 NS 1&4
7. On the whole	Mean	115.58	11.84	101.63	109.22	1.44 NS 1&2
	SD	13.43	15.69	13.80	17.66	4.82** 2&3 2.23* 3&4 5.68** 1&3 0.75 NS 2&4 1.75 NS 1&4

* Significant at .05 level. ** Significant at .01 level.
NS = Not significant

Region 1 &2 : Saurashtra-Kutch and North Gujarat region:

It can be seen from the table that the mean scores of the attitude of the teacher-educators of Saurashtra-Kutch region are higher (115.58) than those of North Gujarat Region (111.84) towards the component 7 viz., Organisational aspects on the whole and further it is not significant in all the components of organisational aspects.

Region 2 & 3 : North Gujarat and Central Gujarat : The result reveals that the attitude score of teacher-educators of North Gujarat region is higher than that of Central Gujarat region and further it is significant at .01 level for the components 1, 5 and 7 viz., Curriculum, Agency and Organisation aspect on the whole and it is also significant at .05 level for the component 6th viz., Agent. Regarding the components 2, 3 and 4 viz., Process, Method and Administration are concerned, though in favour of North Gujarat region, it is not significant.

Region 3 &4 : Central Gujarat and South Gujarat : The result shows no significant difference between the attitude of teacher educators of Central Gujarat and that of South Gujarat region towards the components 2, 3, 4 and 5 viz., Process, Method, Administration and Agency. But with regards to the component 1 viz., Curriculum is concerned the result is indicative of significance at .01 level and the components

6 and 7 viz., Agent and Organisation on the whole is concerned, it is significant at .05 level.

Region 1 & 3 : Saurashtra-Kutch and Central Gujarat :

The result shows the significant difference between the attitude of teacher-educators of Saurashtra-Kutch and that of Central Gujarat region at .01 level for the components 1, 2, 3 and 4, 6 and 7 viz., Curriculum, Process, Method, Administration, Agent, and Organization on the whole and is further significant at .05 level for the 5th component viz., Agency.

Region 2 & 4 : North Gujarat and South Gujarat region :

It can be seen from the result that there is no significant difference between the attitude of teacher educators of North Gujarat and that of South Gujarat region towards all the components except 5 viz., Agency. It further indicates the total mean scores of the attitude of teacher-educators of North Gujarat are higher (111.84) than those of the South Gujarat (109.22).

Region 1 & 4 : Saurashtra-Kutch and South Gujarat : The result sets out the mean scores and the total scores of the attitude of teacher-educators of Saurashtra-Kutch are higher (11⁵.58) than those of South Gujarat region (109.22) and further it is significant at .01 level for the component 3, viz., Method and also significant at .05 level for the components

2, 5 viz., Process and Agency. It further indicates that there is no significant difference for the components 1, 4, 6 and 7 viz., Curriculum, Administration, Agent and Organisational aspects on the whole.

From the above results of the four regions it reveals that Saurashtra-Kutch region is leading in the mean scores on the whole (115.58) as compared to the other three regions of Gujarat towards the organisational aspects of non-formal education programmes leading to life-long education. The earlier results in the hypothesis-7 are also of the same type. Therefore this result is supported by the earlier results. In the same way the result of the Central Gujarat region is lower (101.63) than the other three regions of Gujarat. The result is supported by the results in earlier hypotheses 1, 4, 5, 6 and 7. Therefore the hypothesis partly stands as it is formulated.

Hypothesis - 9 ;

The Hypothesis ^{is} worded as under :

"The teacher-educators of the education colleges in different regions of the Gujarat State will not show significant variations in their attitude towards the suggestions of non-formal education programmes leading to life-long education".

The hypothesis required the examination of the identification of suggestions to formulate the hypothesis on suggestions of non-formal education programmes with regards to attitude of the teacher-educators and other procedures the investigator has already discussed in the hypothesis-1. Identification of suggestions were discussed in Chapter-III.

As emphasized earlier in the Chapter-I, primary education by itself cannot adequately meet the demands of the majority of the people such as practical preparation for earning a living, managing a household and rearing children, and playing a constructive role in community and national affairs. But in a traditional area trying to modernise, the informal learning is based on traditional attitudes, beliefs and practices, and must be supplemented with more modern elements. Thus, non-formal education's important role in such situations is to infuse more modern types of knowledge and skills which can help and motivate the illiterate learners, develop confidence in them through the teachers who have taken the training or by the social workers in the society and develop the confidence in the learners and move ahead.

While most of the administrative and organisational staffs are full-time, for the actual teaching of learners a combination pattern of full-time and part-time teachers exists

For the qualitative improvement of programmes, consideration is to be given to : (1) selecting teaching personnel drawn from the local community, (2) Utilising the services of the teachers from the formal system, (3) involving in teaching functions instructors drawn from different socio-professional strata (4) Utilising services, on a voluntary basis of students, educated housewives, ex-service men and social workers.

Realising, this, pattern of training, some countries have placed reliance on a system where in key personnel are trained at the national level and they in turn, are expected to organise training of staff under their control.

In order to determine significant differences of the attitude of the teacher-educators of various regions with regards to suggestions of non-formal education programmes t-test technique was used to test the hypothesis. The result is shown in the Table 4.12.

Table 4.12 : Significant difference between the attitude of teacher-educators of different regions with the component suggestion.

Components	Region				't' value between groups		
	1	2	3	4			
Suggestion on the whole	Mean	29.18	26.94	26.42	27.81	3.54**	1&2
	SD	3.10	3.88	3.22	3.53	1.02 NS	2&3
						1.92 NS	3&4
						4.84**	1&3
						1.05 NS	2&4
						1.74 NS	1&4

** Significant at .01 level

* Significant at .05 level

NS Not significant

Region 1 & 2 : Saurashtra-Kutch and North Gujarat : The result reveals that the mean scores of the attitude of teacher-educators of Saurashtra-Kutch region are higher (29.18) than those of North Gujarat region (26.94) towards the component suggestion and is further significant at .01 level.

Region 2 & 3 : North Gujarat and Central Gujarat : The result sets out the mean scores of the attitude of teacher-educators of North Gujarat region are slightly higher (26.92) than those of Central Gujarat (26.42) and it is not significantly favourable towards the component suggestion.

Region 3 & 4 : Central Gujarat and South Gujarat : It appears from the result that the mean scores of the attitude of teacher-educators of South Gujarat region are higher (27.81)

than those of Central Gujarat region (26.42). The result is not significant.

Region 1 & 3 : Saurashtra-Kutch and Central Gujarat : Looking to the mean scores from the result that the mean scores of the attitude of teacher-educators of Saurashtra-Kutch region are higher (29.18) than those of Central Gujarat region (26.42) and is further significant at .01 level.

Region 2 & 4 : North Gujarat and South Gujarat : The result indicates ^{that} the mean scores of the attitude of teacher-educators of South Gujarat region are higher (27.81) than those of North Gujarat region (26.94). The result is not indicative of significance.

Region 1 & 4 : Saurashtra-Kutch and South Gujarat : The result sets out that the mean scores of the attitude of teacher-educators of South Gujarat region are lower (27.81) than those of the Saurashtra-Kutch region (29.18) and is further not significant.

From the above results of the four regions of Gujarat Saurashtra-Kutch region has the highest mean scores (29.18) of all and Central Gujarat region has the lowest mean scores (26.42). The earlier results regarding North Gujarat region in hypothesis 1, 6, 7 and 8 are supported while the results of

Central Gujarat are supporting in the results of each hypothesis i.e. 1, 4, 5, 6, 7, and 8.

So it can be concluded that Central Gujarat region is far more advanced in education as compared to the other three regions of Gujarat. Central Gujarat consists of three districts, viz., Kheda, Baroda and Panchmahals. The Kheda district is noted for its economic prosperity and educational advancement. The Baroda district is carved out of the former Baroda State which was educationally more advanced than its neighbouring districts, administered by British. The Baroda district is industrially rapidly developing while Panchmahals is slowly developing educationally. These three districts of Central Gujarat manifest a number of salient characteristics of Gujarat State. Therefore teacher-educators of Central Gujarat do not show more favourable attitude towards the programmes of non-formal education.

Hypothesis - 10 :

The hypothesis is worded as under :

"The teacher-educators of the urban colleges will not differ significantly from the college teachers of semi-urban area with respect to their attitude towards the dimensions of the General aspects of non-formal education programmes leading to life-long education".

With regards to attitude of teacher educators the investigator has discussed and identified in the 1st Hypothesis. However, the dimensions are concerned, the investigator has shown their descriptions in the previous chapter-3 and in the Hypothesis 4. The Hypothesis is based on certain assumptions. Most programmes of non-formal education tend to emphasise populations in rural areas. Doubtless, they represent a major group and their needs are great. Nevertheless, there is a section of urban population whose educational needs are equally demanding. There are the large conglomerations of workers in organised and un-organised sectors who are skilled and semi-skilled, literate, semi-literate and illiterate, offer in a state of poor transition from rural to urban life-settings and ill-equipped to tackle the problems of life and work. They often live in slum surroundings and eke out a drab, deadened and mechanical existence. Non-formal education is important for these groups as well, to improve their life, decrease their dependency and increase work efficiently.

Although the rural population and its social, economic and educational needs are dominant for non-formal education, the urban population in a country like India is by no means small. In fact, India's predominantly rural character conceals a rapidly accelerating growth of dimensions as have led urban

India alone to be ranked "among the biggest countries of the world". Greater Calcutta, if its municipal boundaries are more realistically drawn, is as big as New York or Tokyo. Apart from their size, the urban areas command attention by virtue of their being the seat of economic and political power as also of concentrated poverty and squalor, with their volcanic possibilities.

In order to test the hypothesis, the investigator found out the mean scores of the attitude of teacher-educators of urban and semi-urban areas towards the components of General aspects of non-formal education programmes leading to life-long education. The results are presented in the following Table 4.13. The hypothesis is tested through the t-test technique.

Table 4.13 : Significant Difference between the attitude of urban and semi-urban teacher-educators towards the components of General aspect.

Components		Urban	Semi-urban	t-value
1. Concept	Mean	17.49	17.99	0.53 NS
	SD	2.76	3.26	
2. System	Mean	14.33	13.86	1.59 NS
	SD	2.49	2.39	
3. Administration	Mean	10.19	10.24	0.19 NS
	SD	2.03	2.14	
4. Operation ^{at} Aspect	Mean	11.68	11.45	0.83 NS
	SD	2.16	2.44	
5. General Aspects on the whole	Mean	54.07	53.57	0.56 NS
	SD	6.14	6.69	

NS = Not significant

Attitude of Teacher-Educators - Area-wise :

Significant difference between the attitude of urban and semi-urban teacher-educators with the components of General aspects.

Table 4.13 shows the difference between the attitude of urban and semi-urban teacher-educators towards the components of General aspect. The result indicates that there is no significant difference between the attitude of teacher-educators of urban area and that of the semi-urban area towards all the components of General Aspects.

It may be due to development of science and technology which may influence in both the areas. So both the areas may have similar facilities. Therefore the null hypothesis of no variation in the mean score of attitude the teacher-educators of both the areas are accepted.

Hypothesis - 11 :

"The teacher-educators of the urban colleges will not differ significantly from the college-teachers of semi-urban area with respect to their attitude towards the dimensions of need and Importance of non-formal education programmes leading to life-long education."

The hypothesis is based on certain assumptions.

Seen from the point of view of societal goals, the macro-dimensions of non-formal education would consist of

- (a) creating awareness in individuals and society of the existential situation and need for and direction of change
- (b) creating a rational, objective and scientific temper among all the people
- (c) enriching human potential and thereby community resources and individual and group creativity
- (d) achieving increasing degrees of social, cultural and economic equality through democratic action
- (e) the need for non-formal educational facilities outside the regular educational system is therefore an urgent-necessity for urban citizens and workers, for people wanting to improve prospects, satisfy and diversify their interest, utilise their leisure profitably.

The investigator proposes to test the hypothesis by finding out the mean scores of the teacher educators of urban and semi-urban teacher educators of the various education colleges of Gujarat towards the dimensions of need and importance of the non-formal education programmes leading to life-long education. In the previous hypothesis No.10, it has already been shown while testing the hypothesis 11, the mean

scores of the attitude of teacher-educators on all the dimensions of need and Importance are tested. The hypothesis is tested by applying the t-test. The results are shown in the Table 4.14.

Table 4.14 : Significant difference between the attitude of teacher-educators of urban and semi-urban areas with the components of need and importance

Components		Urban	Semi-urban	t-value
1. Need	Mean	16.15	15.83	1.07 NS
	SD	2.41	2.51	
2. Importance	Mean	18.98	18.71	0.58 NS
	SD	2.52	4.53	
3. NI on the whole	Mean	35.20	33.98	2.1*
	SD	4.41	4.61	

* Significant at .05 level
NS Not significant

Looking to the t-value and mean scores of the attitude of teacher-educators of urban and semi-urban areas it is found that there is significant difference at .05 level between the attitude of teacher-educators of urban and that of the semi-urban areas on the whole. The mean scores of the attitude of teacher-educators of urban areas are higher (35.20) than those of the semi-urban areas (33.98). It may be on account of the availability of facilities in education, commodities and many

opportunities for the masses to come forward (i.e. progress in education and life) in urban area as compared to semi-urban area. The result is not indicative of significance on the components 1 and 2 viz., Need and Importance.

Conclusion :

From the above discussion it can be said that there is variation in the mean scores of the attitude of teacher-educators on the whole therefore hypothesis does not stand. But it stands with the components 1 and 2 viz., Need and Importance.

Hypothesis - 12 :

The hypothesis is stated as under :

"The teacher-educators of the urban colleges will not differ significantly from the college teachers of semi-urban area with respect to their attitude towards the component of aims and objectives of non-formal education programmes leading to life long education.

The hypothesis is focussed on the component of aims and objectives of non-formal education programmes.

The assumptions are -

1. The general objective of the programme is to help the illiterate population in urban and semi-urban areas to

become functionally literate by equipping them with the basic knowledge and skills needed in their daily life, so that they will be able to more effectively participate in and support the development programmes activities.

2. To wipe out illiteracy by imparting the 3 R^s that is reading, writing and arithmetic.
3. The provision of basic learning and earning needs for all categories of learners in urban and rural areas particularly the socio-economically deprived and culturally disadvantaged group are to be made.

On the above assumptions the investigator found out the mean scores of the attitude of the teacher-educators of urban and semi-urban areas towards the component Aims and Objectives of non-formal education programmes leading to life-long education. With the help of computerised data. In order to determine whether the difference was really significant or merely accidental, the t-test technique was applied. The results are presented in the Table 4.15.

Table 4.15 : Significant difference between the attitude of teacher-educators of Urban and Semi-Urban areas towards the component Aims and Objectives

Component		Urban	Semi-urban	t-value
Aims and objectives as a whole	Mean	38.84	38.1	1.10 NS
	SD	5.35	5.98	

NS = Not significant

Table 4.15 sets out the mean scores of the attitude of teacher-educators of urban and semi-urban areas. The mean scores of the attitude of teacher-educators of urban area are slightly higher (38.84) than those of the semi-urban area. Though the result is in favour of urban area it is not significant. The reason for not being significant can be ascribed to a continuous and close development of urban and semi-urban areas, available for similar facilities and equal opportunities for the learners of all types and for the masses in the community. The government of Gujarat is also taking keen interest to introduce the non-formal education programmes in every corner of the State, therefore, it may influence on the attitude of the teacher-educators of urban and semi-urban areas.

Conclusion : From the above discussion, it reveals that there is no significant variation in the mean scores of the attitude

of teacher-educators of both the areas so the hypothesis stands as it is formulated.

Hypothesis - 13 :

The hypothesis is worded as under :

"The teacher-educators of the urban colleges will not differ significantly from the college teachers of semi-urban area with respect to their attitude towards the dimensions of the programmes of the non-formal education leading to life-long education."

Following assumptions are made by the investigator for the hypothesis. The assumptions are in its general form. The urban areas where economic and educational advancement has achieved a high level, the roles of non-formal education are substantially the same in the semi-urban areas (which incidentally, have their "pockets" of underdevelopment). In great majority of developing countries, however, the scale and character of these roles differ considerably, especially in semi-urban areas. To gauge the dimensions of the task for non-formal education, something must be known about the educational background of these out of non-schoolers (who constitute the vast majority of all children and youth in many semi-urban areas.) Yet in most countries neither the ministries of education nor

government is very much keen to know about this large group. Education ministries are pre-occupied with the in-schoolers, and in most countries no agency or organisation has overall responsibility to educational needs of the out-of-schoolers and illiterates. There are great gaps which can conceivably be bridged by non-formal programmes and by introducing modernising elements into the non-formal learning patterns.

In order to determine significant differences between the attitude of teacher educators of urban and semi-urban areas with regards to the dimensions of non-formal education programmes. The t-test technique was used to test the hypothesis. The result is shown in the following table 4.16.

From the result, it can be seen that the mean scores of the attitude of teacher-educators of Urban areas are higher (87.82) than those of the semi-urban areas (85.86) (i.e. programmes on the whole and it is not significant.

It further indicates that there is no significant difference between the attitude of teacher-educators of Urban areas and that of the semi-urban areas towards all the components of the programmes of non-formal education. The reason may be because of the well-planned implementation procedure of non-formal education programmes in urban and semi-urban areas with the cooperation of the Community and cooperation of the people.

Table 4.16 : Significant difference between the attitude of teacher-educators of urban and semi-urban area towards the components of the programmes of non-formal education.

Components		Urban	Semi-urban	t-value
1. Conceptual	Mean	21.89	21.61	0.52 NS
	SD	3.24	5.20	
2. Administration	Mean	27.77	27.05	1.19 NS
	SD	3.61	6.07	
3. Agency	Mean	10.85	10.49	0.72 NS
	SD	2.05	5.57	
4. Method	Mean	2.97	2.89	0.61 NS
	SD	1.18	1.8	
5. Process	Mean	10.24	10.05	0.72 NS
	SD	2.08	2.21	
6. Agent	Mean	10.54	11.00	0.92 NS
	SD	2.52	5.42	
7. Curriculum	Mean	3.50	3.40	0.59 NS
	SD	1.33	1.16	
8. Progress on the whole	Mean	87.52	85.66	1.31 NS
	SD	10.095	14.22	

NS = Not Significant

It appears that due to early advanced education, the teachers in the urban areas are contented with their achievement and do not work with as much zeal as those in semi-urban areas, who work hard to make up the difference.

From the above discussion, it appears that the hypothesis is accepted as it is constructed.

Hypothesis - 14 :

The hypothesis is stated as under :

"The teacher-educators of the urban colleges will not differ significantly from the college teachers of semi-urban areas with respect to their attitude towards the dimensions of the organisational aspects of the programmes of non-formal education leading to life-long education."

The hypothesis is required the examination of the attitude of teacher educators and the dimensions of the organisational aspects of the programmes. The investigator has discussed and described the attitude at length in the hypothesis No.1 and 2. With regards to the dimensions the investigator has shown the description of the dimensions of the organisational aspects in the previous chapter-3 and in the hypothesis No.4. The investigator also discussed some assumptions with regard to urban and semi-urban area in the previous hypothesis from 9 to 13. Even though some more assumptions can be made for the hypothesis.

In the attempt to organise non-formal education programmes on macro-scale and within the existing organisational structure, it is likely that programmes would tend to get classified into stereotypes and so lose their flexibility. It is much easier to follow a set of instructions than to cut new ground. It

would therefore be disastrous of organisations consciously or unconsciously fell into a formalisation and regimentation of non-formal education. On the contrary, they should be custodians of the open-endedness that is at the core of the approach.

In order to test the hypothesis, the difference in the mean scores of the attitude of teacher-educators of urban and semi-urban areas of the various education colleges of Gujarat in the contexts of the dimensions of the organisational aspects of the programmes of non-formal education was tested by applying the t-test technique. The results are presented in the following table 4.17.

Table 4.17 : Significant difference between the attitude of teacher-educators of the urban and semi-urban areas towards the components of organisational aspects of the programmes of non-formal education

Components		Urban	Semi-urban	t-value
1. CUO	Mean	46.53	44.55	1.88 NS
	SD	8.88	8.60	
2. Process	Mean	21.50	23.13	1.66 NS
	SD	3.12	3.18	
3. Method	Mean	10.12	10.32	0.4 NS
	SD	1.90	5.44	
4. Administration	Mean	16.07	16.60	6.78 NS
	SD	3.27	6.1	
5. Agency	Mean	9.13	9.16	0.78 NS
	SD	2.53	3.37	
6. Org. on the whole	Mean	110.07	108.02	1.04 NS
	SD	15.68	15.88	

NS = Not significant

Looking to the mean scores on the whole the attitude of the teacher-educators of the urban areas are higher (110.07) than the mean scores of the attitude of teacher-educators of semi-urban areas (108.02) and it further indicates that there is no significant difference between the attitude of teacher-educators of urban areas and that of the semi-urban areas towards all the components of organisational aspects of the programmes of non-formal education. It may be on account of the coordination of the various agencies and agents to organise the programmes of non-formal education in urban and semi-urban areas. Despite the claims sometimes made that high priority is being accorded to semi-urban development in the national plans, the urban sector has typically received top priority in organisational aspects, on the theory that progress in the cities would eventually "trickle down" to the semi-urban or to the rural areas.

From the above discussion, it can be said that the hypothesis stands as it is formulated.

Hypothesis - 15 :

The hypothesis is stated as under :

"The teacher-educators of the urban colleges will not differ significantly from the college-teachers of semi-urban areas with respect to their attitude towards the component

suggestions of the programmes of non-formal education leading to life-long education.

The investigator has discussed, described and identified the attitudes in the previous hypotheses at length. The investigator has also mentioned the procedure with regards to the dimensions in previous chapter-III and in the previous hypotheses some assumptions were also made by the investigator for urban and semi-urban areas in the previous discussion.

The hypothesis required the examination to build the motivational aspects for the learners in urban and semi-urban areas. It is evident that motivation to learn varies greatly among individuals. Many non-formal education programmes have foundered because they have ignored these fundamental tenets; their managers and teachers insisted on giving the learners what they believed ought to be learned, not what the learners were really interested in and ready to learn. So it can be suggested that a strong effort should be made to discover the true interests, motivations and wishes of the intended audience. The programmes should then be shaped to fit these authentic concerns rather than the professional preconceptions and assumptions of outsiders.

A strategy that sought to capitalise on motivation would call for a heavy new emphasis on self instruction supported

by well-planned educational programme through broadcasts and low-cost printed materials, with "teachers" serving more as guides and coaches to the learners rather than as drill-masters and substitutes for a text-book. This requires the refresher courses for the teachers.

As the present hypothesis is predominantly ^{concerned} with the attitude of teacher-educators of urban and semi-urban areas towards the component suggestion, the investigator was interested to find out whether any significant difference prevails between them. In this context the above hypothesis has been formulated. To test the hypothesis the investigator selected the t-test technique and found out the mean scores of the attitude of the teacher educators of the education colleges of urban and semi-urban areas. The results are presented in the Table 4.18.

Table 4.18 : Significant difference between the attitude of teacher-educators of urban and semi-urban areas towards the component suggestions

Component		Urban	Semi-urban	t-value
Suggestion on the whole	Mean	27.007	27.48	1.696 NS
	SD	3.58	3.68	

NS = Not significant

The result reveals that the mean scores of the attitude of teacher-educators of semi-urban areas are slightly higher

(27.48) than those of urban areas (27.007). Looking to the 't' value it indicates that ^{there is} no significant difference between urban and semi-urban teachers towards the component suggestion. It may be on account of the educational programmes which are far more effective when they are tailored to the real interests and motivations of learners by the teachers in urban and semi-urban areas. The creation of motivation by the teachers is a problem of realistically linking education to social and economic opportunities and helping learners perceive their opportunities. So the attitude of the teacher-educators are same in both the areas.

The finding reveals that the null hypothesis of no variation in the mean scores of the attitude of teacher-educators of both the areas are accepted, therefore, the hypothesis stands as it is formulated.

Hypothesis - 16 :

The hypothesis is stated as under :

"The attitude of teacher-educators towards the dimensions of General aspects of non-formal education programmes leading to life-long education is independent of certain biographical characteristics such as (1) sex (2) age (3) teaching experience (4) visit to a foreign country.

Sex : Before testing the hypothesis the investigator thought to make clear by certain assumptions through the general views of the society about sex. Society, here and elsewhere, is still largely man-made, reflecting in its various manifestations the male world, its vested interest, man's discriminatory power, dominance and aggression. In spite of considerable progress achieved in women's status and in society's attitudes regarding women, traditional and conventional habits die hard. The value system still favours man's position in society, and undermines the role and place of women.

The biographical variable selected to test the hypothesis was the sex of the teacher-educators. Due to the continuous development and advancement of education the attitude of teacher-educators may not differ significantly towards the dimensions of general aspect of non-formal education. In order to test the hypothesis the investigator divided the sex into male teacher educators and female teacher-educators. Mean scores of both the sexes were found out by the research instrument 't'-test technique was used to know the significant difference between the attitude of male and female teacher educators. The result is shown in the following Table 4.19.

Table 4.19 : Significant difference between the attitude of male teacher-educators and that of the female teacher-educators towards the components of General aspects.

Components		Male	Female	t-value
1. Concept	Mean	17.81	18.21	0.89 NS
	SD	3.015	3.055	
2. System	Mean	13.99	14.46	1.29 NS
	SD	2.29	2.97	
3. Administration	Mean	10.20	10.30	0.34 NS
	SD	1.99	2.45	
4. Operational	Mean	11.67	11.12	1.59 NS
	SD	2.14	2.86	
5. GA on the Whole	Mean	53.60	54.48	0.89 NS
	SD	6.01	8.29	

NS = Not significant

The result reveals that no significant difference exists between the attitude of male teacher-educators and that of the female teacher educators. The mean scores of the attitude of female teacher-educators on the whole are higher (54.48) than those of the male teacher educators (53.60). Though the result is in favour of female teacher-educators, it is not significant. Both the teacher-educators have favoured all the components of General aspects of non-formal education. The reason for no significance may be looked as under. Females' work at home may be different from that of males. But with

regards to educational programme at the college females have to do the same type of work as males do.

(2) Age with General Aspects :

Biographical variable in the context of which the hypothesis was tested was the age of teacher-educators. With regards to the dimensions of General aspects of non-formal education leading to life-long education. Age of the teacher-educators is divided into three categories: (i) 30-39 years (ii) 40-49 years and (iii) 50 years and above.

(i) 30-39 years age is the direction towards adolescents. This period will be dramatic. It is assumed that during this period feelings of dissatisfaction grow more and more. The individual may not have experience of this accidental change, but internal currents of continuous unhappiness, frustration is observed. They do not have interest of the events of external world. Majority of them face the challenges of the calamities and make changes in their life-pattern.

(ii) 40-49 years age can be called dictatorial. This range of age is post-adulthood period. During this period the individuals had already decided how to spend the rest of the life-period. They live in deeds and not by words. They know their interest, capacity and limitations. They know how to behave with their intellect. They become balanced with the

environment. The individual is not habituated by the fear of his own death and does not worry about the death. They do not like to study further.

(iii) This age period (50 and above) is considered as the retirement period. But this in concept is changed by the researches. The individuals like to live with their families ^{and} like to study further. They like to live with their father and mother and like much to talk with their children. They want to remain free from social responsibilities. They also like the memories of the past experiences which give satisfaction. They always hate the retirement. They lose their physical capacity and not the mental and always try to regain the physical capacity. They have much leisure time. Education is such a type of activity which makes the individual activated during the leisure time.

From the above considerations the investigator formulates the hypothesis. The hypothesis further stipulates some significant differences between different age-groups of the teacher-educators towards the General aspects of non-formal education. This is examined below in Table 4.20.

Table 4.20 : Significant difference between the attitude of teacher-educators of the various age-groups towards the components of General Aspect

Components		Age-Group			t-value between the groups -	
		1 30-39	2 40-49	3 50 & above		
1. Concept	Mean	17.70	17.90	18.57	0.54 NS	1&2
	SD	2.52	3.33	2.91	0.96 NS	2&3
					1.54 NS	1&3
2. System	Mean	13.71	15.37	13.88	2.11*	1&2
	SD	2.30	2.50	2.48	0.91 NS	2&3
					0.33 NS	1&3
3. Admini- stration	Mean	10.11	10.13	11.07	0.05 NS	1&2
	SD	1.92	2.17	2.07	2.06*	2&3
					2.22*	1&3
4. Opera- tional	Mean	11.46	11.58	11.80	0.40 NS	1&2
	SD	2.10	2.43	2.40	0.42 NS	2&3
					0.71 NS	1&3
5. General Aspect on the whole	Mean	52.95	54.07	55.34	1.33 NS	1&2
	SD	5.61	7.08	6.38	0.85 NS	2&3
					1.88 NS	1&3

* Significant at .05 level
NS=Not significant.

Significant difference between the attitude of teacher-educators of the various age-groups towards the components of General aspect (age-group 30-39 and 40-49). Table 4.20

Age-group 1 & 2 : From the result it appears the mean scores on the whole of the teacher-educators of the age-groups 40-49 are higher (54.07) than those of the age-groups of

30-39 age groups (59) (52.95) and further it indicates that the mean scores are higher for the age-groups 40-49 age-groups towards all the components. The result is not significant towards all the components except 2nd viz., System. Age-groups of both the teacher-educators have no effect on the components 1,3,4 and 5 viz., Concept, Administration, Operational and the General Aspects on the whole. But the significance of difference is found at .05 level for the component 2 viz., System. It may be due to different opinions of the teacher-educators of both the age-groups towards the system of non-formal education programmes. The system of non-formal education programmes is not the same.

Age-group 2 & 3 : (40-49 and 50 & above) : It can be seen from the result that there is no significant difference between the attitude of teacher-educators towards the components, 1, 2 and 4 and 5 viz., Concept, System, Operation and General Aspects on the whole. So it can be concluded that age is not the factor for significant difference between the two-age groups. However, the component 3, viz., Administration is concerned, it is significant at .05 level. This may be because of critical thinking of administration of non-formal education programmes of the age-group 50 & above.

Age-group 1 & 3 (Age-group 50 & above) and 30-39 :

The result reveals that there is no significant difference between the attitude of teacher-educators of the age-groups 50 & above and those of the age-groups 30-39 year age groups towards all the components except 3, viz., Administration. It can be concluded that there is significant difference at .05 level for the component 3, viz., Administration. It may be due to more maturity of the teacher educators of age 50 & above.

(3) Teaching Experience :

The third biographical variable selected to test the hypothesis was the teaching experience of the teacher-educators. The investigator divided into two categories of the teacher-educators : (1) Below five years' and (2) Above five years' teaching experience. Ordinarily experience should improve one's performance but this happens only if the experience acquired is of the right type and in the right direction. For testing the hypothesis the t-test technique as used earlier was applied. The results are shown in the Table 4.21 on the next page.

From the result it can be seen that no significant difference exists between the attitude of teacher-educators having less than five years' teaching experience and those of having more than five years' teaching experience towards

Table 4.21 : Significant difference between the attitude of teacher-educators having less than five years' experience and those of having more than five years' experience towards the components of General Aspect

Components		Below 5 years' experience	Above 5 years' experience	t-value
1. Concept	Mean	17.92	17.88	0.86 NS
	SD	2.55	3.10	
2. System	Mean	13.50	14.19	1.69 NS
	SD	2.83	2.47	
3. Administration	Mean	10.09	10.23	0.40 NS
	SD	1.77	2.13	
4. Operational	Mean	11.61	11.55	0.17 NS
	SD	1.91	2.37	
5. GA on the whole	Mean	53.14	53.89	0.68 NS
	SD	4.78	6.80	

NS = Not Significant

all the components of General aspects in non-formal education programmes. The same attitude is found from the result. So the experience of both the groups of teacher-educators have no effect. Both the groups may have better-understanding towards the dimensions of General aspect. Teaching experience does not seem to have any significant bearing on the attitude of teacher-educators of both the groups.

(4) Visit to a foreign country :

The fourth variable selected to test the hypothesis was

the visit of the teacher educators of the education colleges of Gujarat to a foreign country. The investigator divided the teacher educators into two categories (i) Visit to a foreign country and (ii) Not visit to a foreign country. The hypothesis is based on certain assumptions.

Visit of the teacher-educators to a foreign country may have established certain traditions and they have been able to develop the tone of their own in culture, attitudes and beliefs towards the dimensions of General aspects of non-formal education programmes.

The mean scores of the teacher-educators were computed in order to determine whether the difference in the mean scores was really significant or merely accidental, the t-test technique was applied. The results are presented in the following Table 4.22 given on the next page.

Looking to the t-value it reveals that there is no significant difference between the attitude of teacher-educators having their visit to a foreign country and those of having their no visit to a foreign country. So both the groups have similar attitude towards all the components of General Aspect. So the factor 'visit to a foreign country' makes no influence on the attitude of teacher-educators. The reason for no significance in the attitude of teacher-educators may be because of

not fully aware of well-organised programmes of non-formal education in foreign country.

Table 4.22 : Significant difference between the attitude of teacher-educators having their visit to a foreign country and those of having not their visit to a foreign country towards the components of General Aspect

Components		Visit to a foreign country	Non-visit to a foreign country	t-value
1. Concept	Mean	17.61	17.91	0.40 NS
	SD	3.68	2.98	
2. System	Mean	14.39	14.06	0.54 NS
	SD	2.89	2.41	
3. Admini- stration	Mean	10.83	10.17	1.29 NS
	SD	1.82	2.09	
4. Opera- tional	Mean	12.33	11.51	1.46 NS
	SD	1.91	2.33	
5. GA on the whole	Mean	55.16	53.68	0.92 NS
	SD	6.09	6.56	

NS = Not significant

Conclusion :

On the basis of the fore-going tables and the interpretation made thereof, it seems that the biographical characteristics like (1) sex (2) age (3) teaching experience (4) visit to a foreign country do not seem to have any significant bearing on the attitude of the teacher-educators. But regarding the

variable age, it shows the slight variation at .05 level in the age-group 30-39 and 40-49 with the components 2 viz., System. It also seems variation at .05 level in all the three-age-groups towards the component 3 viz., Administration. This conclusion is also supported by the earlier result in the hypothesis 3. So the hypothesis is not fully rejected as it is formulated.

Hypothesis - 17 :

The hypothesis is worded as under :

"The attitude of teacher-educators towards the dimensions of Need and Importance of non-formal education programmes leading to life-long education is independent of certain biographical characteristics of teacher educators such as (1) sex, (2) age, (3) teaching experience and (4) visit to a foreign country.

Before testing the hypothesis the investigator followed the same procedure as mentioned in the previous hypothesis No.16.

Certain Assumptions about Sex :

The deep foundations of the inequality of the sexes are built in the minds of men and women through a socialisation process which continued to be extremely powerful. Right

from their earliest years, boys and girls are brought up to know that they are different from each other and the differentiation is strengthened in every way possible through language forms, modes of behaviour, of labour etc.

The biographical variable sex is an important factor in influencing between the attitude of the male teacher-educators and those of the female teacher-educators towards the dimensions of need and Importance of non-formal education programmes. The investigator proposes to test the hypothesis by finding out the mean scores of male and female teacher-educators towards the dimensions of need and importance of non-formal education programmes and the t-test technique was applied. The result is shown in the Table 4.23.

Table 4.23 : Significant difference between the attitude of Male teacher educators and those of the female teacher-educators towards the components of Need and Importance

Components		Male	Female	t-value
1. Need	Mean	15.91	16.28	1.02 NS
	SD	2.22	3.26	
2. Importance	Mean	18.61	19.73	2.04*
	SD	2.54	6.43	
3. NI on the whole	Mean	34.52	34.59	0.10 NS
	SD	4.15	5.90	

* Significant at .05 level
NS = Not significant

(1) Sex with Need and Importance :

The result sets out the mean scores of the attitude of the female-teacher educators which are higher than the mean scores of male teacher educators towards the components 1 and 3 viz., Need and Need & Importance on the whole and it is further not significant. The reason for no significance may be because of the influence of education on both the sexes. They may have the same qualifications in their professions therefore both the sexes may think equally for the components of need and Importance. The teacher-educators are not governed by the sex difference. However, component 2 viz., Importance is concerned, the result is indicative of significance at .05 level.

(2) Age with Need and Importance :

Another biographical variable in the context of which the hypothesis was tested, was the age of teacher-educators. Age is divided into three categories as stated in the previous hypothesis 16. The hypothesis is formulated on the basis of certain assumptions. The work of the different age groups of the teacher-educators is same in the colleges of education. But the beliefs, opinions and attitudes according to various age-groups may not be the same towards the components of Need and Importance. It is assumed that age makes one, more qualified to be an able teacher-educators. As one grows older one's attitude

may tend to become more rigid and loses flexibility.

From the considerations the investigator divided the age into three categories (1) 30-39 years' age group (2) 40-49 years' age-group (3) 50 & above. In order to test the hypothesis mean scores of the attitude of various age-groups of the teacher-educators were found out. The t-test technique was used to know whether the age has any significant influence on the attitude of teacher-educators of different age-groups. The result is shown in Table 4.24.

Table 4.24 : Significant of difference between the age-groups with the components Need and Importance

Components		Age-groups			t-value between groups -
		30-39 (1)	40-49 (2)	50 & above (3)	
1. Need	Mean	15.57	16.09	16.96	1.62NS 1&2
	SD	2.20	2.65	1.99	1.59NS 2&3 2.91** 1&3
2. Importance	Mean	18.16	19.24	19.12	2.20* 1&2
	SD	2.65	4.37	2.28	0.14NS 2&3 1.65NS 1&3
3. NI as a whole	Mean	33.74	34.80	36.07	1.79NS 1&2
	SD	4.38	4.71	3.67	1.31NS 2&3 2.49* 1&3

** Significant at .01 level

* Significant at .05 level

NS Not Significant

1. Age with Need and Importance (30-39 years' age group)

Significant difference between the attitude of

teacher-educators of the different age-groups towards the components of Need and Importance.

Age-group 1 & 2 : The result reveals the mean scores of the attitude of teacher-educators of the age-groups of 40-49 years are higher than those of 30-39 years' age-groups and it is further significant at .05 level for the component 2 viz., Importance. The difference may be due to more experience of the teacher-educators of the age-group 40-49. The individuals know their potentialities, interests and limitations during this period (i.e. 40-49) Regarding the components 1 and 2, viz., Need & Need & Importance on the whole it is not significant. The age-group 40-49 works more steadily than the age-group 30-39 but not as much as 40-49 years' age group and hence no significance.

Age-group 2 & 3 : 40-49 years and 50 & above : The result further reveals that they are not significant for any components between the attitude of both the groups of the teacher-educators. (40-49 and 50 & above). The reason for no significance may be on account of the advanced age maturity of both the groups of teacher-educators. They may be satisfied towards the components of Need & Importance. So the age is not the factor.

Age-group 1 & 3 : 50 years & above and 30-39 years : The result indicates the mean scores of the attitude of teacher-

-educators of the age-group 50 & above are higher than those of 30-39 years' age-group and it is further significant at .01 level for the component 1 viz., Need and it is also significant at .05 level for the components 3 viz., Need & Importance on the whole. Significance of difference may be because of the low maturity of the age-group 30-39 years'. But regarding the component 2 is concerned viz., Importance, it is not significant.

(3) Teaching Experience with the Components of
Need and Importance :

The third biographical variable selected to test the hypothesis was the teaching experience of the teacher-educators. The investigator has divided the teaching experience of the teacher-educators into two categories : (1) below 5 years' teaching experience and (2) Above 5 years' teaching experience. It is assumed that the experience is the best teacher. More experienced teachers are given preference in the job of the teaching post. The experience improves one's performance but it should be in right direction otherwise as Rusk observes a bad experience of ten years tantamounts to bad experience multiplying by a number of years the bad experience is acquired.

For testing the hypothesis, the t-test was used. This is examined below in the Table 4.25.

Table 4.25 : Significant difference between the attitude of teacher-educators having less than five years' teaching experience and those of having more than five years' teaching experience towards the component of Need & Importance.

Components		Below 5 years' of experience	Above 5 years' of experience	t- value
1. Need	Mean	15.81	16.01	0.50 NS
	SD	2.14	2.52	
2. Impor- tance	Mean	18.45	18.90	0.73 NS
	SD	2.45	3.86	
3. NI onthe whole	Mean	34.26	34.58	0.42 NS
	SD	4.12	4.62	

NS = Not significant

Looking to the mean scores of the attitude of teacher-educators having more than five years' teaching experience are higher than those of having less than five years' teaching experience towards the components of Need & Importance and it is not significant for all the components. The difference may be because of the same type of working in the colleges of education for both the groups of teacher-educators. Similar types of approaches may be followed by both the groups of teacher-educators towards the learners. So it can be concluded that the biographical variable, such as teaching experience is not the factor to influence the attitude of teacher-educators.

(4) Visit to a foreign country with Need & Importance :

Visit to a foreign country is considered as the credit for the teacher-educators. Varieties of experiences and various human contacts, environments, the varieties of living, the life of the people and culture, change the attitude of teacher-educators. Teacher-educators are too much influenced by the foreign visit. Advantage of ample modern facilities do not allow the teacher-educators to come out from the climate of the foreign country. The fourth variable selected to test the hypothesis was the visit to a foreign country. For testing the relationship of visit to a foreign country towards the attitude of teacher-educators, the mean scores of the attitude of the teacher-educators were found out and t-test was used. The results are shown in the following table 4.26.

Table 4.26 : Significant difference between the attitude of Teacher-Educators having their visit to a foreign country and those of having not their visit to a foreign country towards the components of Need and Importance.

Components		Visit to a foreign country	Not visit to a foreign country	t-value
1. Need	Mean	17.27	15.90	2.31*
	SD	1.74	2.48	
2. Importance	Mean	19.61	18.78	0.92 NS
	SD	2.77	3.74	
3. NI on the whole	Mean	36.89	34.37	2.29*
	SD	3.69	4.56	

* Significant at .05 level
NS = Not significant.

The result sets out the mean scores of the attitude of teacher-educators having their visit to a foreign country are higher than those of having not their visit to a foreign country towards all the components of need and Importance. It further reveals that it is significant at .05 level for the components 1 and 3 viz., Need, and Need & Importance on the whole. Reason for significance may be due to different experiences at various levels in the foreign country. Experience may affect the attitude of teacher-educators. But no significant difference exists between two groups of the teacher-educators for the component 2 viz., Importance.

Conclusion :

From the above discussion, results and interpretation made thereof, it reveals that the biographical variables like (1) sex (2) age (3) Teaching experience and (4) visit to a foreign country seems to have very little significant bearing on the attitude of teacher-educators regarding the component Need and Importance of non-formal education leading to life-long education. The earlier results in the hypothesis 3 and 16 are not supported here. Therefore, the hypothesis is partly rejected as it is constructed.

Hypothesis - 18 :

The hypothesis is stated as under :

"The attitude of teacher-educators towards the components of aims and objectives of non-formal education programmes leading to life-long education is independent of certain biographical characteristics of teacher educators such as (1) sex (2) age (3) Teaching experience and (4) visit to a foreign country".

(1) Sex :

It is observed that (a) present day education, particularly formal education is strengthening traditional prejudices regarding thorough content and form; (b) educational opportunities are unevenly utilised by males and females, making a large portion of education unsuitable and unattractive for females, and (c) many educational programmes, especially non-formal ones, unconsciously emphasise the unequal status of women by perpetuating the classification of a curriculum on the basis of sex.

The above assumptions, which may be inter-woven in the attitude of male and female teacher-educators and it is for that reason the investigator selected the sex variable whether this biographical variable sex is a factor which influences the attitude of male and female teacher-educators towards the component of aims and objectives of non-formal education programmes.

In order to determine significant differences of the attitude of male and female teacher-educators of the various colleges of education the t-test technique was used and the mean scores of male and female teacher-educators were found out. The result is shown in the following table 4.27.

Table 4.27 : Significant difference between the attitude of the male and female teacher-educators towards the component of aims and objectives

Components		Male	Female	t-value
Aims and objectives on the whole	Mean	38.27	39.17	1.06 NS
	SD	5.15	7.41	

NS = Not significant

Looking to t-value and mean scores of the male and female teacher-educators, the result is in favour of female teacher-educators, but it is not significant. It can be concluded that sex is not a factor having any impact on the attitude of male and female teacher-educators towards the dimensions of aims and objectives. Both the groups of teacher-educators show the favourable attitude. The reasons for no significance may be on account of the equal status of the female with male in the present-day society and may have similar opportunities to come forward.

(2) Age with aims and objectives :

In order to test the hypothesis the age of the

teacher-educators was classified into three categories
 (1) 30-39 years' age-group (2) 40-49 years' age-group (3)
 50 and above.

It is assumed that age makes one more qualified and acquires more maturity. It is also assumed that as one grows older one's attitude may tend to become more rigid and loses flexibility. It may be further assumed that with advanced age maturity, one may not be ready to accept new ideas and new directions towards the dimensions of aims and objectives of non-formal education.

From the above assumptions, the investigator selected to test the hypothesis. In testing the hypothesis the t-test technique was found to be the most appropriate. The data collected to take this hypothesis is organised and classified appropriately in the table 4.28 given below :

Table 4.28 : Significant difference between the attitude of teacher-educators of the various age-groups towards the components of aims and objectives of nonformal education programmes

Components	Age-group			t-value between the groups -
	1 30-39	2 40-49	3 50& above	
Aims and objectives on the whole	Mean 36.66	39.53	39.23	4.09** 1&2
	SD 4.54	5.98	6.30	0.23NS 2&3
				2.35* 1&3

** Significant at .01 level

* Significant at .05 level

NS Not significant

Age-group 1&2 : 30-39 and 40-49 years : The result sets out the mean scores of the attitude of teacher-educators of the age-group 40-49 are higher (39.53) than those of the age-group 30-39 to 39 years (36.66) and it is significant at .01 level. The significance of difference exists because it is said that if one grows older, one tries to get more interest and finds the ways for it.

Age-Group 2 & 3 : 40-49 and 50 & above : But the result in this group reveals that the mean scores of the attitude of teacher-educators of the age-group 40-49 are slightly higher (39.53) than those of the age group 50 and above (39.23) and further it is not significant. The reason may be because the older group loses the flexibility even with much more experience than the younger group. The mean attitude score of the age-group 40-49 (younger-group) is the highest amongst the other two groups. They may become work-striking.

Age-group 1 & 3 : 30-39 and 50 & above : It can be seen from the result that the mean scores of the attitude of teacher-educators of the age-group 50 and above are higher (39.33) than those the age-group 30-39 and further it is significant at .05 level. Old teachers of the age-group 50 and above by virtue of their experience have advantage over the age-group 30-39 (the younger group) and therefore, the result is significant.

(3) Teaching Experience with aims and objectives :

It is assumed that more experienced teacher can understand faster than the less experienced one towards the dimensions of aims and objectives of non-formal education. They can show more enthusiasm and perseverance than less-experienced teacher. More experienced teacher can encourage and motivate the learners and involve more learners but at the same time less experienced teachers can try harder than experienced one.

From the above assumptions the third biographical variable selected to test the hypothesis was the teaching experience of the teacher-educators towards the dimensions of aims and objectives. The following Table 4.29 is shown to know the result.

Table 4.29 : Significant difference between the attitude of teacher-educators having less than five years' experience and those of having more than five years' teaching experience towards the components of aims and objectives.

Component		Below 5 years' of experience	Above 5 years of experience	t-value
Aims and objectives on the whole	Mean	37.57	38.61	1.09 NS
	SD	5.14	3.76	

NS = Not significant

The result indicates the mean scores of the attitude of teacher-educators having more than five years' teaching experience are higher (38.61) than those of having less than

five years' teaching experience (37.57) and further it is not significant. So it can be concluded that the factor teaching experience has no effect in influencing the attitude of teacher-educators of both the groups. The more experienced teachers may take their job easier than the less experienced ones.

(4) Visit to a foreign country with aims and objectives :

It is assumed that the teacher-educators who have visited the foreign country are influenced by the culture, traditions, rituals and beliefs. The main aim may be to learn. They may forget the family, nation and the society at large. The teacher educators may come out with different attitudes. The spirit of nationalism, and thriving thirst of love towards the native place, community, caste and religion may emerge the disappointing picture. The communication channel of the teacher-educators is also found one sided.

The hypothesis envisages that visit to a foreign country has no bearing effect on the attitude of teacher-educators. The hypothesis was tested by applying the t-test technique. The data in this regard are classified and presented in the Table 4.30.

Table 4.30 : Significant difference between the attitude of teacher-educators having their visit to a foreign country and those of having their not visit to a foreign country toward the components of aims and objectives

Components		Visit to a foreign country	Not visit to a foreign country	t-value
Aims and objectives on the whole	Mean	38.11	38.48	0.27 NS
	SD	4.40	5.76	

NS = Not Significant

The result indicates that the mean scores of the attitude of teacher-educators having their no visit to a foreign country is slightly higher (38.48) than those of having their visit to a foreign country (38.11). Though the result is slightly in favour of non-visited teacher-educators, it is not significant. So it can be concluded that a foreign visit has no relevance so far as its impact on the attitude of teacher-educators is concerned. The reason for no significance may be due to attractive attachment of birth-place of the teacher-educators who have visited the foreign country. Both the groups of teacher-educators have similar views regarding the components of aims and objectives.

Conclusion :

From the above results of the biographical characteristics

of the teacher-educators like (1) sex, (2) age, (3) teaching experience (4) visit to a foreign country, it can be concluded that the significant variation is found at .01 level in the age-group 30-39 and 40-49 and variation exists at .05 level in the age-group 30-39 and 50 and onwards. The conclusion is also supported by the earlier results in hypothesis-3. Therefore the hypothesis is not fully rejected.

Hypothesis - 19 :

It is worded as under :

"The attitude of teacher-educators towards the dimensions of non-formal education programmes leading to life-long education is independent of certain biographical variables such as (1) sex (2) age (3) teaching experience and (4) visit to a foreign country".

(1) Sex : It is assumed that programmes for females are often taken only on a token scale and are seemingly based on the assumption that the place of female is solely in the home. Therefore, such subjects like home economics, child care, cooking and sewing are selected. The important economic and occupational roles played by female in both traditional and modernising societies, and their role in educating the next generation have been seriously overlooked. In the parts of Asia, for example, females often do most of the rice planting

and also help with the harvesting in rural areas. In some areas of Africa, family subsistence crops are customarily grown in the "women's plot" and cash crops in the men's fields. Women often handle the marketing of crops, keep records, and exercise important management functions.

Regarding the above considerations the hypothesis further stipulates any relationship between some biographical variables of the teacher-educators like sex. This is examined below in Table 4.31.

Table 4.31 : Significant difference between the attitude of male teacher-educators and those of the female teacher-educators towards the dimensions of non-formal-education programmes

Components		Male	Female	t-value
1. Concept	Mean	21.65	22.10	0.69 NS
	SD	3.10	7.50	
2. Administration	Mean	27.20	28.16	1.26 NS
	SD	3.56	8.68	
3. Agency	Mean	10.38	11.75	2.16*
	SD	2.13	8.36	
4. Method	Mean	2.94	2.87	0.39 NS
	SD	1.10	1.20	
5. Process	Mean	10.11	10.28	0.53 NS
	SD	2.072	2.44	
6. Agent	Mean	10.48	11.94	2.31*
	SD	2.31	8.24	

cont...

Table 4.31 (contd.)

Components		Male	Female	t-value
7. Curriculum	Mean	3.46	3.41	0.27 NS
	SD	1.085	1.74	
8. Prom. on the whole	Mean	86.38	88.53	1.16 NS
	SD	9.77	19.66	

* Significant at .05 level

NS = Not significant.

Looking to the t-value it can be seen that except two components i.e. 3 and 6 viz., Agency and Agent, the result does not indicate significance for all the components of non-formal education programmes. This finding gives a lie to a common criticism level being made against females that they fail to be teacher-educator. The reason for no significance may be because of the equal status of female with male so the difference may not exist. However, components 3 and 6 viz., Agents and Agencies are concerned, they showed the significant difference at .05 level. So it can be concluded that the hypothesis is partly rejected.

(3) Age-groups with the dimensions of Non-formal education programmes.

During this period (30-39) mental depression becomes more intensive. The individual may have the experience of passiveness, and always seeks for the constancy of love. The person tries to get mastery over his field and for that purpose

one is trying to get the knowledge and enriching his own profession. The attitudes become fixed at some level.

While the age-group 40-49 has maturity in thinking due to experience. The nature of the individual becomes adventurous and pines for love. Thoughts, ideas are found in unchangeable situation. While the age-group 50 and onwards rigidity takes over the possession. Frustration towards life becomes more and more acute. One is always in the sense of achievement and proud of his past glory. The person during this period is free from responsibility, worldly affairs and bent towards religious activity and worshipping the God. Behavioural changes incline more towards ideality.

Looking to the above discussion, the investigator classified the teacher-educators into three groups. Mean scores of the teacher-educators were found out and t-test technique as used earlier was applied to find out the relationship of age with the attitude of teacher-educators towards the dimensions of non-formal education programmes. The results are shown in the following table 4.32.

Table 4.32 : Significant difference between the attitude of teacher-educators of the different age groups towards the dimensions of non-formal education programmes.

Components		Age-groups			t-value between the groups -
		1 30-39	2 40-49	3 50& above	
1. Concept	Mean	20.88	22.14	22.84	2.20* 1&2
	SD	3.13	5.11	2.07	0.68NS 2&3 2.87** 1&3
2. Administration	Mean	25.86	28.20	28.76	3.60** 1&2
	SD	3.44	5.87	3.35	0.48NS 2&3 3.85** 1&3
3. Agency	Mean	9.98	11.12	10.65	2.05* 1&2
	SD	2.11	5.36	2.24	0.44NS 2&3 1.43NS 1&3
4. Method	Mean	2.49	2.85	3.11	0.66NS 1&2
	SD	1.04	1.14	1.33	0.67NS 2&3 1.08 NS1&3
5. Proc.	Mean	9.82	10.42	9.83	2.18* 1&2
	SD	1.86	2.32	1.98	1.28NS 2&3 0.34NS 1&3
6. Agent	Mean	9.97	11.41	10.23	2.56* 1&2
	SD	2.08	5.38	2.30	1.10NS 2&3 0.55NS 1&3
7. Curriculum	Mean	3.21	3.60	3.50	2.38* 1&2
	SD	1.17	10.29	1.14	0.37NS 2&3 1.10NS 1&3
8. Progm.on the whole	Mean	82.68	89.20	89.07	4.15** 1&2
	SD	8.81	14.01	10.43	0.04NS 2&3 3.17** 1&3

** Significant at .01 level

* Significant at .05 level

NS=Not significant

Age-group 1 & 2 : 30-39 and 40-49 : The result sets out the mean scores of the attitude of teacher-educators in the age-group 40-49 are higher than those of 30-39 years' age group. It is significant at .01 level for the components 2 and 8 viz., Administration, Agent, Curriculum and Programmes on the whole and it further indicates for significance at .05 level for the components 1, 3, 5, 6, and 7 viz., Concept, Agency, Process, Agent and Curriculum. But the result further indicates that it is not significant for the components 4, viz., Method. So it can be concluded that both the groups of teacher-educators are inclined towards the 4 component viz., Method.

Age-group 2 & 3 : 40-49 and 50 and above : From the result it appears that there is no significant difference between the attitude of teacher-educators of the age-group 40-49 and that of the age-group 50 and above towards all the dimensions or components of the non-formal education programmes. The reason for no significance may be on account of the balanced thinking, and adjustment to the environment what they have for both the groups of teacher-educators. It can be concluded that age has no impact to influence the attitude of both the groups of teacher-educators towards the dimensions of non-formal education programmes.

Age-group 1 & 3 : 30-39 and 50 and above : The result reveals that the mean scores of the attitude of teacher-

-educators of the age-group 50 and above are higher than those of the age-group 30-39. It is significant at .01 level for the dimensions 1, 2, and 8 viz., Concept, Administration and programmes on the whole. But it further reveals that no significant difference exists for the components 3, 4, 5, 6 and 7 viz., Agency, Method, Process, Agent and Curriculum. From the result it can be concluded that teacher-educators of both the groups show similar type of attitude towards the components, 3, 4, 5, 6 and 7 viz., Agency, Method, Process, Agent and Curriculum. While the components 1, 2, and 8 viz., Concept, Administration and Programmes on the whole make significant impact on the attitude of teacher-educators.

(3) Teaching Experience with Non-Formal Education Programmes

The third biographical variable selected to test the hypothesis was the teaching experience. It is assumed that experienced teachers have more confidence in facing curious groups of learners while the less experienced ones have been more innovative in employing new strategies of learning. The experienced teachers can quite easily seek the cooperation of the college pupils in planning, execution and evaluation of units.

In testing the significance of relationship between teaching experience and attitude of teacher-educators of various colleges of education towards the dimensions of non-

formal education programmes, t-technique was used. This is examined in the Table 4.33.

Table 4.33 : Significant difference between the attitude of teacher-educators having less than five years' teaching experience and those of having more than five years' teaching experience towards the dimensions of non-formal education programmes.

Components		Below 5 years' experience	Above 5 years' experi- ence	t-value
1. Concept	Mean	21.42	21.80	0.51 NS
	SD	3.67	4.46	
2. Administra- tion	Mean	25.92	27.66	2.071*
	SD	4.14	5.13	
3. Agency	Mean	9.90	10.80	1.26 NS
	SD	2.35	4.47	
4. Method	Mean	2.88	2.93	0.29 NS
	SD	1.01	1.14	
5. Process	Mean	9.47	10.26	2.21*
	SD	1.56	2.21	
6. Agent	Mean	10.11	10.89	1.085 NS
	SD	2.08	4.53	
7. Curriculum	Mean	3.42	3.45	0.12 NS
	SD	1.12	1.26	
8. Prom. on the whole	Mean	83.50	87.40	1.88 NS
	SD	11.29	12.52	

* Significant at .05 level
NS Not significant

It becomes clear from the Table 4.33 that the mean scores of the attitude of teacher-educators having more than five years' teaching experience are higher than those of having less than five years' teaching experience towards all the components of non-formal education programmes and it is further significant at .05 level for the components 2 and 5 viz., Administration and Process. It can be concluded that both the groups of teacher-educators do not have the same attitude towards the components viz., Administration and Process. Teaching experience bears no impact on them. It may be because of the more experience of the teacher-educators who may work more effectively in the development process and administration of non-formal education programmes as compared to less experienced ones. Regarding the components 1, 3, 4, 6, and 7 and 8 viz., Concept, Agency, Method, Agent, Curriculum and Programmes on the whole, it is not significant. It can be concluded that both the groups of teacher-educators are affected in their attitudes towards the components 1, 3, 4, 6, 7 and 8 viz., Concept, ^{Agency,} /Method, Agent, Curriculum and programmes on the whole.

4. Visit to ^aForeign Country with the dimensions of
Non-formal Education Programmes :

Foreign visit is one of the opportunity in life for the teacher-educators. Visit influences on the attitude of

teacher-educators. Many new techniques, approaches, methods are experienced and learnt by the teacher-educators. It is assumed that the concepts, ideas and beliefs are changed. So far as education is concerned, proper planned teaching programme may be brought by the teacher-educators.

The hypothesis seeks to examine whether a foreign visit of the teacher-educators has any impact on the attitude of teacher-educators towards the dimensions of non-formal programmes.

In order to test the significance, the investigator has applied t-test technique. The mean scores of the attitude of teacher-educators were found out. The Table 5.34 below examined the relationship of foreign visit with the attitude of teacher-educators.

Table 4.34 : Significant difference between the attitude of teacher-educators having their visit to a foreign country and those of having not their visit to a foreign country towards the dimensions of non-formal education programmes.

Components		Visit to a foreign country	Not visit to a for- eign country	t-value
1. Concept	Mean	22.44	21.70	0.70 NS
	SD	2.33	4.46	
2. Administra- tion	Mean	29.94	27.43	0.39 NS
	SD	3.81	5.10	
3. Agency	Mean	11.27	10.62	0.63 NS
	SD	2.13	4.33	

cont...

Table 4.34 (contd.)

Components		Visit to foreign country	Non-visit to foreign country	t-value
4. Method	Mean	3.05	2.91	0.49 NS
	SD	1.30	1.11	
5. Process	Mean	10.22	10.14	0.15 NS
	SD	2.23	2.14	
6. Agent	Mean	10.56	10.79	0.22 NS
	SD	2.22	4.37	
7. Curriculum	Mean	3.83	3.42	0.22 NS
	SD	1.04	1.25	
8. Programme on the whole	Mean	87.89	86.74	0.37 NS
	SD	8.66	12.63	

NS = Not significant

Looking up Table 4.34, which sets out the mean scores of the attitude of teacher-educators. The mean scores of the attitude of teacher-educators having their visit to a foreign country are higher than those of having not their visit to a foreign country. Though the result is in favour of the teacher-educators having their visit to a foreign country, it is not significant for all the components of non-formal education programmes. The reason is obvious and it may be because of the influence of environment which may suit more to the teacher-educators who have visited to a foreign country. It can be concluded that visit to a foreign country bears no impact in affecting the attitude of teacher-educators.

Conclusion :

From the above discussion, results and interpretation it can be concluded that the only biographical variable, visit to a foreign country of the teacher-educators does not seem to have any significant bearing on the attitude of the teacher-educators while the other biographical variables like (1) sex, (2) age (3) Teaching experience seem to have little variation. Therefore, the hypothesis is partly rejected as it is formulated.

Hypothesis - 20 :

The hypothesis is stated as under :

"The attitude of teacher-educators towards the dimensions of organisational aspects of non-formal education programmes leading to life-long education is independent of Certain biographical variables such as (1) sex (2) age (3) teaching experience and (4) visit to a foreign country."

(1) Sex :

Male and female begin to learn very early what is proper and not proper for boys and girls and all attempts at deviation are noticed, discouraged and sometimes punished. The sissy and the tomboy are equal objects of derision. There is nothing wrong in this if it were merely a question of distinction. But it soon gets inextricably tied up with the

traditional concepts of the roles of men and women and their mutual relationships which are based on inequality.

There are still opinions that women themselves, their underdevelopment, the backwardness of their intellectual life, their docility and lack of interest, their passivity and alienation are themselves 'guilty' and 'responsible' for this state of affairs. It may be said that these opinions are not uncommon either among men or women. Nevertheless, what was stated for oppressed, alienated people in general is particularly valid for women.

Looking to the above discussion, the investigator selected the biographical variable sex. The investigator wanted to know relationship of male and female teacher educators have any impact on the attitude towards the dimensions of organisational aspects of non-formal education programmes. The results are examined in the following Table 4.35, on the next page.

The result reveals that the mean scores of the attitude of female teacher-educators are higher than those of the male teacher educators and it is further not significant for the components 1, 2, 5, and 7 viz., Curriculum, Process, Agency and Organisational aspects on the whole. However, components, 3, 4, and 6 viz., Method, Administration, and agent are concerned, the results are indicative of significance at .05

level. It may be because of thinking variations between male and female teacher educators regarding method and administration.

Table 4.35 : Significant difference between the attitude of male teacher-educators and those female teacher-educators towards the dimensions of organizational aspects of non-formal education programmes.

Components		Male	Female	t-value
1. Curriculum	Mean	45.50	46.57	0.049 NS
	SD	8.44	10.07	
2. Process	Mean	21.80	21.88	0.147 NS
	SD	3.20	30.28	
3. Method	Mean	9.98	11.19	1.98*
	SD	1.99	8.22	
4. Administration	Mean	16.01	17.62	1.97*
	SD	3.12	10.51	
5. Agency	Mean	9.08	9.39	0.67 NS
	SD	2.45	4.73	
6. Agent	Mean	6.63	8.39	2.29*
	SD	2.06	10.71	
7. Org. on the whole	Mean	108.99	109.18	0.013 NS
	SD	15.84	15.69	

* Significant at .05 level
NS = Not significant

(2) Age :

Age is the important factor in determining the attitude of teacher-educators. It is assumed that with advanced age maturity may be increasing and the number of areas of life-interest appears to decline. Older teachers tended to become

more closed minded than their younger colleagues.

The hypothesis further stipulates a relationship between some biographical variables of teacher-educators and its impact on the attitude of teacher-educators. So the age is selected as biographical variable. It is classified in three (1) 30-39 years' age-group (ii) 40-49 years' age group (iii) 50 and above.

In order to test the significance of relationship of age of the teacher-educators, the investigator applied t-test technique. This is shown in the following Table 4.36.

Table 4.36 : Significant difference between the attitude of teacher-educators of the various age-groups towards the components of Organisational aspects of non-formal education programmes.

Components	Age-group			t-value between the groups -	
	1 30-39	2 40-49	3 50& above		
1. Curriculum	Mean	43.12	46.61	48.50	3.12** 1&2
	SD	8.24	8.92	8.06	1.0NS 2&3 2.97** 1&3
2. Process	Mean	21.17	22.17	22.26	2.47* 1&2
	SD	3.11	3.13	3.24	0.14 NS 2&3 1.57 NS 1&3
3. Method	Mean	9.87	10.50	10.03	1.14 NS 1&2
	SD	1.89	5.31	1.73	0.43 NS 2&3 0.40 NS 1&3
4. Administra- tion	Mean	15.63	16.81	16.34	1.62 NS 1&2
	SD	2.97	6.85	3.80	0.33 NS 2&3 1.02 NS 1&3

cont...

Table 4.36 (contd.)

Components		Age-group			t-value between the groups -
		1 30-39	2 40-49	3 50& above	
5. Agency	Mean	8.67	9.52	8.80	2.17* 1&2
	SD	2.06	3.55	2.88	0.97NS 2&3 0.27NS 1&3
6. Agent	Mean	6.65	7.30	6.46	0.94 NS 1&2
	SD	1.96	6.78	2.06	0.62NS 2&3 0.43NS 1&3
7. Org. on the whole	Mean	111.04	14.04	112.92	3.10** 1&2
	SD	13.90	16.14	17.81	0.54 NS 2&3 2.45* 1&3

** Significant at .01 level

* Significant at .05 level

NS Not Significant

Age-Group 1 & 2 : 30-39 and 40-49 : The result indicates that the mean scores of the attitude of teacher-educators of the age-group 40-49 are higher than those of age-group 30-39 towards all the components of Organisational aspects. It is significant at .01 level for the components 1 and 7, viz., Curriculum and Organisational aspects on the whole. It is further significant at .05 level for the components 2 and 5 viz., Process and Agency. The difference in attitude may be on account of stability of job due to more experience of the age-group 40-49 than those of the age-group 30-39. Further the result is not indicative of significance for the components, 3, 4 and 6 viz., Method, Administration and Agent are

concerned. Similar attitudes are found for the above-said components 3, 4, 6 viz., Method, Administration and Agent.

Age-group 2 & 3 : 40-49 and 50 and above : From the result it has appeared that there is no significant difference between the attitude of teacher-educators of the age-group 40-49 and those of 50 and above. The age-group 50 and above have little more experience than the age-group 40-49 but not as much as the age-group 50 and above, and hence no significance. So age is not the factor to affect the attitude of teacher-educators.

Age-group 1 & 3 : 30-39 and 50 & above : The result indicates a significance of difference at .01 level for the component 1 viz., Curriculum and also significant at .05 level for the Component 7, viz., Organisational aspects on the whole. The reason for significance may be because of the individual differences between the two groups of the teacher-educators. Further it is stated that there is no significant difference for the components 2, 3, 4 and 5 and 6 viz., Process, Method, Administration, Agency and Agent.

(3) Teaching Experience :

The third biographical variable selected to test the hypothesis is the teaching experience of the teacher-educators. It is commonly believed that more experiences add to the

competency of a teacher. The experienced teachers can apply new techniques and methods whereas less experienced ones took more time to get used to them. They may have greater lack of confidence and knowledge than experienced ones.

To examine these assumptions, the investigator classified the teacher-educators in ^{to} two categories : (1) Below five years' teaching experience and (2) Above 5 years' teaching experience. For testing the relationship of teaching experience and attitude of teacher-educators, the t-test technique was applied. The results are shown in the Table 4.37.

Table 4.37 : Significant difference between the attitude of teacher-educators having less than five years' teaching experience and above five years' teaching experience towards the dimensions of Organisational Aspects of non-formal education programmes.

Components		Below 5 years' teaching experience	Above 5 years' teaching experience	t-value
1. Curriculum	Mean	44.31	45.73	0.97 NS
	SD	8.37	8.85	
2. Process	Mean	21.73	21.83	0.18 NS
	SD	2.97	3.20	
3. Method	Mean	9.76	10.31	0.79 NS
	SD	1.76	4.40	
4. Administration	Mean	16.83	16.34	0.008 NS
	SD	3.08	5.82	

cont...

Table 4.37 (contd.)

Components		Below 5 years' teaching experience	Above 5 years' teaching experience	t- value
5. Agency	Mean	8.81	9.20	0.78 NS
	SD	2.02	3.19	
6. Agent	Mean	6.52	7.07	0.63 NS
	SD	2.05	5.54	
7. Org. on the whole	Mean	107.45	109.26	0.68 NS
	SD	13.72	16.13	

NS = Not Significant

The result reveals that the mean scores of the five years' teaching experience of the teacher-educators are higher than those of having less than five years' teaching experience towards all the dimensions of organisational aspects. Though the result is in favour of teacher-educators of having more than five years' teaching experience they are not significant. It can be concluded that teaching experience is not the effective factor in influencing the attitude of teacher-educators of both the groups. This may be due to inter-relatedness between the two groups of teacher-educators. In organising the programmes in the colleges they may work together.

(4) Visit to a foreign country :

The teacher-educators who had visited a foreign country can help the nation in many ways. Their educational experiences

at various levels can render valuable service in assessing the educational needs in the development of the mass education. The analytically minded teacher-educators capable of taking a wide-angle view of the spectrum of development factors in any situation. Each college has a few number of good candidates who have visited a foreign country among their present staff who can be developed into competent general analysts and planners of education. They should have a strong interest in and general familiarity with the processes of human development. Their speciality which they have experienced in foreign country has a significant bearing on development. Experiences at different levels and organisations who would teach each other and bring back to their respective specialised organisations a common set of insights and practical experiences that would facilitate in future.

In order to test the hypothesis - the researcher used t-test technique. The results shown in the following Table 4.38.

The result reveals that there is no significant difference between the attitude of teacher-educators having their visit to a foreign country and those of having not visited the foreign country towards all the dimensions of organisational aspects. The reason may be because of the spirit of nationalism, feelings towards the fellow men and the

Table 4.38 : Significant difference between the attitude of teacher-educators having their visit to a foreign country and those of having not their visit to a foreign country towards the dimension of non-formal education programmes.

Components		Visit to a foreign country	Non-visit to a foreign country	t-value
1. Curriculum	Mean	47.56	45.37	1.017 NS
	SD	7.20	8.88	
2. Process	Mean	22.61	21.76	1.09 NS
	SD	3.07	3.17	
3. Method	Mean	9.94	10.24	0.30 NS
	SD	2.04	4.22	
4. Administration	Mean	16.00	16.36	0.27 NS
	SD	2.66	5.64	
5. Agency	Mean	8.72	9.17	0.61 NS
	SD	1.74	3.12	
6. Agent	Mean	6.56	7.01	0.36 NS
	SD	1.82	5.33	
7. Org. on the whole	Mean	111.94	108.79	0.82 NS
	SD	13.09	15.96	

NS = Not Significant

position of education in the country may not be allowed to change the attitude of teacher-educators who have visited the foreign country. The conclusion can be drawn that both the groups of teacher-educators have similar attitudes towards the dimensions of organisational aspects of non-formal education. Visit to a foreign country has no impact on the teacher-educators who have visited a foreign country.

Conclusion :

From the above results, it seems that the biographical variables like teaching experience and visit to a foreign country of the teacher-educators seem to have no impact on the attitude of the teacher-educators regarding the dimensions of the non-formal education programmes, while the other biographical variables like sex and age make variations regarding certain dimensions. Therefore, the hypothesis is partly rejected.

Hypothesis - 21 :

The hypothesis is stated as under :

"The attitude of teacher-educators towards the component suggestion of non-formal education programmes leading to life-long education is independent of certain biographical variables such as (1) sex (2) age (3) teaching experience (4) visit to a foreign country.

(1) Sex :

Female can play an important role in education. With the development of education, male acquires a better status-while female remains with unskilled and second rate jobs and duties. This is reflected in the expectations which the society and ^{place} family/on female's contribution. They are still not expected to be socially useful, active in civic affairs, or community-

minded. The roles of female and expectations are limited mainly to the area of family upbringing, sex life, and the like, Girls are prepared to get married, young women to bear and rear children, older women to be 'the pillars' of family cells. This is the pattern of life that is in store for most of them.

As stated above, the situation, the investigator selected sex as a biographical variable. The mean scores of male and female teacher-educators were found out to determine the relationship of sex with the attitude of teacher-educators towards the component suggestion. In order to test the hypothesis, the investigator applied t-test technique. This is examined below in the Table 4.39.

Table 4.39 : Significant difference between the attitude of male teacher-educators and that of the female teacher-educators towards the component suggestions.

Component		Male	Female	t-value
Suggestions on the whole	Mean	27.34	26.88	0.87 NS
	SD	3.50	4.14	

NS = Not significant

The result indicates that the mean scores of the attitude of the male teacher-educators are higher (27.34) than those of the female teacher-educators (26.88). Though the result is in favour of male teacher-educators, it is not significant

towards the component suggestion. Both the sexes have similar attitude towards the component suggestion. It may be because of the influence of co-educational programmes to provide greater access and relevant education to both the sexes. The conclusion can be drawn that sex has no significant bearing on the attitude of male and female teacher-educators towards the component suggestion.

(2) Age with the component suggestions :

It is assumed that age is a factor influencing the attitude of teacher-educators towards the component suggestion. General expectation regarding age is that with age one acquires more stability and maturity and therefore it is assumed that age makes one qualified as an able teacher. It may be further assumed that with advanced age maturity may be increasing but readiness to accept new thoughts and modes of action may be decreasing.

In order to know the attitude of teacher-educators, the investigator classified the age into three categories : (1) 30-39 age-group (2) 40-49 age group (3) 50 and above years' age-group. In order to test the hypothesis, the investigator applied the t-test technique. The results are shown in the Table 4.40.

Table 4.40 : Significant difference between the attitude of teacher-educators of the various age-groups towards the component suggestion.

Component	Age-groups			t-value between the groups -	
	1 30-39	2 40-49	3 50& above		
Suggestions as a whole	Mean	26.69	27.70	26.80	2.20* 1&2
	SD	4.0	3.26	3.95	1.25 NS 2&3
					0.13 NS 1&3

* Significant at .05 level
NS Not significant

Age-group 1 & 2: 30-39 and 40-49 : The result reveals that the mean scores of the attitude of teacher-educators of the age-group 40-49 are higher (27.70) than those of the age-group 30-39 (26.69). It further indicates that it is significant at .05 level. The age-group 40-49 by virtue of their experience have advantages over the 30-39 age-group, and therefore, the result is significant. It can be concluded that age has significant impact on the attitude of teacher-educators towards the component suggestion.

Age-group 2 & 3 : 40-49 and 50 & above : It can be seen from the result that there is no significant difference between the attitude of teacher-educators of the age-group 40-49 and those of the age-group 50 and above towards the component suggestion. The reason may be because of the adjustment towards life may be found in the age-group 40-49. They may not even worry for the death. In this age-group - age is

not a factor in influencing the attitude of teacher-educators.

Age-group 1 & 3 : 30-39 and 50 & above : The result sets out the mean scores of the attitude of both the groups of teacher educators. It indicates that the mean scores of the attitude of teacher-educators of the age-group 50 and above are little higher (26.80) than those of the age-group 30-39 (26.69). Though the result is slightly inclined towards the age-group 50 and above, it is not significant. The reason for no significance may be on account of the age-group 50 and above have a more experience than the age-group 30-39 but not as much as the age-group 50 and above, but the age-group 30-39 may works with zeal and missionary spirit, and hence no significance.

(3) Teaching Experience :

The hypothesis^{is} formulated on the basis of certain assumptions. Regarding the biological variable teaching experience of the teacher-educators is concerned, the fact that the less experienced ones have better innovative attitudes towards the suggestion of non-formal education programmes or the experienced ones have more confidence, can not be stressed too far. Individuals, whether they are experienced or less experienced, have certain unique capabilities and the situations also vary from college to college. The experienced teacher can understand faster than less experienced ones.

The investigator divided the teaching experience into two categories (1) Below 5 years' teaching experience and (2) Above 5 years' teaching experience. The results were examined by applying the t-test. The Table 4.41 given below examines the relationship of age with the attitude of experienced and less experienced teacher-educators towards the component suggestion.

It is appeared from the result that the mean scores of the attitude of teacher-educators having less-than five years' teaching experience are slightly higher (27.83) than those of having more than five years' teaching experience (27.14), and it is not significant. The factor teaching experience has nothing to do with the attitudes of teacher-educators of both the groups towards the component 'Suggestion'. The reasons for no significance may be on account of humanistic spirit and compassionate actions of the teacher-educators of both the groups towards the learners.

Table 4.41 : Significant difference between the attitude of teacher-educators having less than five years' teaching experience and those of having more than five years' teaching experience towards the component suggestion.

Component		Below 5 Years' experience	Above 5 Years' experience	t-value
Suggestions on the whole	Mean	27.83	27.14	1.12 NS
	SD	4.04	3.55	

NS = Not significant

(4) Visit to a Foreign Country with the Component 'Suggestion'

The hypothesis is formulated on the basis of certain assumptions. It is believed that the visit of the teacher-educators to a foreign country would make marked difference in their attitude towards their fellowmen, nation, family and educational programmes. Most important of all is that the children born to-day and their elder brothers and sisters will be the main actors in the drama of social and economic development as the present century ends and new one begins. There can be no question of more world-wide concern to-day than how well the children of this new generation are being prepared for tomorrow's responsibilities, and what more can be done to prepare them better-especially those who receive little preparation at all. How much more to be done, will depend upon the vision and determination of the teacher-educators who have visited to a foreign country to bring about necessary changes and advances regarding the suggestions of nonformal education programmes.

In order to determine the significant difference between the attitude of the teacher-educators of those having their visit to a foreign country and those of having not their visit to a foreign country, the investigator used the t-test technique. The result is shown in the Table 4.42.

Table 4.42 : Significant difference between the attitude of teacher-educators having their visit to a foreign country and those of having not their visit to a foreign country towards the component suggestion.

Component		Visit to a foreign country	Not visit to a fore- ign country	t-value
Suggestions on the whole	Mean	27.33	27.24	0.09 NS
	SD	4.15	3.60	

NS = Not significant

Looking to the t-value and mean scores it can be seen that the mean scores of the attitude of teacher-educators having their visit to a foreign country are little higher (27.33) than those of having not their visit to a foreign country (27.24). Though the result is in favour of the teacher-educators having their visit to a foreign country, it is not significant. The reason for no significance may be because of the affection, love, nationalistic spirit of the teacher-educators of both the groups. The teacher-educators may not be adjusted to the culture, environments, customs of the foreign country to those who have visited to a foreign country. The factor visit to a foreign country has no impact in influencing the attitude of teacher-educators towards the component suggestion.

Conclusion :

From the above discussion, the results and interpretation made thereof, it appears that the biographical variables like (1) sex, (2) age (3) teaching experience and (4) visit to a foreign country seem to have no significant bearing on the attitude of teacher-educators regarding the component suggestion except in age group 30-39 and 40-49 in the variable age. The result is supported by the earlier results in the hypothesis 3, 18, 19 and 20 (on the whole), Therefore, the hypothesis is partly rejected.

(B) Inter-Correlation among the six major components of non-formal education programmes leading to life-long education regarding the attitude of teacher-educators of the education colleges of Gujarat State.

The 'Inter-Correlation Matrix' of the components for the attitude scale is computed and given herewith in this section. The results of the matrix are very interesting and useful for interpreting the inter-correlation among the components. Among these results : (1) some are positively significant, (ii) some are positively- non-significant, (iii) very few are negatively significant.

Intercorrelation Matrix

(1) Section I : General Aspects

All the sub-components of the General Aspects are internally correlated and significant either at .01 level or .05 level. But regarding Administration with system and operational aspect with concept and system are concerned, they are correlated positively, which is not significant.

(2) Section II : Need and Importance

All the sub-components of Need and Importance are internally correlated with each other and also with the sub-components of the General Aspects in Section I and significant at either .01 level or .05 level.

(3) Section III : Aims and Objectives

Aims and objectives are highly and positively correlated with the sub-components of General Aspects (Section I) and with the sub-components of Need and Importance (Section II) and significant at either .01 level or .05 level.

(4) Section IV : Non-formal Programmes

Concept (sub-component) is highly and positively correlated with the sub-components of Section I (General Aspects) except operational Aspect which is negatively correlated. It may be due to chance. It is also highly and positively correlated

with the components of Section II (Need and Importance) and with Section III (Aims and objectives) which are significant either at .01 level or .05 level.

Administration - The sub-component of Section IV viz., Administration which is highly and positively correlated with the sub-components of Section I, II, III and IV which are significant at either .01 level or .05 level.

Agency : Agency of Section IV is highly and positively correlated with the components of Section I (General Aspects) except operational Aspect which is negatively correlated and also with the sub-components of Section II except Need and Importance on the whole which is negatively correlated and they are significant at either .01 level or .05 level.

Method : It is positively correlated with the components of Section I, II, III and IV (Internal factors) which are significant at either .01 level or .05 level. But it is not significant with Agency in Section IV which is negatively correlated which shows Agency has no relationship with Method.

Programme : It is also highly and positively correlated with all the sub-components of all the four sections except Operational Aspect in Section I (negatively correlated) and they are significant at either .01 level or .05 level.

Agent : It is highly and positively correlated with sub-components of Section I except operational Aspect (Negatively correlated) and in Section II Need and Importance on the whole which is also negatively correlated. The rest of the components are significant at either .01 level or .05 level.

Curriculum : It is also highly and positively correlated with all the components of Section I, II, III and IV and they are significant at either .01 level or .05 level except Programmes in Section IV but it is correlated positively.

Programmes on the Whole : It is highly and positively correlated with all the components of Section I, II, III and IV and barring one or two factors which may be due to chance factor it is also internally correlated as well as significant at .01 level or .05 level.

Section V : Organisational Aspects :

Sub-component Curriculum : It is highly and positively correlated with all the components of Section I, II, III and IV and significant at either .01 level or .05 level.

Process : It is also highly and positively correlated with all the components of Section I, II, III and IV and significant at either .01 level or .05 level.

Method : It is highly and positively correlated with the components of Section I except operational Aspect and

Need and Importance on the whole in Section II and Method in Section IV, which are negatively correlated. It may be due to chance. All the rest of the components of all the sections are significant either at .01 level or .05 level.

Administration : It is also highly and positively correlated with all the components of Section I, II, III and IV except operational Aspect in Section I and Need and Importance on the whole in Section II which are negatively correlated. It is due to chance they are negatively correlated. They are significant at either .01 level or .05 level.

Agency : This component is also highly and positively correlated with all the components of Section I, II, III and IV except operational Aspect in Section I and Need & Importance on the whole in Section II which are negatively correlated. It may be due to chance. The rest of the components of Section, I, II, III and IV are significant at either .01 level or .05 level.

Agent : It is highly and positively correlated with all the components of Section I, II, III and IV except operational Aspect in Section I and Need & Importance on the whole in Section II which are negatively correlated. It may be due chance. All other factors are significant at either .01 level or .05 level.

Organisational Aspect on the Whole : It is also highly and positively correlated with the components of Section I, II, III and IV as well as with the internal factors and significant at either .01 level or .05 level.

Section VI : Suggestion

The component Suggestion of the Section VI is highly and positively correlated with all the components of the Section I, II, III, IV and V and it is significant at either .01 level or .05 level.

Grand Total : Looking to the relationship under Grand Total of all the components of the Section I to VI, they are highly and positively correlated and significant at either .01 level or .05 level.

Favourable and Unfavourable : The last variable favourable or unfavourable attitude of the teacher-educators has no correlation with all the components of Section I to VI, that means attitude has no concern with the various aspects of non-formal education programmes leading to life-long education. It can be said that the attitude of the teacher-educators is not dependent on the different aspects of the non-formal education programmes.

CONCLUSION :

From the above discussion of the correlation matrix, it appears that all the components of the tool constructed and standardized by the investigator are mutually inclusive, cohesive and true to the objective of measuring "attitude scale" of the teacher-educators of the education colleges (i.e. Secondary teachers' training colleges) of Gujarat.