CHAPTER V

EXPERIMENTAL DESIGN:

Two school organisations were initiated viz. WALDEN & CASET. The two school organisations were comparable with respect to:

i) Curricula,

ii) Staff qualifications, experience, age and family socio-economic-educational background,

iii) Staff salaries,

iv) Teaching aids,

v) Other teaching facilities,

vi) Admission rules,

vii) Children admitted - children of the same age, socio-economic-educational background, health etc. were admitted to both the school systems.

viii) Summer and winter programmes,

ix) Co-curricular activities,

x) Pupil-teacher ratio,

xi) All material and non-material operating components excepting those that were specifically related to different administrative designs.

xii) Motivating techniques excepting those that were inherent in different administrative systems.

The details of how the controls were operating are given towards the end of this Chapter.
Independent Variables:

The independent variables were:

The Theory-X and Theory-Y management designs, the details of which are already given in the Chapter on "Statement of the Problem, Definitions and Delimitations". The other independent variables included:

i) Interaction,
ii) Reward,
iii) Awareness,
iv) Autonomy,
v) Job Manageability,
vi) Opportunity to exert.

The independent variables like Theory-X and Theory-Y administrative designs were alternatively present in each school system. Thus a particular school system was either working under Theory-X administrative structure or under Theory-Y administrative structure. Whether a school system was working under Theory-X or Theory-Y, under each administrative structure the other independent variables like awareness, interaction, job manageability, opportunity to exert, autonomy, reward etc. were either present or absent. In fact the independent variable viz. job management, interaction, autonomy, awareness, opportunity to exert & reward were either present or absent in each administrative structure.
The purpose of this design was to independently study the importance of job manageability, opportunity to exert, awareness, autonomy, interaction and reward in each system of administration. The different variables viz. autonomy, awareness, interaction and reward etc. were fed one by one cumulatively and later withdrawn one by one from each design of administration.

**Dependent Variables:**

The dependent variables were:

i) Job effectiveness,

ii) Job commitment,

The details of measurement of the independent and the dependent variables are given under the Chapter "Developing Tools of Measurement".

UALDEN & CASET were put under Theory-X and Theory-Y management designs respectively for one year and then the treatment was reversed for another year. The cycle was repeated for the other two years. Thus during the

1st Year  WALDEN was put under (Theory-X) and CASET under (Theory-Y).

2nd Year  WALDEN was put under Theory-Y and CASET under Theory-X.

3rd Year  WALDEN was put under Theory-X and CASET under Theory-Y.

4th Year  WALDEN was put under Theory-Y and CASET under Theory-X.
The two school systems were alternately put under Theory-X and Theory-Y designs. The purpose of such AB-BA design was:

1) To observe and compare the behaviour of the same system under two management designs,

2) To observe and compare two comparable systems under two management designs.

Such an experimental design completely controlled all possible control variables and clearly brought forth the effect of experimental variables.

Putting the same system under two treatments may involve carry-over effect. This carry-over effect is cancelled by reversing the cycle from X-Y to Y-X in the same system. Since two comparable systems are never absolutely comparable, observations become reliable only under repeated alternating treatments of the two systems.
Tools of Measurement

Independent Variables

Theory X and Theory Y

Measured on All/None Principle /% Scale

E, R, I, A

Dependent Variables

Job Effectiveness

Measured Through Achievement Score

Job Commitment

Measured Intuitively Through Observation