CHAPTER - IV

PLAN AND PROCEDURE

Chapter No.4

PLAN AND PROCEDURE

4.1 Introduction :

Nobody can deny the practical importance of the idea hidden in the words, 'Well begun is half done'. This is true in the field of research also. Therefore, keeping in mind this fact researcher started his work. What is the place of blueprint in the field of architecture, design occupies the same place in the field of research. Of course design is the backbone or skeleton of all the research activities. If design is well planned and well structured, the objectives of the investigation become easy approachable.

In this chapter an attempt has been made to structurize the research endeavour or plan of attack on the problem ie. design of the study. Selection of the sample, its nature and full description, population from which it has been selected, description of the tools constructed for the purpose, their reliability and validity, data collection, scoring, statistical techniques applied to analyse the data to find out required relationships among the various variables etc. have been discussed here.

4.2 Selection of the Sample at Pilot Study Stage :

The results of the pilot testing were to be utilized to determine the quality and nature of the statements with

reference to the teacher's population at which the test was to be administered i.e. practicability and usability of the tool. Therefore the sample used for pilot study was drawn from the same population. It was aimed that the scale should cater the needs of all the secondary schools of the district and as such they should form the best sample for the purpose. Since it was very tedious or almost impossible task to include each and every subject of the population hence a representative sample of the population was needed. Maximum care was taken in drawing the sample from the population. There are four 'Tahsils' in the Ghazipur district of province Uttar-pradesh. So keeping in view that the sample should be representative, two schools were chosen randomly from each of the four 'Tahsils', one from urban sector and other from rural sector. Purposive sampling was done in case of girls schools because they were very few in the district. In this way two girl's schools were taken. While selecting male and female teachers from different schools, it was also remembered to include all the variables related to teachers ie. age, sex, status, qualification, residence, experience, academic stream etc. Details regarding selected teachers for pilot study is given below in table No.4.1.

4.3 Selection of the Sample for Final Phase of the Study :

The field of study taken was Ghazipur district of eastern U.P. which has been mentioned in the title, therefore it is relevant to give a vivid idea of the location of Ghazipur district. It is north-eastern part of the U.P. In

Table NO.4.1 : Nature of the Sample Selected at Pilot Study

S.N.	Variables	Dichotomised group	No. of teachers	Total
1.	Sex	Male	42	50
		Female	8	
2.	Experience	Highly Experienced	27	50
		Less Experienced	23	
3.	Age	Above 35 years	32	50
		Below 35 years	18	
4.	Status	Lecturers	23	50
		Assistant Teachers	27	
5.	Residence	Rural	40	50
		Urban	10	
6.	Academic Stream	Science Teachers	10	50
		Social Science Teachers	40	

south-east it is itself forming the boundary of U.P. and Bihar provinces. Adjacent to it is the'Chhappara' district of Bihar. In east the boundary district is 'Ballia'. On the other sides it is surrounded by 'Varanasi', 'Jaunpur', 'Azamgarh' and 'Ballia' districts from south to west, north and then east, as its neighbour districts. The great, Holy River Ganges flows through the district deviding it into two parts, one

major part in north and some parts in south. It is one of those districts which are combined to give the name 'Purvanchal' of U.P. Province. Regarding number of schools, on the whole there were one hundred secondary schools in this district including newly opened schools also up to 1984 (Appendix A) catering the needs of education and providing education from sixth to twelfth standards, to its population. Out of these schools sixty were Intermediate colleges and forty high schools. The schools which are providing education up to tenth standard only are called high schools and those which are providing education upto twelfth standard are called Intermediate colleges which are also named as secondary schools. Out of these schools eleven were girls schools and colleges and remaining were providing education to both of the sexes. Out of these girls schools there were five intermediate colleges and remaining six high schools. From the above population of schools, the schools approached for study consisted of only one government school for boys and remaining semi government schools and in case of girl's schools, all were government schools except two only, which were semi-government. Semi government in the sense that the total responsibility of paying the salary of the employees of these schools has been taken by state government and the 80% of the fees collected from the students is deposited in the government account by the authorities of the schools ie. principals or managers. The remaining 20% of the fees is utilized by the management in development and other maintenances. In terms of dwelling situation, out of total schools taken, thirty were from the urban sectors and remaining seventy in rural sectors.

The sample of teachers taken from different institutions is given below in the Table No.4.2. The number of teachers taken from the schools was not under the control of the investigator but was dependent upon the mercy and helping attitude of principals and teachers. Therefore the sample might lack randomness, but number of schools has been taken randomly from total population of schools.

Table No.4.2 : Nature of Sample in Final Phase

S.N.	Variables	Dichotomized groups	No. of teachers	Total
1.	Sex	Male	350	400
		Female	50	
2.	Experience	Highly Experienced	200	400
		Less Experienced	200	
3.	Age	High Age Group	250	400
		Low Age Group	150	
4.	Status	Lecturers	130	400
		Assistant Teachers	270	
5.	Residence	Rural	310	400
		Urban	190	
6.	Academic Streams	Science Teachers	110	400
		Social Science Teachers	290	

4.4 Selection of the tools :

Selection of the tools is one of the most important parts of the design. In the present study the purpose was to go in search for the extent and patterns of reactions to frustration and professional adjustment of secondary school teachers. While going through the related studies done in this field the investigator came to know that most of the researchers have used "Rosenzwig's Picture Frustration Study." adapted by U.Pareek (either adult or children form), as the tool for the study of the reactions to frustration. The situations given in the said tool are not related to school environment, they have been taken from general life instances while the investigator wanted to particularize the situations only to the school environment in strict sense and thus to make them more relevant. Except this the investigator was also having the idea that situations and their reactions shown in Rosenzweig's P.F. study are affected by culture and norms of society from which they had been drawn which might not be giving the same meaning in Indian society, even after adaptation by U.Pareek. Although some researchers have used their own scales constructed in Indian situations but they are also lacking the relevance with respect to the situations taken in them (situations are not absolutely related to school environment). Therefore need was felt to construct his own tool and thus researcher made up his mind to go in this direction. Similar was the problem with adjustment scale also. So an Adjustment Inventory was also constructed

by the investigator. Besides these two tools a self prepared personal information blank was also constructed to get relevant information, from the teachers, related to their personal as well as academic life. In this way the tools constructed are following -

(a) Frustration study tool for teachers,

(b) Adjustment Inventory for teachers,

(c) Personal Information Blank for teachers.

4.5 Description of the Tools :

(a) Frustration Study :

Frustration study tool constructed is in two parts. In first part investigator has given full instructions for responding the tool. To make the subjects well understood one example has also been sited just after the instruction is over. Second part is the main body of the scale. There are twenty four situations in this tool (in final form). These situations are drawn from the teacher's activities and behaviours related with their school environment only. All these situations are framed in such a way that the person who, if facing these situations, will feel more or less frustration. There are six reactions related to all of these situations, according to six patterns of frustration taken in the study, which are given just next to the situations. Investigator has also given one continuum containing four points specified as 'Always', 'Often', 'Some times' and 'Rare' from left to right. This continuum is given just against to the situations

and reactions. The respondents had to make tick marks (_/) showing their reaction, at the intersection point of any one of the reactions and any one of the columns of the continuum for each situation (Appendix F).

(b) Adjustment Inventory :

Second tool is 'Adjustment Inventory'. It has also two parts, one for instruction and other for the statements. In instruction part it has been tried to describe the manner in which the respondents had to respond. In second part thirty four statements, related to teaching profession, have been given which are in interrogative form showing adjustment or mal-adjustment of the teachers. The answers of the statements can be given in 'Yes' or 'No' by making tick marks (_/) under any one of the two columns which are given just opposite to the statements (Appendix H).

(c) Personal Information Blank :

The third tool is 'Personal Information Blank'. In this blank attempt has been made to get full and relevant information, from the teachers, related to their personal as well as academic life. viz. name, age, sex, qualification, status, academic stream, teaching subjects, number of family members, residence, participation in cocurricular as well as social activities etc. (Appendix I)

All these three tools were given in the same booklet. These were combined together for the sake of conveniance and to avoid the psychological feeling, on the part of the

teachers, that they have to complete three tools which could take too much time.

4.5.1 Construction of Frustration Study Tool :

In the construction of frustration study tool the main and important part of the work was collection of appropriate situations. The collection of situations was done on the following lines -

(1) Collection of the Situation :

After finalization of the topic the problem of the collection of situations confronted the investigator. He could have taken his own situations but chances of bias were so much that this idea had to be dropped out. Since the usability of this type of scale depends upon the objectivity and originality of the situations, much care was taken to attain these qualities while collecting them from different sources. The present scale was to be applied on the secondary school teachers, therefore for this purpose secondary school teachers were suitable sources for collecting the situations. Ten teachers of five different schools (five male and five female) were selected randomly and after establishing proper rapport they were informed regarding the investigation. After giving proper instructions the investigator requested them to give at least ten situations related to the teaching profession which were most frustrating to them.

Although the overall situations given by the teachers were too much but those of having maximum agreement were

selected which are given below. These are related to different facets of teaching profession:

(a) Leave matters.

(b) Academic activities.

(c) Monetory conditions.

(d) Extra curricular activities.

(e) Personality traits.

(f) Classroom environment.

(g) Administration.

(h) Principal.

(i) Promotion and

(j) Routine work or Scheduled duties.

Although the situations were collected but as such they had no usability for the purpose. The problem was to give them proper shape which could be utilized. For this purpose five secondary school teachers and five research scholars doing research in Centre of Advanced Study in Education, M.S. University, Baroda were again requested to construct real incidents related to these situations. The incidents or situations constructed by these people, which had maximum frequency were accepted and proper modification was done, with respect to the language, with the help of language experts. In this way investigator had got forty two incidents (situations) which could be given to the subjects. The number of instances in each of situations were as shown below:

Constitution of Situations

S.N.	Situations	No. of instances
1.	Leave Matters	2
2.	Academic activities	7
3.	Monetory Conditions	4
4.	Cocurricular activities	5
5.	Personality Traits	5
6.	Class room environment	7
7.	Related to Administration	5
8.	Principal	2
9.	Promotion	1
10.	Routine work or Scheduled duties	4

(ii) Statements for Reactions to Frustration :

The second part of the frustration scale was that part which contains statements for reactions to frustration. Although several investigators have reported so many reactions (page N. 46) to frustration but there is no agreement in the opinion of different groups of the investigators regarding these patterns of reactions. This was very critical situation for the researcher, regarding choice of reactions to frustration. The finalization of patterns of reactions to frustration was done on the basis of pilot study, and following six patterns of reactions to frustration were selected for the purpose.

(1) Aggression

(2) Regression

(3) Fixation

(4) Resignation

(5) Rationalization

(6) Projection

Here, it is necessary to explain that these six reactions were not finally chosen but only for the pilot study. Possibility of other reactions was also there depending upon the reactions given by subjects in pilot study. But after pilot study it was observed that subjects had given only six reactions (There was a blank space in the tool for the reactions given by subjects but on the basis of reactions given by them it was found that they had given only said reactions not any other. Thus six reactions were retained).

After selection of reactions, the problem was to construct statements for each reaction which could express their meaning clearly. By taking cooperation of fellow researchers of Centre of Advanced study in Education, M.S.U. Baroda, the investigator constructed all the six statements for each of the situations. In this way for forty two situations the statements constructed came to be 252. In every situation these statements were given in random order so that the subjects could not use guessing techniques while responding. In the tool these statements showing patterns of reactions were given just below each of the situations. There was one more space i.e. seventh, for the expected reaction which might be somewhat other than the given six patterns of reactions depending upon individual personality traits of the subjects, with the instruction 'any other reaction'. This was done, to get some more patterns of reactions given by subjects independently side by side to maintain the objectivity of patterns of reactions.

This was not the end of the effort. The investigator had an idea to know the extent of frustration also. Therefore, for this part emphasis was laid to continuum method and just opposite to each and every situation one continuum was given having five points (Although in final form only four points were retained) starting from 'Always', 'Often', 'Sometimes', 'Rare' to 'Never', from left to right, in which the subjects could give their responses by making tick marks according to their extent of frustration. The fifth point 'Never' was omitted in the final form because it was having zero weight which was not necessary for analysis.

(iii) Judgement of the Experts regarding the Statements :

To elicite proper and appropriate pattern of reactions to frustration the statements must bear some definite meaning as well as some unique characteristic. They should have some relevance in them, they should not be ambiguous or vague and should be highly striking. Keeping in mind these factors the language of the statements was improved with the help of language experts. The statements thus obtained in first phase were given by either the researcher himself or collected from fellow researchers. Therefore, it was necessary to be judged the nature of these statements ie. whether they were implying the meaning, for which they were constructed, or not. For this purpose five staff members of psychology department of M.S.U. Baroda and ten members of research staff of Centre of Advanced Study in Education, M.S.U., Baroda were selected and requested to cooperate. They were instructed that they have to indicate

against each and every statement for what type of the patterns statements were conveying the meaning. On judgement of the nature of each statement by the judges, statements, on which cent percent or maximum agreement was there, were taken as such and remaining were improved to remove the ambiguity. At last all the situations and their corresponding statements were arranged randomly.

(iv) Instructions :

Standard and suitable instructions were given in the format of the tool. Manner of responding was explained and illustrated by means of one example. Since the samples were those of secondary school teachers of Ghazipur district of province U.P. which is a Hindi speaking region of the country, therefore, the investigator got the tool translated into Hindi version for the administration and was administered in different selected schools. The subjects had to choose only one reaction for one situation and they had to make a tick mark (✓) opposite to that very reaction and under any one of the columns, according to their intensity of frustration. If they wanted to give their own reaction, they could write at seventh place and make tick mark against the number (g) which had been left blank for this purpose only. Now the scale was ready to be applied for try out, (Appendix G).

The reasons of the try out of the tool may be summarized as under -

To identify weak and defective statements and to get an idea of needed improvement in the tool to get data for

item analysis.

To determine inter item similarities and to avoid over lapping.

To provide data needed to determine the number of items to be included in the final form.

To discover any weakness in the process of administration of the scale.

To standardize the instructions to be given for the scale.

To find whether any item needs some changes in its language or form.

To ascertain approximate time required to complete the tool.

(v) Try out :

The purpose of the try out of a test has been described earlier. The scale was tried out on a sample of 100 teachers of the secondary schools of Ghazipur district of the province Uttar Pradesh. Here it may be stated that, for the purpose of this study, the sample chosen was also used for the study of reliability. The subjects chosen at this phase were both males and females of the boys and girls schools respectively. The selection of the sample was purposive keeping in view to include all the types of teachers ie. according to experience etc. All the subjects were interviewed personally regarding usability of the scale and suggestions were taken from those subjects who wanted to give some suggestions.

(vi) Scoring :

The tool was constructed to yield two types of informations. The first was regarding the patterns of reactions to the frustrating situations. This was done simply by observation and recording of the tick marks made by the respondents for different patterns. The second information was regarding extent of the frustration. For this information scoring was done by assigning weights to the different categories viz., four weights to response category 'Always', three to 'Often', two to 'Sometimes', one to 'Rare' and zero to 'Never'. All the weights were added to get the total frustration score for a particular subject.

(vii) Data Sheet :

When scoring was done a data sheet was prepared showing the scores of each subject on each item and also for total frustration scores. Model of data sheet is given in Appendix J .

From the data sheet it is clear that response category of each subject can be found out and the total frustration score of the subjects can also be calculated by adding all the weights in different situations ie. total of first row. In other words total of first row will be the total frustration score of first subject and total of first column will be total score for first situation which is used in item analysis.

4.5.2 Item Analysis :

Item analysis is that step in the construction of tools in which items are checked for ambiguity and relevance. For this purpose total responses on different categories for each of the items were calculated. This was done simply by adding the weights given to each columns. Besides this the different reactions shown by subjects in each of the situations were also recorded. On the basis of reactions shown and full informations furnished by the subjects only fifty subjects out of hundred, were retained for item analysis others were rejected due to incomplete informations given by them.

In the above way distribution of responses in all the categories for all the situations were tabulated. When the total responses in every category were computed, the situations containing less than 2% (at least one) of the responses in any of the categories were rejected. It was done simply by observation of the table. In this operation seven items were rejected. Now these remaining 35 items were further analysed for the scale discriminating power. It was computed by using t-test ie. test of significance of the difference between two means.

For item analysis, out of total subjects (N=50) top 27% and bottom 27% cases ie. 14 each were selected on the basis of total scores by arranging them in descending order of merit. Since the standard error for 27% is minimum hence it was decided to choose 27% (Garrett 73, p.367). The mean of the two groups for each situations were calculated and the significance of their difference was tested by t-test at

.01 level of significance. Those situations whose t-values were not significant at .01 level were rejected. The process of item analysis for item N.1 is given below.

Table No.4.3 : Process of Item Analysis (Sample).

UPPER GROUP				LOWER GROUP			
Scale value	Frequency (f)	fx	fx^2	Scale value	Frequency (f)	fx	fx^2
4	13	52	208	4	4	16	64
3	1	3	9	3	3	9	27
2	0	0	0	2	1	2	4
1	0	0	0	1	6	6	6
N=14, $\Sigma fx=55$, $\Sigma fx^2=217$				N=14, $\Sigma fx=33$, $\Sigma fx^2=101$			
Mu=3.93				M_L =2.35			

Σx_u^2 (sum of squares for upper group) = 1.00

Σx_L^2 (sum of squares for lower group) = 23.20

t = 4.30 significant at .01 level of significance

4.5.3 Item Selection :

Keeping in view the significance of difference between two means of the upper and lower groups at .01 level of significance 11 items were again rejected. Thus after item selection only 24 items were retained. Item selection chart is given in Appendix K

4.6 Construction of the Adjustment Inventory :

The next tool which was to be used in the present study was Adjustment Inventory for the secondary school teachers. Most of the inventories constructed by other investigators are related to general adjustment. Therefore the investigator tried to construct

his own Adjustment Inventory which must be relevant for teachers. Before construction of the tool a drastic survey of other inventories was done and at last decision was taken to construct the inventory on the lines of Bell's inventory (Bell, 38). For the construction of this tool same process was also repeated as in the case of frustration study tool. A brief account of the same is again given below.

First step taken was collection of statements related to professional adjustment of the teachers. For this purpose the investigator again requested five research fellows of Centre of Advanced Study in Education, M.S. University, Baroda, to give twenty statements each from which ten showing adjustment and ten maladjustment in the teaching profession. In this way hundred statements were pooled showing both the directions of adjustment ie. positive and negative. Twenty statements from this were rejected, after a preliminary examination, which were similar in meaning to some other statements. After first selection of statements, five research scholars who were well to do in measurement, were requested to judge the nature of direction of these statements ie. positive or negative. After their judgement the statements on which there was maximum agreement regarding direction were accepted as such and others were modified. (Here, the term direction is implying the meaning, that, if 'yes' responses, to particular statements are showing adjustment then those statements are having positive direction and if 'no' responses to the statements are showing adjustment then those statements are having negative direction). When the direction of the statements was decided, all the statements were mixed and numbered randomly.

This draft was given to ten secondary school teachers to get the idea whether they were giving the meaning, for which they were made, or not. After this step only 58 statements were retained and others were rejected. The language of the statements was also improved with the cooperation of language experts. Standard instructions were also given in the beginning (Appendix G).

4.6.1 Try Out of the Adjustment Inventory :

For the sake of applicability, relevance and appropriateness of the tool, the Adjustment Inventory was also tried out. For this purpose this inventory was administered along with the frustration study tool and all the steps taken in previous tool were repeated at the same time for this inventory also. In this inventory there were only three response categories (at the pilot study stage) viz. 'yes', 'no' and 'uncertain'. After collecting the inventory scoring was done for item analysis. For positive statements all the responses indicating 'yes' answers were awarded one marks and in the same way for negative statements one mark was awarded to 'no' responses and zero to uncertain responses. In this way scores for all the subjects were tabulated for Item Analysis.

4.6.2 Item Analysis :

In adjustment inventory there were only two possible responses 'yes' and 'no'. The response category 'uncertain' had not any role in scoring because, for all the responses - coming in this category zero mark was assigned which was having no meaning. Therefore, it was decided to avoid this category in

final form. For item analysis all the scores of the subjects were arranged in descending order and then two groups were made. First group consisted of 27% of the subjects ie. 14 which had secured high marks in order of merit. The second group consisted of 27% of the subjects ie. 14 from the bottom of the merit scale. The measure selected ie. statistic for item analysis was point biserial, because if there are only two responses 'Yes' and 'No' point biserial should be applied. According to Garrett H. (73), "When items are scored simply as 1 if correct and 0 if incorrect, that is, as right or wrong, the assumption of normality in the distribution of right wrong responses is unwarranted. In such cases the point Biserial r rather than biserial r is appropriate. Point Biserial r assums that the variable which has been classified into two categories can be thought of as concentrated at two distinct points along a graduated scale or continuum. Examples of true dichotomomies are male-female, living-dead, loyal-disloyal etc. " After calculating biserial values of all the statements, those statements whose values were not significant at .05 level were rejected. In this way only thirty four statements were retained for final form of the inventory. The item selection chart is given in Appendix L .

4.7 Reliability and Validity of the Tools :

Reliability is one of the two most important and essential characteristics of a sound test. The other being validity. By reliability is meant the extent to which or the accuracy with which a test measures what it has been constructed to measure. If the scores on a test are stable and trustworthy then we can call

that test as reliable. Scores on unreliable tests are neither stable nor trustworthy. "The reliability of a test is its ability to yield consistent results from one set of measures to another, it is the extent to which the obtained test scores are free from such internal defects as will produce errors of measurement inherent in the items and their standardization" (Freeman, Frank S, 71 Theory and Practice of Psychological testing).

The term reliability has two closely related but somewhat different connotations in psychological testing. First, it refers to the extent to which a test is internally consistent or homogeneous ie. consistency of results obtained through out the test when administered once. In other words, how precisely is the test measuring at a particular time? Second, reliability refers to the extent to which a measuring device yields consistent results upon testing and retesting ie. how dependable it is for predictive purpose. Obviously, if a test does not have a high degree of reliability, when used more than once, it can have but limited value in predicting an individual's future performance or level of development.

Operationally, "The reliability coefficient for a set of scores from a group of examinees is the coefficient of correlation between that set of scores and another set of scores on an equivalent test obtained independently from the members of the same group." (Ebel, Robert L, 1966).

4.7.1 Reliability of the Frustration Study Tool:

In the field of research if the researcher is not using standardized tools and constructing his own tool then he should standardize his tool for the purpose. Because if the tool is not standardized the inference drawn on the basis of that tool will be useless, misleading and absurd. No generalization can be done of those results obtained from such tools. The two main measures of the standardization process are reliability and validity of the scales. In the present study the investigator had too less time to complete the work and there was no idea in his mind to prepare norms for the tools, constructed, therefore only two measures ie. reliability and validity were considered and no effort was done for preparing norms.

In the case of frustration study split half reliability was computed. This was done by making two equal halves of the scale by taking even numbered situations in first half and odd numbered situations in second half. The reliability was determined by calculating product-moment correlation from these two sets of scores. After this calculation, correct reliability coefficient was calculated by applying the spearman Brown Correction. This reliability is called as coefficient of consistency or homogeneity of the scale. Split half reliability is shown in table No.4.4.

Although test-retest reliability could also have been worked out but the reluctance in cooperation shown by teachers prevented the investigator to go for retesting the tool.

Table No.4.4 : Split Half Reliability of Frustration Study.

N = 50	
Obtained Reliability Coefficient	= .88
Corrected Reliability Coefficient	= .94*
Standard Error of Measurement	= 4.8

* Significant at .01 level

4.7.2 Reliability of the Adjustment Inventory :

To calculate the reliability of the Adjustment Inventory same method was applied as in the case of frustration study. Split half reliability of Adjustment Inventory is given below, in table No.4.5.

Table No.4.5 : Split Half Reliability of Adjustment Inventory.

N = 50	
Obtained reliability coefficient	= .75
Corrected reliability coefficient	= .86 *
Standard Error of Measurement	=2.15

* Significant at .01 level

From the tables given above, it is clear that the reliability coefficient of frustration study is .88 and that of Adjustment.Inventory is .75 which are highly significant at .01 level of significance on 48 degrees of freedom (N=50). It can also be concluded that frustration study is less reliable than Adjustment Inventory. It might be due to reasons

that Frustration Study contains so many such situations in which subjects might have not reacted honestly and naturally because situations and reactions were very near to their normal behaviour.

4.7.3 Validity of the Tools :

The most important and difficult problem in the construction of tests is to devise methods to determine the validity of the tests. A test is said to be valid if it measures what it is designed to measure. To discover whether or not a test actually functions in this way, two sets of measures are obviously needed, those are, the test itself and of the thing it is stacked against the measuring rod, as it were. This problem of the test has become very difficult because an independent criterian against which a test can be validated is not available in most of the cases. If a test is validated against some internal criterion, the validity is known as 'internal validity'. If it is validated against some independent external criterion, it is called as 'external validity'. In the first approach to determine the internal validity, a test is made valid by definition.

Content validity involves essentially the systematic examination of the test content to determine whether it covers a representative sample of the behaviour domain to be measured or not. The domain under consideration should be fully described in advance, rather than being defined after the test has been prepared. Moreover, content validity depends on the relevance of the individual's test responses to the behaviour areaunder consideration, rather than on the apparent relevance

of item content. Content validity is built in a test from the out set, through the choice of appropriate items (Anastasi 76).

In present tools care was taken so that they should have content as well as construct validity. This was done by selecting the items is such a way that all the areas of the content may be covered. The internal consistency of the inventory was also secured by the subsequent selection of the test items.

4.8 Hindi Version and Printing of the Tools :

The field of investigation chosen for present study was Ghazipur district of U.P. Province which is the Hindi speaking belt of the country. Therefore it was compulsory to get the tools translated into Hindi language. This was done by taking help of experts who were well known in both the languages. When Hindi version was completed all the three tools viz. frustration study tool, Adjustment Inventory and Personal data Blank were printed and given in the single booklet. Six hundred copies of these booklets were prepared.

4.9 Preparation for Administration of the Tools :

Before marching for the data collection, it was felt that to minimize the time and labour, there must be a well organized and structured plan of the task and side by side the number of schools and their location or situation in the district, which were to be covered. For the list of schools the investigator took the help of District Inspector of schools and after proper persuation he was able to have the up to date and complete list of all the high schools and intermediate colleges of the district (Appendix A). After collecting the list of schools

the main part of the study ie. field work was started. In every chosen school the investigator tried to make good rapport with the principals and requested for the cooperation in the investigation. In almost all the schools, principals were very cooperative and enthusiastic and they took a keen interest in the administration of the tools. In some schools, even the principals convinced the reluctant teachers to complete the tools. In only one school which was scheduled to cover, the investigator got disappointment where he was unable to get the cooperation of the principal and thus those of the teachers of that school. This was the reason why the return of tools was not satisfactory. Thus, on the whole the return was approximately three fourth of the distributed booklets.

4.10 Administration of the Tools :

Administration of the tools is the main part of the data collection. Because tools might be standard and well planned but if instructions were not given properly, at the time of administration, there is least possibility that all the subjects may complete, the tools accordingly. Therefore, the investigator tried his level best to instruct the subjects properly for making the task easy and approaching to his goal in a homely atmosphere. Administration was done in group and some times by personal approach.

4.11 Scoring and Analysis of the Data :

I) Scoring :- Maximum precautions were taken by the investigator to make the respondents able to respond properly,

even then it was found that a number of teachers had responded in a very careless way. It might be due to their disinterest in giving responses or they might have thought that by disclosing their personal feelings they might get some problems. Any way, these types of responses were deleted. Only those responses were taken into account which were complete in every respect. In this way booklets of four hundred teachers were accepted for scoring and analysis purposes. For scoring, the investigator had to check two things in the frustration study viz., the category of reactions or patterns of reactions in which the subjects had made their tick marks and next, the columns in which the tick marks lie. Four weights were awarded to the responses coming in the column, 'Always', three, two and one to the responses occuring in the columns 'Often', 'Sometimes' and 'Rare' respectively. In this way all the weights given to each of the responses were added to give the total frustration score for a particular subject. Besides this an account was also maintained for the patterns of reactions for all the situations, so that nature of reactions could be judged.

In the Adjustment Inventory there were only two options viz. 'Yes' and 'No'. The respondents were awarded one mark for the option 'Yes', against the positive statements and one mark for the option 'No' in case of negative statements. For other responses zero mark was awarded. At last all the marks were added to give the total adjustment score for a particular subject. A master chart was prepared containing all the informations furnished by the subjects regarding their personal and professional life and scores for both the tools separately which were to be used for data analysis.

II) Analysis of the Data :

The data obtained by scoring were analysed to give the following different measures with the help of calculator and sometimes by the investigator himself.

1. Total frustration scores for each of the subjects.

2. Patterns of reactions to frustration shown by individual subjects.

3. Extent of frustration amongst the subjects.

4. Adjustment scores of different subjects.
   Extent of adjustment amongst the subjects.
   Adjustment of high and low frustrated teachers.
   Adjustment of high and low regressive teachers.
   Adjustment of high and low aggressive teachers.
   Adjustment of high and low fixating, resignating rationalizing and projecting teachers.
   Significance of difference between means of frustration scores in different categories with respect to different variables viz. age, sex, status, residence, experience and academic stream of teachers.

   Coefficient of Correlation between frustration and adjustment scores of the teachers.

   Significance of difference between means of adjustment scores of teachers with respect to different variables viz. age, sex, status, residence, experience and academic stream.