CHAPTER III :

THE RESEARCH INSTRUMENTS

3.1 Introduction

3.2 Construction of the Tool Institutional Climate Description Questionnaire.

3.3 Development of the Research Instrument to Study Student Control Ideology (The SCI)

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3.1 INTRODUCTION

It was indicated in the previous chapter on the Research Plan that the practice adopted by some of the Indian researchers to use the OCDQ by Halpin and Croft which was standardized on the USA data considering the tool being appropriate to meet the educational conditions in India was criticised by principals of secondary schools and some research workers like Shelat (1975), Patel (1976), Gandhi (1977) and others. For instance, Neela Shelat (1977: 96) observes :

> "Critics do not fail to point out the limitation of this approach to map the domain of organizational climate of schools. The present investigator has been often posed with the questions by school principals and school teachers while she conducted seminars on school climate through her Extension Service Centre as the Coordinator. Their contention was that their behaviour patterns - or interactions alone do not go to build up their schools' organizational climate. In those parts of India, where private enterprise dominates at the secondary school stage, the domination of the Managing Committee (or Education Committees in the case of the Panchayati Raj schools) is so

> much and so complete that the principal has no behaviour of his own - he is, more or less, a puppet or somebody's mouth piece. Therefore, it is maintained, that unless how the management pulls that string from behind the curtain is known, no proper estimation or evaluation of school principal's or teachers' behaviour can be made. It is further alleged that managements of educational institutions are so powerful in some parts of the State that one cannot map fully and effectively the domain of principal's and staff behaviour - what manifests does not give the true picture and what Halpin (1963) talks of the authenticity of climate becomes suspect. The implication is that the eight sub-tests developed by Halpin and Croft are inadequate to identify <u>really</u> organizational climate of Indian schools."

The investigator, therefore, decided to develop the tool to measure organizational climate afresh and on new lines. She was encouraged to do so by the fact that her theme was the climate of a unitary, teaching and partially residential university whereas the tool developed by Mehta (1977) was to identify and evaluate the institutional climate of an affiliating university where private colleges are located

over a vast area of North and Central Gujarat where they are spread out sparsely. In a country like India, the gulf between an affiliating type of university and an unitary teaching university is very great and decisive in terms of physical resources and conditions as well as the academic and professional equipment of university teachers, not to talk of its annual budgets. The University Acts which govern the constitution of the Gujarat University and the M.S.University of Baroda are so much different in many vital facets of university governance that Mehta's ICDQ (Baroda Form II) could not be used to study the institutional climate of the M.S.University of Baroda.

Further, the preliminary exploratory discussions that the investigator had with some of the Deans of Faculties, Heads of the University institutions and Departments as well as some officials of the University Administration Office made it abundantly clear to her, that in the university, the administrative dimensions like Organizational Structure, the channels, modes and inadequacy of communication, the autonomy of teachers vis-a-vis the university Administration, Faculty

Dean/Head of Institution and heads of Departments and human relations are such potent factors that unless they are included as dimensions of the tool to identify and measure institutional climate, it will be difficult to get a true picture of the personality of the M.S. University of Baroda which has earned such a name in the country and abroad.

These interviews with the senior university teachers and Faculty/University administrators strengthened her decision to try her hands in developing an altogether new tool to study the institutional climate of the M.S.University of Baroda. This decision received reinforcement from the series of research seminars on climate held in 1975 in the Department of Educational Administration of the Faculty of Education wherein some research fellows and staff members also participated. In this connection, the investigator would like to mention particularly the names of Professor D.M. Desai, Professor D.B. Desai, Dr. B.K. Passi, Dr. P.K. Dongre, Dr. (Mrs.) Neela Shelat, Dr. D.R. Darji, Dr.(Mrs.) Pramila Dekhtawala, Dr. M.M. Choksi, the Principal of the University Experimental High School and doctoral students of the Department of Educational Administration, viz.,

Kirit Gandhi, Miss. Anjani Mehta, Samrong Pengnu, Sat Paul Gupta, Mr. S.C. Tikmani and others.

In developing the new tool, the models of the ICDQ by Halpin and Croft (1973), the Indian version of the ICDQ by Motilal Sharma (1973), the OCDQ for colleges by R.S. Shah (1975) were available. George Stern (1970) has developed the Need-Press Mouel to conceptualize organizational climate.

George Stern (1970:14) had developed the College Characteristics Index (the CCI) in collaboration with C.Robert Pace et al. The tool had the following elements :

Academic

1. Faculty characteristics
2. Programme and Course contents
3. Classroom activities: teaching, examinations, outside preparation
4. Extra-curricular academic : Chapel, Press, special programmes.

Administrative

1. Organizational Structure
2. Rules and Regulations

3. Physical plant facilities

4. Student personnel facilities and practices.

Student

1. Student characteristics

2. Community Life

3. Extra-Curricular Activities

4. Study Patterns.

The investigator discussed with those who had worked in the area of climate research the appropriateness of the CCI as a tool to measure the institutional climate of the institutions of the M.S.University. The emergent view was that it would be more desirable and appropriate to use the OCDQ of Halpin and Croft (1963) as a model or a base and build the new tool on the similar structure, enriching it in terms of administrative behaviour.

Stern and others had also made attempts to develop a tool and procedures to measure the intellectual climate in colleges. As the stress in the study was on the organizational climate and not merely on the intellectual climate, the decision to develop a new tool which can give a comprehensive

measure of the institutional climate of Faculties/Institutions/ Departments was preferred.

The investigator wanted to examine the OCDQ-HE by Borrevik. But, unfortunately, her efforts to get a copy of the tool did not succeed. She felt that such an exploration would be more time consuming. She, therefore, took the final decision to develop a new tool - the ICDQ for the unitary teaching and residential university.

How this tool was developed is described briefly below :

3.2 CONSTRUCTION OF THE TOOL INSTITUTIONAL CLIMATE DESCRIPTION QUESTIONNAIRE

This tool will be briefly referred to in the study as the ICDQ (Baroda Form III). It is called 'The Baroda Form III', because previous two tools to measure climate suitable to conditions of education in the State were constructed and standardized. They were : "Organizational Climate Description Questionnaire" tool to measure climate of secondary schools. This tool was constructed in 1975 by Kirit Gandhi who tried it out in 1976 successfully to measure the climate of

secondary schools of Gujarat. This tool was called "The OCDQ (Baroda Form I)". The second tool was constructed by Miss. Anjani Mehta in 1975 to measure the institutional climate of the affiliated colleges of the Gujarat University and was tried out in 1976. The tool was called "The ICDQ (Baroda Form II)". The present tool is intended to be used to measure climate of a unitary*, teaching and residential university like the M.S.University of Baroda. It was also constructed in 1975 and used in 1976. It is named as the ICDQ (Baroda Form III) to distinguish it from the ICDQ (Baroda Form II) which is meant to be used to measure climate of an affiliating university where the university conducts a few post-graduate institutions of its own. This is in contrast to the affiliating university, where, at the most of the colleges are private or government..

As observed earlier, in constructing the ICDQ (Baroda Form III), the investigator has used the OCDQ Model of Halpin and Croft. It would, therefore, be worthwhile to note briefly the salient characteristics of the original OCDQ.

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* This is a city-university, having all its constituent colleges of its own, and all the teachers are recruited by the university itself.

The tool consists of 64 items of Likert-type. Each item is in the form of a statement. It describes how teachers perceive the behaviour of their colleagues or of their principal in relation to teachers. The OCDQ items are, as Halpin (1966:47) observes measures of attitudes or alternatively, of perceptions. The statements are supposed to provide a dependable index of what is "out there".

Halpin also observes that the OCDQ was gradually built up by starting to build up a bank of about 1000 items. The items were screened in various ways, but principally by constructing and actually testing preliminary forms. The major analysis was done on the data provided by 1151 respondent teachers of 71 elementary schools.

The authors used factor analysis which resulted into the identification of eight dimensions of Organizational Climate. The items which loaded on each dimension conspicuously were assigned to it.

The eight sub-tests that were thus identified contained the first four dimensions which refer primarily to the behaviour of teachers. These four teacher dimensions are :

1. Disengagement (10 items)
2. Hindrance (6 items)
3. Esprit (10 items)
4. Intimacy (7 items)

The conceptual framework of these four teacher dimensions was presented in Chapter I.

The remaining four dimensions referred to the behaviour of principal. They are :

5. Aloofness (9 items)
6. Production Emphasis (7 items)
7. Thrust (9 items)
8. Consideration (6 items)

The ideology of these four dimensions in operational terms was also set forth earlier in Chapter I.

Such is broadly the structure of the eight dimensions of OCDQ developed by Halpin and Croft in 1963.

By the iterative cluster analyses and the factor analyses, Halpin and Croft, were able to identify, as shown above, the eight relatively independent dimensions, which they chose to use as indexes of the Organizational Climate of a school.

The next step in the process was the conversion of the raw scores for each sub-test yielded by each respondent into standard scores, with an arbitrary mean of 50 and a standard deviation of ten. This process resulted into eight standard scores for each respondent.

The correlations between the eight sub-test scores of the OCDQ on 64 items responded by 1,151 teachers were computed. They, then, factored intercorrelations among the eight sub-test scores and went through the process of factor analysis at the sub-test level by using a principal-components method of analysis. Halpin and Croft used the Two-Factor Varimax Rotational Solution and Three-Factor Varimax Rotational Solution. The latter yielded three General Factors, (1) Social Needs, (2) Esprit and (3) Social Control. As the purpose of the researchers was mainly to describe the Organizational Climate of schools as perceived by their staff, they developed procedures for the construction and the standardization of

the school profiles. By examining the factor matrix, Halpin and Croft were able to separate the school profiles into six sets.The researchers then set themselves the task of computing for each of the six sets of school profiles into a single prototypic profile. Halpin (1966:170) observes that these six prototypic profiles can be viewed as descriptions of six different climates which the researchers named and ranked in order from Open to Closed. The six organizational climates, thus, mapped out on a climate continuum are (1) Open, (2) Autonomous, (3) Controlled, (4) Familiar, (5)Paternal and (6) Closed, with Open climate constituting one extreme end and the Closed climate the other end.

In constructing a new institutional climate description questionnaire, the ICDQ, the Halpin and Croft Model was kept in mind, but some deviations from the model were inevitable:

(1) The four teacher behaviour dimensions and the four principal behaviour dimensions were retained, but four additional dimensions, as observed earlier, delineating administrative behaviour were added.

(2) The individual items were developed as a result of

experts' observations, and discussions with teachers, heads of Departments, Faculty Deans/Institution Heads on what happens "out there" in different Faculties/Institutions/ Departments.

A preliminary experimental draft of 200 items reflecting the four dimensions of teacher behaviour (with 66 items), four dimensions of principal behaviour(again with 66 items) and four dimensions of administrative behaviour (also with 66 items) was prepared, and the items were discussed for their content validity and relevance to each dimension or sub-test some university teachers from different Faculties, with some office bearers of the Baroda University Teachers' Association (the BUTA) and with some of the researchers who worked in the area of measurement of climate. These included, Dr.(Mrs.) Shelat, Dr. D.R. Darji, Dr. Ivy Franklin, Dr. B.N. Patel, Dr. D.G. Pandya, Dr. S.P. Gupta and others. Some of the senior teachers of the University like Professor R.N.Mehta (the then Dean, Faculty of Arts, and the present head, Department of Archaeology), Dr. N.S. Pandya (the then Dean, Faculty of Science and the then Head, Department of Physics), Dr. C.H. Pathak, Head, Department of Botany, Dr. V.M. Shah, Head,

Department of Mathematics, Professor D.M. Desai, the then Dean, Faculty of Education and Psychology and at present Head, Department of Educational Administration, Dr. N.S. Pathak, Department of Psychology, Dr. S.D. Desai, Department of Geology, Mrs. Kalpana Parlikar, Department of Extension Education, Faculty of Home Science, and Dr. Pramila Dekhta-wala, Research Fellow, Centre of Advanced Study in Education, and others provided precious help.With such help and efforts, the investigator was able to add four more dimensions delineating administrative behaviour, viz., Organizatiomal Structure, Communication, Freedom and Democratization and Human Relations. These four new dimensions were in addition to the four teachers' behaviour dimensions and four principal behaviour dimensions identified in Halpin-Croft Model. The Table 3.1 gives the number of categories of dimensions and the number of items included under each category of dimensions.

Table 3.1 : Number of Items in Each Component of the Experimental Draft of the ICDQ (Baroda Form III)

Dimensions	No.of items
Teachers' Behaviour	66
Principals' Behaviour	68
Administrative Behaviour	66
Total	200

The investigator, going through this preliminary process of observation, discussion, comments and review, was able to develop 200 items delineating behaviours encompassed under different twelve dimensions which were empirically arrived at. This constituted a deviation from the Halpin-Croft model, where the eight sub-tests or dimensions were arrived at by analysing the data yielded by the respondents at the item level, by means of iterative cluster analyses and Factor analyses. But the investigator has got the individual items assigned to each sub-test or dimension by experts - the researchers who had either done or who were doing doctoral research work in the area of organizational climate. They included the following :

(1) Professor D.B. Desai, Baroda.

(2) Dr. P.K. Dongre, Baroda.

(3) Dr. N.S.Pathak, Baroda

(4) Dr. (Mrs.) Neela Shelat, Baroda.

(5) Dr. D.R. Darji, Baroda

(6) Dr. B.N. Patel, Gangadhara, Surat Dist.

(7) Dr. D.G.Pandya, Godhra, Panchmahals Dist.

(8) Dr. K.V. Sheth, South Gujarat University, Surat.

(9) Dr. (Mrs.) Pramila Dekhtawala, Centre of Advanced Study in Education, Baroda.

(10) Shri Kirit Gandhi, Lecturer, R.P. Anada College of Education, Borsad, Dist. Kheda.

(11) Miss. Anjani Mehta, Principal, M.N. Contractor College of Education, Dabhoi, Dist. Baroda.

(12) Dr. Samrong Pengnu, a Thai Doctoral Student at Baroda.

(13) Dr. S.C. Tikmani, Research Officer, the S.S.C. Examination Board, Gujarat State, Baroda.

(14) Dr. S.P. Gupta, Dev Samaj Women's College, Ferozpur, Punjab (then a doctoral student at Baroda).

The experts or co-researchers were requested to review each item from four angles, viz., (1) the clarity of the language, (2) its relevance to the dimension to which it was assigned, (3) the adequacy in respect of the teacher-teacher, teachers-leader and administrative behaviour patterns that usually go on in institutions of higher education and (4) the likelihood of anybody resenting to the content or mode of stating the item and (5) the desirability of using a four-keyed or a five-keyed response of the reviewers - those experts who belonged to the M.S. University of Baroda were also requested to screen each item from the correctness as well as the scope

of the interactions that take place in the institutions of the University - they were expected to do on the basis of what they actually saw or heard of what has been happening on the campus of the University (the majority of the Baroda experts were senior teachers having at least ten or more years of professional membership of the University community at Baroda).

After, getting the 200 items screened and reviewed, the investigator edited them on the basis of the suggestions and comments she received from the experts and co-researchers.

The draft form of the ICDQ was then tried out on 50(but who were not included in the final sample) university teachers drawn from the different Faculties/Institutions of the M.S. University of Baroda. The scale against which the respondents were requested to indicate the extent to which each item characterised their institution was defined by five categories viz., (1) never occurs; (2) rarely occurs; (3) sometimes occurs; (4) often occurs and (5) very frequently occurs.

After administering the experimental draft to the 50 university teachers belonging to different Faculties/ Institutions, the issue before the investigator was to compute item-dimensional total correlation which would help her in determining whether items correlate significantly to the dimension or sub-test to which each was assigned and to discard the items which failed to establish a significant relationship with the sub-test to which it was assumed to belong. This internal consistency of individual items with the dimension total was established using the Product-Moment Coefficients of Correlation technique.The results of item-dimension total correlation are presented along with the item of the final draft in Table 3.2. The Experimental Draft along with the coefficients of correlations of the items that were discarded is given in the Appendix.

Table 3.2 : Correlation Analysis of the Experimental Draft of the DCDQ for Item Selection for the Experiment Draft.

DISENGAGEMENT

Sl. No.	Item No.	Item	Original	Correlation
1	19	"More work only if more Pay" is what the teachers in the department say in private.	27	.56
2	32	Teachers are not bothered about whether students attend classes or not.	41	.69
3	44	Teachers of this Department take active part in the faculty activities.	54	.44
4	57	Teachers feel themselves as a part and parcel of this Department.	76	.63
5	65	Teachers raise irrelevant questions in the staff meetings.	92	.53
6	76	Teachers have to be told and pushed to do their work.	110	.61
7	87	Teachers delay taking up their periods	121	.76
8	94	Teachers come to the faculty when they have a period to take and leave the department after that.	130	.52
9	100	Teachers keep to themselves in this department.	137	.51
10	101	Teachers are not always in their classes when the period starts.	139	.70

Sl. No.	Item No.	Item	Original	Correlation
		ESPRIT		
1	2	There are internal bickerings and jealousy among the staff of this Department.	2	.48
2	17	Teachers complain about favouritism by Administration.	25	.50
3	29	Teachers' output is good in this Department because their merits are recognized.	37	.77
4	46	Teachers feel happy with the conditions of work in the Department.	56	.82
5	58	Teachers respect their colleagues.	80	.68
6	63	Teachers of this Department seem to be well adjusted.	89	.85
7	71	The staff of this Department is stable over a period of time.	98	.50
8	85	Teachers are happy with the recreational facilities provided to them in the Faculty.	119	.59
9	90	An accepted common goal binds together all the staff in the Department	124	.70
10	108	Teachers are interested in private remunerative work.	147	.59
11	110	Teachers put in their best efforts in this Department.	149	.55

Sl. No.	Item No.	Item	Original	Correlation
12	119	Teachers' social needs are well-satisfied in this Department.	160	.51
13	126	Teachers of this department manifest positive attitude towards their work	169	.68
14	130	The teachers use students to pressurise Administration to gain their demands	103	.72
15	132	There are factions among the staff of this Department.	177	.73
16	134	Teachers of this Department give credit to their colleagues for their achievement.	180	.52
		INTIMACY		
1.	8	The staff of this Department is like a family.	11	.67
2.	10	Teachers know the family members of their colleagues.	13	.45
3	14	Teachers of the Department have a lot of fun when they are together.	20	.71
4	24	Teachers feel happy to help one-another.	32	.57
5	27	Cooperative work is favoured by the teachers of this Department	35	.71
6	36	Teachers of this Department share their snacks at tea time.	46	.54

Sl. No.	Item No.	Item	Original	Correlation
7	53	Closest friends of teachers in this department are their colleagues	68	.43
8	68	Teachers are hurt if any of their colleagues is wrongly criticized.	95	.60
9	74	Teachers of this Department rush to help their colleagues in an hour of need.	107	.71
10	141	The work of a sick teacher is readily shared by the other teachers in the department.	190	.65
		ALOOFNESS		
1	35	The head keeps to himself in his office.	45	.57
2	59	There is a formality and detachedness in the behaviour of the Department head.	84	.76
3	67	The Teachers can enter the Head's Office at any time.	94	.50
4	73	The Head dictates rather than persuades and convinces the teachers.	106	.71
5	79	The Head is in the habit of taking all important decisions in the Department himself without consulting any one in the Department.	113.	.71

Sl. No.	Item No.	Item	Original	Correlation
6	83	The Head is proud of his objective and impersonal behaviour.	117	.42
7	91	The Head mixes freely with the staff members.	125	.61
8	117	The Head takes tea with the staff during the recess.	158	.49
9	131	The Head keeps his staff at a distance.	175	.69
10	136	The Head joins the staff in their excursion or picnic.	184	.42
		PRODUCTION EMPHASIS		
1	3	The Department Head checks all the instructional work done by teachers.	3	.57
2	9	No deviations from prescribed rules are tolerated by the Head.	12	.41
3	18	Supervisory work of the Head keeps teachers alert.	26	.46
4	26	The Head gives his preference to his teachers for deputation to foreign countries and inland summer institutes and seminars.	34	.49
5	43	The Department Head is vigilant that all Department work is completed by the staff in time	53	.52
6	50	The Department Head practises what he has in mind at any cost.	63	.52

Sl. No.	Item No.	Item	Original	Correlation
7	69	The Head shows favour to hard working teachers on his staff.	96	.53
8	81	The Head exacts work from his staff according to the duties assigned.	115	.57
9	86	Teachers are evaluated on the basis of their output.	120	.64
10	92	The Head is always available to teachers and students to discuss their problems.	128	.54
11	103	Supervision of examination and tutorials is very strict in this Department.	141	.45
12	120	Admissions in this Department are made strictly on the basis of merits and set criteria.	161	.55
		THRUST		
1	7	The Head helps teachers in their departmental work.	10	.70
2	13	The Head resists ideas that deviate from his own.	19	.57
3	15	The Head enthusiastically discusses with his staff the new ideas and experiences he gathers.	21	.73
4	31	The Head of this Department is the first to arrive in the Faculty and last to leave.	40	.76

Sl. No.	Item No.	Item	Original	Correlation
5	45	The Department Head motivates rather than bosses over his colleagues.	55	.77
6	47	The Department Head stays back in the Department after Faculty hours to help a teacher doing extra useful work.	57	.45
7	54	The Head misses no opportunity to correct wrong ideas or methods of work of his teachers.	71	.84
8	56	The Head discusses teaching and research techniques in staff seminars to improve teachers' work in the Department.	75	.55
9	70	The Head is truly an agent of change.	97	.81
10	77	'The duty of the Department and the Faculty first, everything else last' is the motto of the Head.	111	.59
11	112	The Head is well prepared whenever he talks to a group of teachers.	151	.64
12	122	The Head sets an example to the teachers by working hard himself.	164	.80
13	139	The Head's leadership is conducive to better work on the part of teachers.	187	.78
14	142	The Head of this Department is not easy to understand.	191	.71
15	143	The Head explains his point when he differs from his colleagues.	193	.64

Sl. No.	Item No.	Item	Original	Correlation
		CONSIDERATION		
1	1	The Head of my Department is by the side of teachers in an hour of need	1	.70
2	6	It is difficult for the Head to forget that he is a Head and to part with his power.	9	.43
3	51	The Head grudges any extra consideration or help to a teacher in difficulties.	65	.49
4	75	The Head tries his best to make the work in the Department enjoyable for teachers.	108	.85
5	78	The Head cares more for himself than for the staff.	112	.72
6	88	The Department Head visits the ailing colleagues in his home or in the hospital.	122	.48
7	93	The Head takes interest in the personal problems of the teachers and students.	129	.72
8	96	The Head gives all facilities to teachers to do their work in the Department.	132	.68
9	102	The Head is really not what he pretends to be.	140	.69
10	121	The Head's behaviour is characterized by conservation, caution and distrust.	162	.60

Sl. No.	Item No.	Item	Original	Correlation
11	123	The Head is known for his human relationship.	166	.78
12	125	The Head attends to all the difficulties of his staff, even if it means extra-work for him.	168	.61
13	144	The Head is a man of confidence and inspiration to the staff.	194	.81
		COMMUNICATION		
1	22	Teachers and students freely and easily communicate with the Head.	30	.65
2	28	The Head welcomes feed-back from his teachers and students.	150	.63
3	33	The important informations relating to the teachers and students are put up on the Faculty notice-board.	43	.64
4	61	It is easy to obtain sufficient and correct information about the Department.	87	.65
5	106	The Head transmits all important information available with him to his teachers and students.	145	.69
6	135	Teachers are informed soon after administrative decisions are taken.	182	.67
7	137	Staff meetings serve as a communicative device.	185	.58

Sl. No.	Item No.	Item	Original	Correlation
8	147	The teaching community of the Faculty is happy about its two way flow of communication among teachers and administrators.	198	.67
		ORGANIZATIONAL STRUCTURE		
1	11	All staff members shoulder responsibility in regard to one or the other activity of the Department or the Faculty.	14	.50
2	16	Workers and shirkers are both being bothered about the least in this department.	24	.58
3	23	The staff has full involvement in the Departmental academic planning.	31	.63
4	39	Senior subject teachers coordinate teaching in their paper or course.	49	.58
5	55	Decision-making is more centralized in the Dean's office than in the Department.	73	.57
6	64	The Head refuses to change a stand once taken by him on any Departmental or Faculty matter.	90	.47
7	105	Department Head readily changes decision once taken, if placed under pressure.	81	.43

Sl. No.	Item No.	Item	Original	Correlation
8	109	Coordination of the Departmental activities is done through staff-meetings.	148	.49
9	114	The Head takes into confidence senior teachers before taking a decision pertaining to the students.	154	.45
10	128	The programming done in this Department is haphazard.	171	.65
		FREEDOM AND DEMOCRATIZATION		
1	5	The idea of teachers forming an association of their own is disliked by the leader.		
2	21	The Head or the few senior teachers talk the most in staff meetings.	29	.49
3	40	The Head believes that every staff member can contribute his mite in the Department	50	.50
4	41	The Department Head involves the staff in taking all vital decisions regarding the Department.	51	.67
5	52	Teachers of this Department are free to take up extra assignments of their interest in their free time.	67	.47
6	82	The individuality of teachers of this Department is well respected.	116	.57

Sl. No.	Item No.	Item	Original	Correlation
7	89	Everyome feels free to make his stand clear on any matter pertaining to the Department and the Faculty.	123	.60
8	95	Every one in the Department feels free to say what he or she desires.	131	.77
9	99	The Department Head recommends the constructive proposals from his colleagues to the University even though they involve additional expenditure.	136	.62
10	107	Teachers speaking at the staff meeting are interrupted by the Head.	146	.75
11	111	The Head is obstinate in his views and attitudes and is authoritarian.	74	.54
12	124	The Head is suspicious of teachers who argue or differ from him.	167	.61
13	127	Teachers of this Department cannot express their own views openly.	170	.62
14	138	The Head frowns on teachers who talk boldly.	186	.64
15	145	The teachers are made to teach as the Department Head wants.	196	.44
		HUMAN RELATIONS		
1	4	"Give students more chance to talk" is the motto of the teachers of this Department.	6	.45

Sl. No.	Item No.	Item	Original	Correlation
2	12	The Head is frank and cordial with the staff and students.	16	.65
3	20	Teachers of this Department live under tension.	28	.53
4	25	The staff of this Department knows their students closely.	33	.44
5	34	This Faculty is visualized as an integrated community of Dean, Department Heads, teachers and students.	44	.64
6	37	The Head inquires about the well beings of the family of his colleagues when he meets them.	47	.47
7	42	This Department is ready to associate with other educational, social or industrial organizations in training and research programmes pertaining to its field.	52	.42
8	48	Friendly and kindly guidance to students and others is the motto of the staff of this Department.	60	.70
9	60	Self respect of teachers is maintained in this Department.	85	.62
10	62	The Head talks despairingly outside about his Department.	88	.55
11	66	The staff of this Department gets along well with others in the Faculty and in the University.	93	.72

Sr. No.	Item No.	Item	Original	Correlation
12	80	Junior teachers hardly get real help and sympathy from the senior teachers and Department Head in their work.	114	.68
13	84	The Department Head is busy to the staff but yielding to the University Administration.	118	.69
14	97	Students feel at ease while meeting the staff members of this Department.	113	.58
15	98	The Department welcomes other Departments in the University to make use of the facilities available with it.	135	.56
16	113	The atmosphere of this Department is smoothing and inspiring.	152	.65
17	118	Teachers of this Department are liked and appreciated by others.	159	.47
18	129	This Department has a human climate.	172	.66
19	140	'Divide and Rule" is the policy in this Department.	189	.73
20	148	The Head uses different languages to explain the same event in the Department to different persons.	199	.54

The above screening process yielded the following items that were retained in the final ICDQ (Baroda Form III).

Table 3.3 : Items retained under different Dimensions in the Final Form of the ICDQ (Baroda Form III).

Dimensions	Item Nos.	Total No. of items
1. Disengagement	19, 32, 44, 57, 65, 76, 87, 94, 100, 101, 104, 115, 133	13
2. Hindrance	30, 38, 49, 72, 116, 146	6
3. Esprit	2, 17, 29, 46, 58, 63, 71, 85, 90, 108, 110, 119, 126, 130, 132, 134, 144.	17
4. Intimacy	8, 10, 14, 24, 27, 36, 53, 68, 74, 141	10
5. Aloofness	35, 59, 67, 73, 79, 83, 91, 117, 131, 136	10
6. Production Emphasis	3, 9, 18, 26, 43, 50, 69, 81, 86, 92, 103, 120	12
7. Thrust	7, 13, 15, 31, 45, 47, 54, 56, 70, 77, 112, 122, 139, 142,132	15
8. Considera-tion	1, 6, 51, 75, 78, 88, 93, 96, 125.	9
9. Organizational Structure	11, 16, 23, 39, 55, 64, 105, 109, 128	9

Table 3.3 (contd.)

Dimensions	Item Nos.	Total No. of items
10. Communication	22, 28, 33, 41, 61, 102, 106, 114, 121, 135, 137, 147	12
11. Freedom and Democratization	5, 21, 40, 52, 82, 84, 89, 95, 99, 107, 111, 124, 127, 128, 145	15
12. Human Relations	4, 12, 20, 25, 34, 37, 42, 48, 60, 62, 66, 80, 97, 98, 113, 118, 123, 129, 140, 148.	20
Total		148

The final choice of items was based on internal consistency as reflected in item-dimension total Product Moment Coefficient of Correlations. Table 3.4 gives the range of selected items under each dimension of the ICDQ.

Table 3.4 : Range of Pearson Product Moment Coefficient of Correlations between Dimension Total Score Individual Items for the Final Form of the ICDQ (Baroda Form III).

Dimension	Range of r
Disengagement	.44 to .76
Hindrance	.41 to .64
Esprit	.48 to .82
Intimacy	.43 to .71
Aloofness	.42 to .76
Production Emphasis	.41 to .64
Thrust	.45 to .84
Consideration	.43 to .81
Organizational Structure	.45 to .65
Communication	.45 to .69
Freedom and Democratization	.44 to .77
Human Relations	.44 to .73

It would, thus, be seen that items included under individual dimension bears significant correlationship with dimension total.

Halpin (1966:156) observes that "when one constructs a battery of tests one must be concerned with three standards: (1) that each test measures a relatively different "thing" or type of behaviour; (2) that the battery, as a whole, taps enough common behaviour to permit the investigator to describe the patterns in terms of a few more "general" factors (that is, fewer certainly, than the number of sub-tests); and (3) that the general factors which he extracts for a particular domain of inquiry are not discordant with those that have been previously reported in the literature.

As the present investigator had developed a new battery of tests - the twelve sub-test complex of the ICDQ, she also decided to resort to factor analysing the ICDQ and ascertain to what extent the three norms set by Halpin for constructing the original OCDQ are met by her new ICDQ. The factor analysis in such a case would serve two purposes: one of ascertaining the factorial composition and secondly of analysing the criterion in order to determine the nature and the weight of the factors which enter into it .

It needs to underscore the fact that factor analysis is a specialized mathematical technique, widely used and highly

important in test construction. It is a refined technique for analysing the interrelationships of data. The main purpose of factor analysis is to simplify the description of data by reducing the number of necessary variables or dimensions.

Defining factor analysis Fruchtur (1967) observes :

> "Factor analysis is essentially a statistical tool. In factor analysis a series of test scores or other measures are intercorrelated to determine the number of dimensions the test space occupied, and to identify those dimensions in terms of traits or other general concepts.

Thus, factor analysis would satisfy the first two standards of Halpin earlier described (vide- page 156).

The data obtained from the administration of the ICDQ were factor analyzed first by intercorrelations among factors. These correlations indicate whether the inventory possesses a common element. The correlation matrix (15x15) is given in Table 3.5. Considering the inter-correlations among the twelve sub-tests of the new ICDQ (Baroda Form III), it would be seen that the inter-correlations are low enough to

Table 3.5 : Intercorrelation (15 x 15) Matrix.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1		.36	-.59	-.36	.53	-.27	-.29	-.28	-.39	-.36	-.24	-.44	.17	-.02	.14
2			-.25	-.13	.04	-.19	-.23	-.36	-.36	-.33	-.33	-.11	.13	.03	.21
3				.29	-.08	.10	-.06	.02	.09	-.04	-.06	.12	-.05	-.01	-.15
4					-.20	.06	-.14	-.06	-.07	-.05	-.05	-.06	.11	.18	.05
5						.03	-.46	-.61	-.45	-.34	-.36	-.60	.09	.01	.05
6							.27	-.20	.03	-.29	-.36	-.26	-.18	-.11	-.01
7								.25	.25	.08	.05	.10	-.11	-.02	-.04
8									.22	.29	.46	.52	-.10	-.06	.08
9										.19	.29	.24	-.11	-.12	-.14
10											.27	.37	-.04	.17	-.14
11												.30	-.04	-.01	-.13
12													-.13	-.04	-.05
13														.33	.46
14															.28
15															

indicate that each sub-test measures a relatively different "thing" or type of behaviour. This is consistent with the first norm set forth by Halpin in constructing a battery of tests.

The Table 3.5 indicates a 15x15 correlation matrix. The figure, 1, 2, 3, ... 15 are used in the table to represent the fifteen variables* of the present study.

After having discussed the correlation matrix in Table 3.5., the Factor Matrix of the original Principal component is given in the following Table 3.6.

The Table 3.6 contains the Original Principal Component Matrix (12x5). The values in columns 3-8 are referred to as factor loadings and it is used to interpret the hypothetical nature of the factors. The 'eigenvalues' of each of these five factors are 25.00, 13.20, 8.85, 7.57 and 5.75 respectively. A column labelled h^2 has been added. It is obtained by summing the squared factor loadings in each row and can be interpreted as that portion of the variance of each variable which is correlated with the other variables.

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* They include 12 sub-tests of the ICDQ, the Student Control Ideology, The Dogmatism and lastly the Students' Acts of Indiscipline.

Table 3.6 : Original Principal Component Factor Matrix (12x5))

Variables	I	II	III	IV	V	h^2
1. Disengagement	75	-46	-01	-12	-04	.866
2. Hindrance	53	-28	60	60	12	.800
3. Esprit	-29	56	-33	24	-15	.724
4. Intimacy	-12	34	-05	10	-07	.607
5. Aloofness	79	79	-39	-28	-01	.870
6. Production Emphasis	07	78	34	-13	05	.789
7. Thrust	-41	20	62	-23	13	.761
8. Consideration	-70	-31	07	06	-13	.628
9. Communication	-58	09	06	-20	-33	.541
10. Organizational Structure	-55	-29	-15	-25	52	.782
11. Freedom and Democratization	-56	-42	-24	-20	-35	.712
12. Human Relations	-68	-29	02	43	13	.743
Percentage Variance	25.0	13.0	8.85	7.57	5.75	
Cum per cent variance	25.0	38.0	58.26	65.83	71.5	

Note: All decimal points have been omitted in factor loadings. Loading beyond ± .30 are considered significant.

There are two essential conditions of an institution or an organization, i.e., group maintenance and task achievements. In this context, Factor III, with a high loading on "Intimacy", Factor V with a high loading on "Esprit" and Factor I with a high loading on "Consideration", "Communication", "Freedom and Democratization" and "Human Relations" can be named as the "Group Maintenance Sector" of the ICDQ and Factor IV that loads high on "Hindrance" and "Thrust", Factor II with a high loading on "Production Emphasis" and Factor VI with a high loading on "Organizational Structure" can be named as "Task Accomplishment Sector" of the ICDQ.

From the given matrix of correlations each of the factoring methods is arbitrarily located; the reference axes get in shifted in a different position. In order to move the axes from the arbitrary location determined by the method of extraction to some position useful for interpretation of the factors, the axes are rotated. A major goal of rotation is to obtain meaningful factors that are as consistent as possible from analysis. A factor was considered to be of lesser importance if 'eigenvalue' was less than 1.00. Applying this criterion all the five factors were considered

for Varimax Rotation. The rotation of factors was done on the lines of Kaiser's (1959) computer programme of Varimax Rotation. It is given in Table 3.7 with factor loadings of five factors.

The Table 3.7 indicates the Rotated Factor Matrix (15x5). The values in column 3-5 are referred to as "factor loadings". After the rotation of factors, five factors were extracted. Those variables having less than .30 value were not considered in Varimax Factor.

After the rotated factor loadings have been obtained, an interesting next step is to try to identify the content and nature of the factors. This is done by taking into consideration the high loadings on a factor that are in common.

Table 3.7 : Rotated Factor Matrix (12 x 5).

Variables	Factors				
	1	2	3	4	5
1. Disengagement	45	68	-29	24	-12
2. Hindrance	-06	-23	-18	78	-20
3. Esprit	-03	82	-03	-09	-13
4. Intimacy	01	73	-03	05	17
5. Aloofness	88	-14	-24	13	-06
6. Production Emphasis	28	22	79	03	-18
7. Thrust	-33	-19	75	-20	09
8. Consideration	-68	-07	-05	-39	03
9. Communication	-32	05	22	-61	72
10. Organizational Structure	-37	00	-12	-20	71
11. Freedom and Democratization	-39	-10	-35	-66	02
12. Human Relations	-82	09	-15	-01	07
Percent Common Variance	18.30	12.44	10.76	11.99	8.44
Percent Total Variance	25.56	17.38	15.04	16.75	11.79

Note: All decimal points have been omitted in factor loadings.

DISCUSSION OF RESULTS

The discussion of the results is based on the Varimax Rotated Factor Matrix. Anastasi (1958) has pointed out :

> "In interpreting a factor, we consider only those items whose loading with that factor exceeds some minimum. The interpretation of Varimax factors has been centred around only those variables which had loadings greater than absolute value of .30".

Applying this criterion five factors were derived from the rotated factors. The five Varimax factors are described, named and interpreted as under :

Varimax Factor I

The significant loadings of the Varimax Factor I, arranged in descending order, are given in Table 3.8 for the sake of convenience.

Table 3.8 : Varimax Factor I.

Name of the Variables	Loading
Aloofness	.88
Disengagement	.45
Communication	-32
Thrust	-33
Organizational Structure	-37
Freedom and Democratization	-39
Consideration	-68
Human Relations	-82

The Varimax Factor I is characterized by significant loadings for eight variables, out of which two variables of the factor loadings are found to be positive whereas six variables are negative. The per cent common variance covered by this factor is 25.56. The significant loadings were shared by variables Aloofness (.88), Disengagement (.45), Communication (-32), Thrust (-33), Organizational Structure (-37), Freedom and Democratization (-39), Consideration (-68) and Human Relations (-82). Since this factor is mostly dominated by Aloofness and Human Relations, this factor can be named as "Human Skill".

Varimax Factor II

The Varimax Factor II is summarised in Table 3.9.

Table 3.9 : Varimax Factor II.

Name of the Variables	Loading
Esprit	82
Intimacy	73
Disengagement	68

All the factor loadings are found to be positive. This Varimax factor is characterized by significant loadings for three variables. The per cent common variance covered by this factor is 17.38. The significant loadings were shared by variables Esprit (82), Intimacy (73) and Disengagement (68). Since this factor is mostly dominated by high significant loading on Esprit, this factor can be named as 'Esprit'.

Varimax Factor III

The significant loadings of the thirdh Varimax Factor are being summarised in Table 3.10.

Table 3.10: Varimax Factor III.

Name of the Variables	Loadings
Production Emphasis	79
Thrust	75
Freedom and Democratization	-35

The Varimax Factor is characterised by significant loadings on three variables. Though two of these variables have positive loadings, the remaining one is negatively loaded. The per cent common variance covered by this factor was 15.04. This factor is characterised by significant loadings on variables Production Emphasis (79), Thrust (75) and Freedom and Democratization (-35). Since this factor is dominated by Production Emphasis, Varimax Factor III can be named "Leader Behaviour".

Varimax Factor IV

The significant loadings of the Varimax Factor IV arranged in descending order are given in Table 3.11.

Table 3.11 : Varimax Factor IV.

Name of the Variables	Loadings
Hindrance	78
Consideration	-39
Communication	-61
Freedom and Democratization	-66

This factor is characterized by significant loadings on four variables. One variable has positive loading and the other three variables are negatively loaded. The per cent common variance covered by this factor is 16.75. The significant loadings were shared by variables Hindrance (78), Consideration (-39), Communication (-61) and Freedom and Democratization (-66).Since this factor is mostly dominated by high significant loading on Hindrance, this factor can be named as "Institutional Control".

Varimax Factor V

The significant loadings of the Fifth Varimax Factor are being summarised in Table 3.12.

Table 3.12 : Varimax Factor V.

Name of the Variable	Loadings
Communication	72
Organizational Structure	71

This factor is characterised by significant loadings only on two variables. All the factor loadings are found to be positive. The percent common variance covered by this factor is 11.79. The significant loadings were shared by the variables Communication (72) and Organizational Structure (71). This factor can be named as 'Institutional Culture'.

CONCLUSION

The factor analysis was done by calculating tetrachoric covariances for the responses to the total 200 items. These covariances were then factored, using the principal axis orthogonal factor solution. The results of the factorial procedure showed that the tetrachoric covariances between the scores of the 200 items were represented by five factors. After rotation, five of these factors could be readily

interpreted. The details of extraction of factors based on the Original Correlation Matrix are presented in Original Principal Component Factor Matrix (12x5) in Table 3.6.

The factor matrix comprising five principal axis components, explains the correlation matrix (15x15) (Vide-Table 3.5). The five factors explain percent common variance. The naming and interpretation of the rotated Varimax Factors have shown the composition of the important factors implicit in the fifteen variables. The factors named are (1) "Human Skill", (2)"Esprit", (3) "Leader Behaviour", (4) "Institutional Control", and (5) "Institutional Culture".

In the present study, the other dimensions like Dis-engagement, Intimacy, Consideration, Communication were not identified by the respective factors. Out of these five factors, "Human Skills" has covered 25.56 per cent of common variance and it has been the most dominating factor. The per cent common variance covered by the factor 'Institutional Culture" was only 11.79 and it was least dominating factor. According to the rotated Varimax Factor Matrix and according to the per cent common variance, the following was the order of importance of the five named factors : (1) "Human Skills",

(2) Esprit (3) Leader Behaviour, (4) Institutional Control and (5) Institutional Culture.

The present section was principally devoted to the discussion of the construction of the tool "Institutional Climate Behaviour Description Questionnaire" and the Factor Analysis of its sub-tests.

This factor analysis, thus, helps in meeting the third norm set by Halpin for the construction of a test battery viz., extraction of some general factors.

Over and above the three standards set by Halpin for the construction of a battery of tests, there are other two characteristics which all satisfactory measuring instruments should satisfy. They pertain to their validity and reliability.

Halpin himself has raised the question of the validity of his and Croft's tool - the OCDQ. He observes (page 195) : "Indeed we are not sure against what criteria we should check the climate scores". In this study, as it will be seen that Open and Closed climates have correlated positively and significantly with Humanistic Control Ideology and Custodial Ideology

respectively and also Open Climate with Open mindedness and Closed climate with Closed mindedness.

The reliability of the tool was determined by the Test-Retest Method. The tool was administered to 50 university teachers drawn at random from different Faculties/Institutions after an interval of twenty days.

Further, the validity of the present ICDQ has been studied in two ways: As mentioned earlier all the items of the tool have been reviewed critically. Again item validation was also done through the Product Moment Coefficient Correlation Method, as discussed earlier. The inter-correlation matrix, and item dimension total score correlation provided sufficient indication as regards the validity of the tool. Therefore, the investigator did not think it essential to attempt any cross-validation. It showed the relation of items with each other.

The investigator employed the test-retest method for determining the reliability of the present questionnaire. The tool was again administered to 50 university teachers who were the same group of teachers who had taken the test.

The scores of the subjects at both the administration were then correlated. The correlation between the first and second set of scores was found by the Product Moment Method. The reliability coefficient obtained was .60. This value is sufficiently high, indicating that the questionnaire was reliable for measuring institutional climate of the Faculties/Institutions/Departments of the University.

As regards the scoring scheme of the ICDQ, as indicated earlier, the scale on which the respondents registered their answers is a five-point scale, namely -

1. Never occurs;
2. Rarely occurs;
3. Sometimes occurs;
4. Often occurs;
5. Very frequently occurs;

Thus, the maximum score possible for a respondent is 148 x 5 = 740. The responses for the positive items will be scored as 5, 4, 3, 2, and 1. Whereas the responses of negative items will be 1, 2, 3, 4, and 5.The scores that

will be obtained for each institution will be in raw data form. They will be subjected to the process of double standardization i.e. normatively and ipsatively. Thus standard scores dimension-wise will be used in the process of identification of the institutional climate of each sampled faculty.

Factor Analysis

The investigator felt it necessary to determine the factorial composition and also to determine the nature and weights of the factors which enter into it. One of the purposes of the present study is to explain the factors implicit in the institutional climate. All the dimensions of ICDQ have been mentioned earlier. Based on these 12 dimensions, the factor analysis was done by principal axes method.

Factor analysis is a specialized mathematical technique, widely used and highly important in test construction. It is a refined technique for analysing the interrelationships of data. The main purpose of factor analysis is to simplify the description of data by reducing the number of necessary variables or dimensions.

3.3 DEVELOPMENT OF THE RESEARCH INSTRUMENT TO STUDY STUDENT CONTROL IDEOLOGY (THE SCI)

The second research instrument developed by the researcher in the present study, was the Student Control Ideology form (the SCI). This tool was originally developed at the Pennsylvania State University by Donald J. Willower, Terry L. Ridell and Wagne K. Hoy in 1967. The model of the original PCI is used to construct the new SCI tool. The Statements that constituted the content of the tool are made to confirm to Indian scene in higher education to an appreciable extent.

The Student Control Ideology (the SCI - the Baroda Version III) consists of 45 items which measure the University teacher's views of student control on custodial - humanistic continuum. They are given in Table 3.13. The preliminary or the experimental draft was made of 65 items concerning student control ideology. The items denote either custodial ideology or humanistic ideology. It is necessary to mention that the custodial and humanistic orientations toward pupil control have been already discussed in Chapter I. Therefore, the

repetition of the explanatory exposition is avoided here. The originally constructed 65 items, concerning Student Control, Ideology were [illegible] given to 10 experts consisting of Professors, Lecturers and research students. Keeping in mind the comments, the modification was done. And it was given to a group of 32 university teachers for tryout.

Responses to each item are measured on a five point scale, ranging from strongly agree to strongly disagree. A high score signified a custodial attitude toward student control and a low score indicated a humanistic attitude towards control of students. The response categories were scored 5, 4, 3, 2 and 1 for 'Strongly agree', 'agree', 'undecided', 'disagree' and 'strong disagree' respectively, with scoring reversed for the items positive to the humanistic view point. The item scores are to be then summed up to provide a single test score.

For item analysis, the original authors used the biserial correlation technique*. This they did to determine the discriminating power of each statement. The present investigator

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* The coefficient of correlation for the 20 selected items ranged from .33 to .60.

has, however, used the t-test technique for item analysis. This she preferred to do because the items distinguished between the two types of student control ideology, viz., humanistic and custodial. The 45 items with a t-value greater than 1.96 were accepted and other 20 items having a lower t-value than that were rejected. The following 3.13 shows the t-value of items on Student Control Ideology (the SCI).

Table 3.13 : t-value of Items on student Control Ideology.

Sl. No.	Items	t-value
1.	Control the child to mould its character.	2.5
2.	Students are students -, they should be under the teacher.	2.80
3.	The students should imbibe the teacher's good habits.	2.10
4.	To-day's students are not interested in learning.	3.02
5.	Students should obey rules or they quit.	2.07
6.	Even from students teachers can learn.	2.11
*7.	Students know not moral values.	1.0
8.	Confidence in oneself alone will develop the students' potentialities.	2.62
*9.	No learning is possible without class control.	1.0

Sl. No.	Items	t-value
*10.	Effective discipline comes from within and not from without.	1.33
11.	The principal should first know how to control his students and then to teach.	2.08
12.	Learning takes place best in free climate.	3.00
*13.	The destructive among the students should not go unpunished.	.04
14.	Students should learn to control themselves.	2.57
15.	It is desirable for a teacher to be impersonal in his dealings with students.	3.20
16.	Love and understanding improve even a worst student.	2.65
17.	It is best to encourage an inquiring mind.	2.55
18.	Aptitude and interest are the best guides for students to choose their subjects.	4.4
19.	Teacher-Student relations can never be informal.	2.70
*20.	Students become worse even under benevolent pressure.	1.25
21.	To spare the road is to spoil the child.	3.03
22.	Students should feel a sense of belongingness in the school.	3.21
23.	Students should not have an access to school records.	4.9
24.	Recognition leads students to follow or do better acts.	3.33
25.	A teacher should trust in his students.	4.70

Sl. No.	Item	t-value
26.	Learning experiences should cater to students' individual differences.	4.10
27.	Let not students feel insecure in class.	2.41
28.	The individuality of all students should be respected.	2.50
*29.	Knowledge should be pumped out and not to be pumped in.	1.0
30.	Faculty orders are to be issued and not to be discussed with students.	3.12
*31	The best teacher is one who never teaches.	1.5
32.	Without teacher-student interaction no learning takes place.	2.77
33.	It should be realised that students also have good ideas.	3.70
*34.	A teacher should have confidence in students' honesty.	1.43
35.	Equality of opportunity should be the concern of every teacher.	2.52
36.	Teachers should be sympathetic towards students who have handicaps.	3.01
*37.	Severe punishment never improves a college student.	1.16
38.	Real discipline grows out of free discipline.	2.83
*39.	Let the students be free to accept or reject the teachers' views.	1.07
40.	Students catch democracy best by practising it.	2.33
41.	Students' needs and interests should count the most in the faculty/institution.	3.34

Sl. No.	Items	t-value
*42.	Unless the teacher teaches, no learning can take place.	0.83
43.	Students' immature mind cannot decide their education.	2.62
44.	The college time-table should be adjustable to students' needs.	4.31
45.	The main task of the teacher is to build up students' character.	2.30
*46.	College students have basically a sense of responsibility.	0.33
*47.	The teacher has not taught unless the students have learnt.	0.31
48.	Too much democracy spoils college students.	2.22
49.	Students' learning follows their interests.	2.35
50.	Even co-curricular activities in Faculty/ Institution teach something precious to students.	3.33
51.	Students should feel that they are accepted by the institution community.	3.02
52.	At their age it is impossible for the students to behave properly.	2.26
53.	All acts of students should always be watched with vigilance by the teacher.	5.33
54.	Examination alone is not the measure of students' achievement and development.	
55.	"I am you and you are I" this sums up teacher-student relationship.	1.96

Sl. No.	Items	t-value
56.	A teacher should keep his students at a respectable distance.	3.52
*57.	No co-curricular programme without teachers' supervision.	1.00
*58.	There is nothing wrong in beating college student.	0.89
*59.	All late comings should be punished.	.98
*60.	Unwilling students learn from unwilling teachers.	1.0
61.	Teaching is a tactful game.	2.07
*62.	Good ideas flow from bottom.	1.1
*63.	There should be student participation in the decision-making that concerns them.	0.96
*64.	Examination results do not tell everything.	0.8
65.	"Pass us and leave us" is the cry among the students.	2.06

Note: For 30 degrees of freedom at .05 level.
T = 2.04 (significant value)
Therefore items having more than 1.96 t-value are accepted and others having low value than 1.96 are rejected.

* These items are not significant, and therefore, they were discarded in the final form.

Validity and Reliability of the SCI

Thus, the final form of the SCI came to retain 45 items out of the originally constructed 65 items. The validity and the reliability were calculated. The next question was to determine the validity and reliability of the tool on the M.S. University of Baroda sample. The validity of the SCI form was based on the judgement of some of the heads of the Departments pertaining to the student control ideology of some of their teachers whom they know for long and closely enough to be able to judge the nature of their student control ideology. The two terms, "Custodial" and "Humanistic" were explained to the heads and they were requested to identify at least two university teachers from their Department whose ideology was most like either of these two dimensions. A sample of 32 such teachers was obtained. Then the mean scores were compared and the t-value was applied to examine to what extent the two types of the teachers having custodial ideology would differ from the teachers having humanistic ideology. The t-value indicated that there is a difference in the expected direction.

Reliability* was worked out by applying the test-retest correlation technique. With an interval of 15 days, Pearson's Product Moment method was applied to find out the correlation. The value obtained was .73. Thus, the SCI Form can be taken to be valid and reliable.

3.4 THE DOGMATISM SCALE (FORM E)

The third research instrument that is used in the present study is the Dogmatism Scale. The tool was developed by Rokeach (1960) to measure individual differences in Openness or Closedness of individuals organization or their belief-disbelief systems.

The investigator has chosen to use the original tool with minor modifications.

The Dogmatism Scale consisting of 40 items has three main dimensions viz., (1) the belief-disbelief dimension, (2) the central-peripheral dimension, and (3) the time-perspective dimension of dogmatism. For this instrument,

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* In the original form for determining the reliability of the PCI, a split-half reliability coefficient was calculated by correlating even item sub-scores with odd-item sub-scores (N=170). The resulting Product-Moment Coefficient was .01; application of the Spearman-Brown formula yielded a corrected coefficient of .95.

the respondents were requested to respond each of the 40 items by indicating +1, +2, +3, -1, -2, -3 respectively to denote 'agree a little', 'agree on the whole', 'agree very much', 'disagree a little', 'disagree on the whole' and 'disagree very much'.

The responses of the teachers are to be scored by adding the constant +4 to the algebraic value of each item by summing up the forty converted item scores. The range of the score will be 40 to 280. It indicates that higher the score, the more dogmatic or closed minded the respondent is.

Validity and Reliability of the Dogmatism Scale

The data on the validity of the Dogmatism Scale have been provided through the use of the "Method of known Groups". The validity* of the tool was determined by asking some of the heads of the University Departments belonging to the different Faculties/Institutions to suggest the names of some of their colleagues about whom they have close comtinuous and intimate knowledge and therefore, can judge them to the persons of high dogmatism or low dogmatism in their belief systems and attitudes. Thus, the investigator was able to

* The validity of the Dogmatism Scale in Indian educational situation was has been tested earlier by Qumar Hussain (1965).

collect a group of 20 subjects to whom the Dogmatic Scale was given for their responses. The Department heads were requested to indicate the degree of dogmatism of these respondents by rating them on a five point scale i.e. 'never dogmatic', 'rarely dogmatic', 'sometimes dogmatic', 'often dogmatic' and 'very frequently dogmatic'.

The rating of the heads of the Departments was converted into numerical values which were correlated with the scores earned by the respondents on the Dogmatism Scale. The high correlation of .86 was found between the scores yielded by the ratings of the heads and the scores yielded by teachers judged to be high and low dogmatic by the heads of the Departments to which they belong. This is indicative of the fact that the tool is valid enough to be used in an Indian situation.

The reliability of the tool was tested by the Test-Re-test method, administering the tool to the same group of the respondents after an interval of 20 days. The Coefficient of Correlation indicating the reliability index was found to be .78, indicating that the test is also reliable and can also be used in the Indian situation.

The investigator has used the Dogmatism Scale after this kind of preliminary scrutiny about the validity and reliability of the scale in Indian educational situation.

3.5 DEVELOPMENT OF RESEARCH INSTRUMENT TO STUDY STUDENTS' ACTS OF INDISCIPLINE (THE SAI)

The fourth new research instrument to be used in the present study is Students' Acts of Indiscipline (the SAI). It consists of 38 items covering four main areas viz., (1) Acts of Indiscipline against Administrators, (2) Acts of Indiscipline against teachers (3) Acts of Indiscipline against fellow students and (4) General Acts of Indiscipline. The tool was given to 10 experts consisting of the Professors' and Readers' category. Modification was done according to the comments of the experts. The tool was administered on the sample of 50 university teachers based on the item analysis using the t-value. All the 38 items were found with a significant t-value (the range of t-values was from 4.4 to 9.9) greater than 1.96 and all the items were retained by the investigator. Table 3.14 shows the t-value of the students' Acts of Indiscipline.

Table 3.14 : Students' Acts of Indiscipline.

Sl. No.	Items	t-value
1.	Gheraoing.	5.35
2.	Hurling threats.	6.8
3.	Use of abusive language.	7.7
4.	Destruction of faculty property.	5.6
5.	Going on strikes.	6.6
6.	Taking out morcha.	6.8
7.	Going on relay fast.	6.57
8.	Writing slogans on the walls.	7.12
9.	Refusal to obey rules.	5.0
10.	Using abusive language.	6.6
11.	Physical assault.	8.0
12.	Insulting.	6.07
13.	Irritating teachers.	4.4
14.	Vulgar writing on the walls.	9.9
15.	Class-room pranks.	5.0
16.	Use of foul means in examination etc.	5.59
17.	Rowdyism in the class.	8.2
18.	Non-cooperation.	8.3
19.	Bulleying and Gangsterism	6.83
20.	Physical assault.	5.4
21.	Eve teasing.	6.8
22.	Stone throwing.	5.73
23.	Intimidation and pressurization.	5.80
24.	Use of foul language.	7.3
25.	Stealing.	5.3

Sl. No.	Items	t-value
26.	Sexually unacceptable conduct.	6.39
27.	Threatening with lethal weapons.	7.12
28.	Ragging.	5.0
29.	Smuggling.	4.4
30.	Hijacking the public bus.	6.34
31.	Damaging the public property.	8.6
32.	Violent demonstration.	9.8
33.	Damaging private property.	8.1
34.	Use of foul language with public servants.	7.1
35.	Molesting women.	7.5
36.	Ticketless travels.	8.2
37.	Gambling.	5.0
38.	Drinking.	4.28

Validity and Reliability of the Students' Act of Indiscipline

The SAI consisting of 38 items, was given to 15 university teachers, to judge the validity of the instrument. Then the mean scores were compared and the t-values were computed. It was found that all the 38 items have high t-values, indicating validity of the items.

Reliability was worked out by applying the test-retest

method, administered to a group of 50 teachers who had earlier responded to the tool with 15 days of interval. The correlation coefficient was calculated by the Product Moment Method. The value was .70, indicating that the scale is reliable. Hence, the SAI form proved to be a valid as well as a reliable research instrument.

3.6 THE SIXTEEN PERSONALITY FACTOR QUESTIONNAIRE

The sixteen Personality Factor Questionnaire is the fifth research instrument to be used for the present study. Originally it is developed by Cattell (1956) to ensure comprehensive coverage of the whole sphere of personality. The 16 P.F. Questionnaire, provided, as its name implies, the multidimensional measurement of personality through normative scores on 16 bipolar factors.

The 16 bipolar factors are shown in Table 3.15.

Table 3.16 presents the 16 P.F. in bipolar form of low scoring and high scoring. This tool was used to get the personality traits of the selected heads of the University departments by some of their colleagues.

Table 3.15 : 16 P.F. Test Profile.

Factor	Low Score Description	High Score Description
A	RESERVED, detached critical, cool (Sizothymia)	OUTGOING, Warmhearted, Easy-going, Participating (Affectothymio, formertly Cyclothymia)
B	LESS INTELLIGENT, Concrete-Thinking (Lower Scholastic mental capacity)	MORE INTELLIGENT, Abstract-Thinking, Bright (Higher scholastic mental capacity)
C	AFFECTED BY FEELINGS, Emotionally less Stable, Easily Upset (Lower ego strength)	EMOTIONALLY STABLE, Faces Reality, Calm, Mature (Higher ego strength)
E	HUMBLE, Mild, Accommodating, Conforming. (Submissiveness)	ASSERTIVE, Independent Aggressive, Stubborn (Dominance)
F	SOBER, Prudent, Serious, Taciturn (Desurgency)	HAPPY-GO-LUCKY, Impulsively Lively, Gay, Enthusiastic (Surgency)
G	EXPEDIENT, Evades Rules, Feels Few Obligations (Weaker Superego Strength)	CONSCIENTIOUS, Persevering Staid, Rule-Bound (Stronger superego strength)
H	SHY, Restrained, Diffident, Timid (Threctia)	VENTURESOME, Socially Bold, Uninhibited, Spontaneous (Parmia)
I	TOUGH-MINDED, Self-Reliant, Realistic, No-nonsense (Harria)	TENDER-MINDED, Dependent, Over-Protected, Sensitive (Premsia)
L	TRUSTING, Adaptable, Free of Jealousy, Easy to get on with (Alaxia)	SUSPICIOUS, Self-opinionated Hard to fool (Protensian)

...cont.

Table 3.15 (contd.)

Factor	Low Score Description	High Score Description
M	PRACTICAL, Careful, conventional, Regulated by External, Realities, Proper (Praxemia)	IMAGINATIVE, Wrapped up in Inner Urgencies, Careless of Practical Matters, -Bohemian (Autia)
N	FORTHRIGHT, Natural, Artless, Sentimental (Artlessness)	SHREWD, Calculating, worldly, Penetrating (Shrewdness)
O	PLACID, Self-Assured, Confident Serene (Untroubled adequacy)	APPREHENSIVE, Worrying, Depressive, Troubled (Guilt proneness)
Q_1	CONSERVATIVE, Respecting stablished Ideas, Tolerant of Traditional Difficulties (Conservatism)	EXPERIMENTING, Critical, Liberal, Analytical, Free-Thinking (Radicalism)
Q_2	GROUP-DEPENDENT, A "Joiner" and Sound Follower (Group adherence)	SELF-SUFFICIENT, Prefers own Decisions, Resourceful (Self-sufficiency)
Q_3	UNDISCIPLINED SELF-CONFLICT, Follows own urges, Careless of Protocol (Low integration)	CONTROLLED, Socially-precise, Following Self-Image (High self-concept control)
Q_4	RELAXED, Tranquil, Torpid, Unfrustrated (Low ergic tension)	TENSE, Frustrated, Driven, Overwrought (High ergic tension)

A sten of	1	2	3	4	5	6	7	8	9	10
is obtained by about	2.3%	4.4%	9.2%	15.0%	19.1%	19.1%	15.0%	9.2%	4.4%	2.3%

of adults.

3.7 CONCLUSION

Thus, the three instruments used in the present study were developed by the investigator. For that purpose, the items were scrutinised, internal consistency was found out, t-value was applied, validity and reliability were determined. In the present study five research instruments were used, three of which have been entirely new and constructed specifically for the purpose of the study. These three mew instruments are (1) The Institutional Climate Descriptive Questionnaire (the ICDQ Baroda Form III), (2) Student Control Ideology (the SCI Baroda Form III), and (3) Students' Acts of Indiscipline (the SAI). She has also used two more research instruments previously developed and standardised. They are : (1) The Dogmatism Scale by Milton Rokeach (1960) and (2) 16 P.F. by Cattell (1951).

With the help of the five research instruments, described and discussed in this chapter the necessary data for the study were collected by administering them on the selected sample. The collected data were analysed in the form of testing some sixteen hypotheses and the results obtained. The next chapter will present the analysis and interpretation of the data.