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CHAPTER : VII

COMPARATIVE VIEW AND FACTOR ANALYSIS OF THE O.H.Q.

This chapter covers the comparative view of the three Education Systems from different aspects : Governance; Decisional participation; Organizational Health. Relationships among decisional participation (Existing), decisional participation (Expected) and organizational health have been studied on the basis of overall responses of Faculty members (All combined for three Education Systems). Factor analysis of the organizational health instrument has been done considering the responses of four hundred respondents from the three Education Systems to study the dimensions of the instrument and to find out the percent variation. For convinience point of view; following code have been used in doing statistical analysis:

Variable 1	Dimension-I	of the Organizational Health
Variable 2	Dimension-II	of the Organizational Health
Variable 3	Dimension-III	of the Organizational Health
Variable 4	Dimension-IV	of the Organizational Health
Variable 5	Dimension-V	of the Organizational Health
Variable 6	Dimension-VI	of the Organizational Health
Variable 7	Dimension-VII	of the Organizational Health
Variable 8	Dimension-VIII	of the Organizational Health
Variable 9	Dimension-IX	of the Organizational Health
Variable 10	Dimension-X	of the Organizational Health

Variable 11 for total score (all dimensions combined) of the Organizational Health.

Variable 12 for Decisional participation (Existing)

Variable 13 for Decisional participation (Expected)

For various tables showing means, standard deviations etc., these code numbers for different variables have been used frequently. Forty decision situations are given in the Decision-making participation instruments alongwith category of responses. Forty items of Organizational Health Questionnaire are also given with reference to the dimensions in Chapter-III.

Table-VII : 1 showing means and standard deviations for the Organizational health scores for the different Education Systems :

Measures \ Education System →	Technological University	Technically Oriented University	I.I.T.
N	200	70	130
Mean	88.58	85.69	77.67
S.D.	28.62	29.04	23.01

Table VII-2 : showing means and standard deviation of decisional participation scores (Existing and Expected) for the different Education Systems :

Education System / Measures	Technological University		Technically Oriented University		I.I.T.	
	Decisional participation N = 200		Decisional participation N = 20		Decisional participation N = 130	
	Existing	Expected	Existing	Expected	Existing	Expected
Mean	43.10	94.13	53.27	94.26	49.92	91.81
S.D.	29.23	23.96	30.51	35.04	21.10	22.74

Table VII-3 : showing means and standard deviations of different variables calculated from the faculty members of faculty members (for the three Education systems)

N=400

Measures \ Dimensions	1	2	3	4	5	6	7	8	9	10	11	12	13
Mean	8.44	8.29	9.21	7.58	8.95	8.83	8.68	8.85	8.46	7.21	84.53	49.60	93.40
S.D.	3.36	3.54	3.30	3.45	3.38	3.32	3.62	3.23	3.33	3.78	27.44	27.22	23.34

Table VII-4 : showing intercorrelations among different variables calculated from the responses of faculty members (for the three Education Systems)

N=400

	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1	.58	.54	.60	.46	.58	.57	.56	.56	.66	.77	.21	.03
2		1	.55	.62	.54	.58	.49	.51	.56	.58	.75	.15	.01
3			1	.60	.58	.69	.57	.55	.63	.70	.80	.19	.06
4				1	.52	.65	.68	.58	.65	.67	.82	.13	-.03
5					1	.64	.50	.58	.64	.55	.75	.16	.06
6						1	.70	.60	.69	.65	.35	.16	.01
7							1	.62	.60	.68	.80	.18	.05
8								1	.58	.66	.78	.23	.06
9									1	.68	.82	.17	.03
10										1	.86	.21	.04
11											1	.22	.02
12												1	.37
13													1

Table VII-5 : showing significance of the difference between means for the existing and expected decisional participation of the faculty members (for the three Education Systems).

Combined (Three Education Systems)			N=400		df = 399	
Type of decisional participation	Mean	S.D.	r	$S.E_{D.}$	D	't' value
Existing	49.60	27.22	.37	1.43	43.83	30.65
Expected	93.40	23.34				

Table VII-6 : showing factor loadings obtained from Factor Analysis of the O.H.Q

Factor \ Dimensions	1	2	3	4	5	6	7	8	9	10
I	.76	.75	.80	.82	.74	.85	.80	.78	.83	.86

Percent Variation = 63.99

Cumulative percent Variation = 63.99

Job stopped in the computer as columm sums were less than or equal to .3610. No rotation of factor due to this.

7.1 COMPARATIVE PICTURE OF THE GOVERNANCE :

Technological University (I-1) has the syndicate as top most managing body of the institution which has got members from government, public and private sectors, Deans and teachers of the University and members of the legislative assembly and council while technically oriented University (I-2) has Senate as the top most authority along with the Syndicate. Here memberships of the Senate and Syndicate are distributed to the various categories of personnels like teaching and non teaching staff, students, government officers. Local bodies authorities (from corporation and Panchayats), Vice-Chancellors of other Universities in the state, members of legislative assembly and member of Loksabha, head master, teachers journalists, researchers etc. In the case of I.I.T. (I-3), the I.I.T. Council and Board of Governors are the top most managing bodies. Membership is limited only from the selected institutions i.e. from authorities of other I.I.Ts and Indian Institute of Science, U.G.C. Chairman, nominees of the Central Government from important ministries members of parliaments and other experts by nomination. Minister Incharge of technical education is the Chairman of the Council. Senate is dealing only academic affairs just like academic councils of the other two institutions. Regarding finances and construction there are two important committees in I.I.T. i.e. Finance Committee and Building and works committee. In the case of

Technological University and teachnically oriented University executive powers are vested in the Syndicate while for I.I.T. the same are with the Board of Governors. In the case of Technological University the Syndicate covers the powers and duties of Senate and Syndicate of technically oriented University, whereas in the case of I.I.T., it is quite different as more powers are vested in I.I.T. council and Board of Governors. The powers and duties of Academic Councils and Board of Studies in Technological University and technically oriented University are comparable to the powers and duties of Senate and Board of Studies in the case of I.I.T.

I.I.T. management has got more representation from the central government which is not the case with other two Education Systems. Even U.G.C. Chairman is a member in I.I.T. management. Head of the institution is Director in the case of I.I.T. While in other two Education Systems Vice-Chancellor is head of the institution. Chairman of the Board of Governors could be compared to the Chancellor of Education System-I or Education System-II. In Technically Oriented University teachers' participation is much more incomparision of Technological University and I.I.T., There is also students participation in Technically Oriented University which is not observed in the other two Education Systems. Considered in this investigation. It can be said that there is difference in Governance for the three Education Systems which affects the different decision-making mechanisms.

7.2 Comparision of organizational health of the three Education Systems could be done on the basis of the organizational health scores (means). As these are three different Education Systems so it has been decided not to use significance of difference test. Comparision has been done on the mean scores of the three Education Systems. From table no.VII-1 it could be inferred that the Technological University and Technically Oriented University, have got nearly same type of organizational health (as means are 88.58 and 85.69 with nearly equal standard deviations). Organizational health for the systems could be interpreted somewhat better than the average organizational health. Mean score of the organizational health for the I.I.T. is 77.67 which is less than the mean scores of Technological University and Technically Oriented University. It is also somewhat less than the index of average organizational health. It could be interpreted that Technological University and Technically Oriented University have got some what better organizational health than I.I.T.

7.3 Comparision of existing decisional participation and expected decisional participation could be done on the basis of mean scores calculated in Chapters IV, V, VI, Table No. VII-2 shows the means and standard deviations of decisional participations scores (Existing and Expected) for the different Education Systems. It has been decided not to use the significance [illegible] of difference test as these are three different Education Systems for comparision. Comparision has been done on the

basis of means scores of decisional participation (Existing and Expected). It could be inferred from table No.VII-2 that means of the decisional participation (Existing) are 43.10, 53.27, 49.92 for the Technological University, Technically Oriented University and I.I.T., respectively, which are less than the index of average decisional participation. Expected mean decisional participation scores are more than the index of average decisional participation. It could be interpreted that in all the three Education Systems Faculty want more participation in decision-making and existing participation is not sufficient.

7.4 RELATIONSHIP BETWEEN EXISTING DECISIONAL PARTICIPATION AND ORGANIZATIONAL HEALTH :

Relationship between organizational health and existing decisional participation has been found out separately for the three education systems in the Chapters IV, V, VI. Here correlation co-efficient has been calculated from the organizational health score and existing decisional participation score of respondents from the three Education Systems. Table No.VII-4 gives $r = .22$ which is significant at .01 level of confidence (From the standard table, for df=300, $r = .148$ and for df=400, $r = .128$, for .01 level). On the basis of this inference it could be interpreted that there exists significant relationship between existing decisional participation and organizational health. Existing decisional participation affects the health of the organization. It implies that if there is good decisional participation then the health of the organization will be better.

7.5 RELATIONSHIP BETWEEN EXPECTED DECISIONAL PARTICIPATION AND ORGANIZATIONAL HEALTH :

Relationship between organizational health and expected decisional participation has been found out separately for the three education systems in previous chapters. Here correlation co-efficient has been calculated from the organizational health score and expected decisional participation score of the respondents from the three Education Systems. Table No.VII-4 gives r = .02 which is insignificant at .05 level of confidence (From the standard table for df=300, r =.113, for df=400, r=.098, for .05 level). From the above inference it could be interpreted that there is insignificant relationship between expected decisional participation and organizational health.

7.6 RELATIONSHIP BETWEEN EXISTING DECISIONAL PARTICIPATION AND EXPECTED DECISIONAL PARTICIPATION :

In previous Chapter relationship between existing decisional participation and expected decisional participation have been considered for the three educations systems separately. Table No.VII-4 gives r = .37 which is based on the respondents (Faculty members of the three Education Systems). The calculated value of r is clearly significant at .01 level of confidence (From the standard table, for df = 300, r = .148 for df = 400, r = .128, for .01 level). From the above inference it could be interpreted that there exists relationship between existing decisional participation and expected decisional participation. Expectations of participation in decision-making may vary with the existing decisional participation.

7.7 FACTOR ANALYSIS OF THE O.H.Q. :

Factor analysis is a specialized mathematical technique, widely used and highly important in test construction. The main purpose of factor analysis is to simplify the description of data by reducing the number of necessary variables or dimensions. The data obtained from the administration of the O.H.Q. (from the three Education Systems) have been processed for the factor analysis as per specification of the computer programme of P.R.L. computer centre, Ahmedabad. Table No.VII-4 shows the intercorrelations of the ten dimensions considered for the organizational health. It could be observed that the intercorrelations are high enough to indicate that each dimension measures a relatively same type of behaviour. Table No.VII-7 gives the factor loadings obtained from the factor analysis done with the help of computer (P.R.L. computer, Ahmedabad). This exhibited only one factor with highly significant loadings on the considered dimensions of the organizational health. It could be interpreted that only one factor is dominant.

7.8 INTERPRETATION OF THE DOMINANT FACTOR OBTAINED FROM THE FACTOR ANALYSIS :

Table No.VII-6 shows factor loadings with the ten dimensions of the organizational health and also gives cumulative percent variation as 63.99 or 64. It shows that one single factor is dominant in the organizational health and O.H.Q. developed in this investigation measures 64 percent

of the desired behaviour. This single factor obtained from the factor analysis could be called as Organizational effectiveness which covers all the ten considered dimensions of the organizational health. This factor analysis has established the validity of the O.H.Q. developed.