CHAPTER V

THE PREDICTOR MEASURES

Measure of Intelligence: The Group Test of General Mental Ability.

Measures of Personality:
- Washburne Social Adjustment Inventory
- The Vyaktitva - Parakh - Prashnavali.

Measure of Socio-Economic Status: Socio-Economic Status Scale.

Measure of Academic Achievement.
The basic problem in any study of prediction on teaching efficiency is to find in what way and to what extent the data descriptive of teachers are related to a criterion of teaching efficiency. The dependability of the relationship between the data on teacher behaviours or characteristics and an ultimate criterion of teaching efficiency will depend upon, the reliability and validity of the various predictor and the criterion measures. In the present study an attempt was made both to select reliable and valid predictor measures and to develop an instrument for measuring teaching efficiency which would serve as an adequate criterion measure.

The predictor measures employed in the present study have been described in the following pages. (The development of the criterion measure will be detailed in the next two chapters).

Review of the previous researches (chapter III) has shown that a fairly large number of variables can be used for the prediction of teaching efficiency, but it is not possible to employ all these predictors in one research design. Ordinarily it becomes very difficult to cope with the data, if more than five predictors are employed. The following have been used in this study as predictors and
will now be described in some detail.

1. Intelligence - The Group Test of Mental Ability by S.S. Jalota.

2. Personality - (i) Washburne Social Adjustment Inventory by J.N. Washburne.
   (ii) Vyaktitva Parakh Prashnavali (Personality Adjustment Inventory) by M.S.L. Saxena.


4. Academic Achievement - Divisions obtained at the various examinations.

MEASURE OF INTELLIGENCE

The Group Test of General Mental Ability (1/60): The Group Test of General Mental Ability, hereinafter called as GIMA, consists of one hundred test items which are of the following types:

1. Vocabulary-Similars;
2. Vocabulary-Opposites;
3. Number Series;
4. Classification;
5. Best Answer;
6. Inferences and
7. Analogies.

The items in the test have been arranged according to their difficulty. It is a speed test and twenty minutes are needed to complete it. The author has provided centile norms.

*S.S. Jalota, The Group Test of General Mental Ability (1/60), Manual and Test Booklets, (Chandigarh, Department of Psychology, Punjab University: The Author).
for classes VIII to XI as well as for ages 13 to 16. The test can also be used for adults and the author has provided conversion tables for determining mental ages from point scores for the adult population.

The correlations of test scores against school marks at various levels vary from .50 to .78 and the limit of reliability of the test is +.938.

This test was administered to a small sample as a try-out. The scores range from 31 to 89 and inspite of a small sample of seventy nine cases, the distribution approximates to the normal (Fig. 2). The mean and standard deviation are respectively 61.8 and 12.9 and the ratio of range to standard deviation is approximately 4.5. Considering the small number of cases involved this ratio seems to be satisfactory.

MEASURES OF PERSONALITY

In the present investigation Washburne Social Adjustment Inventory and Saxena's Vyaktitwa Parakh Prashnavali, which seems to have been based upon Bell's Adjustment Inventory have been employed. As has been mentioned earlier, these particular instruments have been chosen on account of their established value as predictors, availability, ease of administration and overall suitability. They will now be described fully.
FIG. 2. DISTRIBUTION OF SCORES OF SEVENTY NINE STUDENT TEACHERS ON JALOTA'S INTELLIGENCE TEST
Washburne Social Adjustment Inventory*. The primary purpose of the Washburne Social Adjustment Inventory (to be hereinafter called as WSAI) is to determine the degree of social and emotional adjustment of an individual. The inventory is designed to measure the following eight dimensions.

(i) Truthfulness;
(ii) Happiness;
(iii) Alienation;
(iv) Sympathy;
(v) Purpose;
(vi) Impulse – Judgement;
(vii) Control;
(viii) Wishes.

Sub-tests (i) to (vii) are objective while subtest (viii) requires longer responses which can be scored only subjectively. This subtest "Wishes" is of importance chiefly for purpose of differentiating between degrees of superior adjustment and need not always be used. It has been left out in the present study. A high score on this inventory means poor adjustment and vice versa. There is no time limit for taking the inventory which is considered appropriate for secondary school and college students or for any one (except the feeble minded) over twelve years of age. The biserial r coefficient of validity is .90, and the coefficient of reliability as determined by a retest of college students after an interval of one semester is .92.

"The Vyaktitva - Parakh - Prashnavali" MA - 62" (Personality Adjustment Inventory). The Vyaktitva-Parakh-Prashnavali (hereinafter to be called as VPP) seeks to discriminate between well adjusted and poorly adjusted students.

It provides five separate measures of adjustment, viz.,

A. Home Adjustment.
B. Health Adjustment.
C. Social Adjustment.
D. Emotional Adjustment.
E. School (or College) Adjustment.

A high score on this Inventory indicates good adjustment while a low score shows poor adjustment. The inventory is not timed, but approximately 45 minutes have been found to be sufficient for its administration. The inventory is intended for use with school, college and university students ranging in age from eleven years to adulthood. Some validity figures against external criteria have been reported by the author:

- .80 against Asthana's Adjustment Inventory.
- .63 against teachers' estimates (boys).
- .71 against teachers' estimates (girls).

The reliability of the instrument is reported as under:

Reetest reliability - .87
Split half reliability- .89

The two inventories were administered to a smaller sample during the session 1963-64 as a try out. Figures 3 and

FIG. 3. DISTRIBUTION OF SCORES OF SEVENTY ONE STUDENT TEACHERS ON THE WASHBURNE SOCIAL-ADJUSTMENT INVENTORY
FIG. 4. DISTRIBUTION OF SCORES OF SIXTY SIX STUDENT TEACHERS ON SAXENA'S ADJUSTMENT INVENTORY
4 present the histograms for the distribution of scores on the Washburne Social Adjustment Inventory and Saxena's Adjustment Inventory respectively for the above sample. These figures indicate that the scores on both the inventories have a satisfactory spread the scores tend to cluster towards the "good adjustment" end of the distribution, in both cases. The range and other statistics of the two distribution are presented in table VIII.

TABLE VIII

RANGE AND OTHER STATISTICS FROM THE TWO ADJUSTMENT INVENTORIES ADMINISTERED DURING 1963-64.

<table>
<thead>
<tr>
<th>Inventory</th>
<th>N</th>
<th>Range</th>
<th>Mean</th>
<th>S.D.</th>
<th>Range/S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSAI</td>
<td>71</td>
<td>116-277</td>
<td>172.04</td>
<td>33.46</td>
<td>4.81</td>
</tr>
<tr>
<td>VPP</td>
<td>66</td>
<td>29-92</td>
<td>67.44</td>
<td>14.06</td>
<td>4.48</td>
</tr>
</tbody>
</table>

MEASURE OF SOCIO-ECONOMIC STATUS.

The fourth predictor variable is a measure of socio-economic status as assessed through Dr. Kuppuswami's Socio-Economic Status Scale.* This scale, hereinafter to be called - SESS, combines ratings on family education, income, and occupation to arrive at a single score.

Information about the individuals' socio-economic background is obtained on Forms A and B of an inventory. Form "A" is meant for adults and Form "B" for students. Form "A" may be used as a schedule to be completed by the investigator by asking questions especially in the case of illiterate persons. Form "B" requires the students in schools and colleges to fill up particulars regarding their parents and guardians. The inventory is self-explanatory. Information obtained through the inventory is summarised on a score card and the ratings after multiplication by predetermined weights are summated to give a socio-economic status score.

MEASURE OF ACADEMIC ACHIEVEMENT

Research studies have revealed that measure of academic achievement is, to some extent, predictive of future teaching success. (Somers, 8; Barr, 1; Finsent, 6; Dodd, 3; Rudyard, 7; Gould, 5; Freehill, 4; Claude and Park, 2). These studies have used either achievement at one examination or over-all achievement prior to student teaching as predictor measures.

Two measures of academic achievement were available for the student population under study. The marks obtained by these students at the bachelor's degree examination (the minimum educational qualification) or their over-all academic achievement prior to student-teaching could serve as a measure of academic merit. The study by Claude and Park (2) shows
that overall achievement is a better predictor of teaching efficiency than the achievement at one examination only. They obtained a correlation of .34 between overall grade point average prior to student teaching and a composite of three ratings during student teaching, and only a correlation of .20 between rank in high school and the above criterion of teaching efficiency. The present investigator computed correlations between the marks obtained at the degree examination of a small sample of students included in this study and supervisory ratings of teaching efficiency and between an index (to be described later in this chapter) of overall academic merit of these students and supervisors ratings of teaching efficiency. These correlations were .151 and .261 respectively, and indicate that overall academic merit is a relatively better predictor of teaching efficiency than the achievement at degree examination only.

An index of overall academic merit arrived at by assigning weights to divisions obtained suitably weighted at various examinations and adding for all examinations from High School to the B.A./B.Sc. appears to be reasonable. Such an index of overall academic merit has been used as a predictor variable in the present study.

The weights allotted to the different divisions obtained at the various examinations passed prior to student teaching
are given in table IX, a student passing an examination,

**TABLE IX**

**WEIGHTS ASSIGNED TO DIVISIONS OBTAINED AT VARIOUS EXAMINATIONS**

<table>
<thead>
<tr>
<th>Examinations</th>
<th>I</th>
<th>II</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School.</td>
<td>15</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Intermediate.</td>
<td>30</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>B.A., B.Sc., or B.Com.</td>
<td>60</td>
<td>40</td>
<td>20</td>
</tr>
</tbody>
</table>

at the supplementary examination was treated as having passed it in the third division.

The system of weights given in table IX although arbitrary, has an underlying rationale. The degree examination, being the minimum prescribed educational qualification, is given a comparatively higher weight than the intermediate and high school examinations. A first division gets three times and a second division is given twice as much weight as assigned to the third division. Since the minimum qualification for admission to the B.T. course is the bachelor's degree, and most of the students do not possess a post-graduate degree, such qualifications were not taken into consideration in arriving at the index of over-all academic merit.

According to the above scheme of weightage a student
who consistently obtained at first division from high school upto the first degree examination will get a score of 105 and students with consistent second and third divisions will get scores of 70 and 35 respectively.

The five predictor measures as described in the foregoing pages were chosen out of a wider range of such measures which were available. in the judgement of the investigator, particularly in view of the usability of the procedure, these five are significant and representative of the range of possible predictors. It was, as has been said earlier not practicable to employ a larger number.

REFERENCES


