CHAPTER 12

RETROSPECT AND PROSPECT

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Whatever has been achieved in the present study and what is likely to be achieved on the basis of this work is the concern of this last chapter. At the outset a brief summary of the present study presents an over-all view of the work done. The important conclusions of the study are, then, pointed out. At the end, several suggestions for making the use of the Inventory and for further research are given.

GENERAL SUMMARY

The present study was concerned primarily with the development of a school-adjustment inventory. The Inventory, that has been developed, is the result of the work on the problem for over four years. The efforts made for its development are summarized in this section. This would present a running short story of the work done.
Satisfaction of a student with the school and that of school with the student were determined as the criteria for measuring the level of a pupil's school-adjustment. Much of the spade work was concerned with exploring the specific indicators of higher and lower level of school-adjustment according to these established criteria. 618 pupils of 20 secondary schools were approached for collecting the representative problems and difficulties with regard to various aspects of school. A number of educationists, psychologists, headmasters and experienced teachers were consulted for collecting the desirable as well as undesirable behaviour-characteristics of pupils at school from the school-adjustment viewpoint. After analysing and classifying the material collected through this two-fold approach, 115 problems and 48 characteristics were finally listed in the two checklists.

In order to study the discriminative value of each of the problems and the characteristics included in the checklists, two criterion groups of well adjusted and poorly adjusted pupils were selected. According to the criteria of school-adjustment mentioned above, a well-adjusted pupil was defined as the one who is satisfied with the school and also satisfies the school-personnel, while a poorly-adjusted pupil was considered to be the one who is dissatisfied with the school and who
dissatisfies the school personnel. A satisfaction-questionnaire was prepared especially for this purpose. It was administered to 3224 pupils studying in 92 classes of 28 schools. Simultaneously, the nominations of the students at the two extreme points of school-adjustment were invited from two teachers of the same 92 classes. 134 pairs of well adjusted and poorly adjusted pupils matched for the sex, age, school and class were selected on the basis of the best agreement of these two techniques of self-judgment and teachers' nominations. The responses of these 134 pairs to the Problem Checklist and of their teachers to the Characteristic Checklist were studied for significant differences by using Chi-square method. 99 problems and 36 characteristics were found to be discriminating between the two groups at .01 level of probability.

200 questions for the inventory were constructed around the significant characteristics and problems. They were dealing with the five aspects of the school-life: (1) Academic; (2) Social; (3) administrative, (4) teachers, and (5) personal. The number was reduced to 186 after showing them to 20 experts for their face-validity in their related aspects. They required 'Yes', 'No', or '?' answer from the respondents. The total
number of items answered in the favourable direction, decided on the basis of criterion-keying, constituted the individual's score on the Inventory.

Three preliminary runs of the Inventory were held leading to its final form. The first run helped to remove the language difficulties in the questions and to refine the instructions. The questions were further pruned by the item-analysis techniques. They were tested against a fresh criterion of 120 pairs of well adjusted and poorly adjusted pupils from 15 schools selected in the same manner as the previous criterion groups. The comparison of their responses by the Chi-square technique revealed that on 174 items, the two groups differed significantly. These items were finally evaluated against internal criterion, the total score on the Inventory. For this purpose it was administered on a representative sample of 400 students selected from 18 schools. Making use of 27% high and low scores, biserial 'r' for each item was noted. 165 items were found to have adequate internal consistency, having index more than .25. The final form of the Inventory was, thus, shortened to 165 items.

The final form of the inventory was administered on a representative sample of 2550 IX to XI grade pupils of 72 schools. The sample was proportionate on three dimensions viz. sex, area and management of the school.
The responses were scored as per key. The Mean, Median and Standard deviation of the scores on the total Inventory and on its five categories were calculated and their reliability was tested. Scores were, then, studied for normality of distribution. The distribution of scores followed closely to the normal distribution. The skewness and Kurtosis tests showed no real deviation from normality for the total scores on the inventory and for most of the categorial scores.

Correlations between scores on five categories and on the total Inventory and inter-categories correlations were computed. The correlations of scores on five categories with the score on total Inventory were sufficiently high. They varied from .70 to .91. The inter-categories correlations were comparatively low and varied from .25, to .70. The validity coefficient was computed by using the criterion of teachers' ratings. It was found to be +0.69. The split-half reliability coefficient on a sample of 255 pupils was .83, while the test-retest reliability coefficient on a sample of 176 pupils was found to be .96. Looking to the normality, validity and reliability of scores, percentile norms, T-score norms and letter-grade norms were calculated for the population.

The data was further analysed into various sub-according groups/to sex, area, management of the school and the
grade. The differences in the mean scores of various groups and the critical ratios indicated many significant differences: (1) girls exceed significantly to boys in their adjustment to general environment and organisational aspect of the school. The total school-adjustment of girls is also significantly better than that of boys; (2) Rural school pupils exceed significantly to urban school pupils in adjustment to their teachers, mates and to the self, while urban school pupils exceed significantly to rural school pupils in academic and organisational aspects of the school; (3) Private school pupils are significantly better than Government school pupils in their adjustment to the teachers and academic aspect of the school. The total school-adjustment of private school pupils is also significantly higher than of Government school pupils.

CONCLUSIONS

The present work, summarised in the preceding section, leads to the following conclusions:

1. The difference between the well-adjusted and poorly adjusted pupils appeared as a difference in their quality of behaviour and in the number of problems and difficulties. The well-adjusted pupils were characterised by +ive characteristics, which are
considered desirable for higher level of school-adjustment, while poorly adjusted pupils were characterized by -ive characteristics which are considered as symptomatic of lower level of school-adjustment. The poorly-adjusted pupils were encountering, on the whole, many more problems and difficulties in the school situation than those who were well-adjusted.

2. The above study showed that the school-adjustment could be measured in terms of a number of behaviour characteristics and problems manifested by pupils in the school-situation, which discriminated significantly between the well-adjusted and poorly-adjusted pupils. A combination of a host of these manifestations can present a true picture of the level of school-adjustment of pupils.

3. The scores on the Inventory, based on the multiple discriminating manifestations, showed that the pupils are nearly normally distributed on school-adjustment.

4. The Inventory is highly reliable in view of its split-half and test-retest reliability coefficients, which were found to be .83 and .96 respectively.
These estimates of reliability are above the levels that are generally accepted as minimal for inventories.

5. The Inventory is valid. The logical relationship between the concept of school-adjustment and the items of the Inventory indicates its concept or construct validity. There is ample evidence about its content validity in view of detailed explorations of the indicators of school-adjustment. Each of its items correlated highly with the total scores. All these facts ensure its high internal validity. Its external validity is also evident in view of the empirical basis on which the items were formulated and empirical criterion for selection of the items. Each item has been shown experimentally to differentiate sharply between the contrasted groups of well adjusted and poorly adjusted pupils.

All the above evidences reveal that the items of the Inventory were derived by a combination of rational and empirical process. Thus, the manner in which the Inventory is developed signifies that the validity is inherent in it. The validity coefficient of .69 against teachers' ratings is an additional support of its high validity.
Correlations between scores on categories and on the total Inventory reveal that each category is highly related to the total Inventory. The high correlations between scores on each category and on the total Inventory establish the validity of the total score of school-adjustment achieved by combining the scores of five categories.

Significant positive inter-category correlations show the existence of a definite relationship between the various aspects of school-life. The coefficients of correlations reveal that:

(a) Substantial relationship (r's above .5) exists between adjustment to:
   (i) teachers and administrative conditions of the school.
   (ii) Personal conditions and academic matters.
   (iii) Personal conditions and teachers.
   (iv) Teachers and academic matters.
   (v) Personal conditions and social life of the school.

(b) Comparatively less relationship (r's .3-5) exists between adjustment to:
   (i) Personal conditions and administrative conditions at school.
(ii) academic matters and administrative conditions at school.

(iii) Social life and administrative conditions at school.

(c) The lowest relationship (r's below .3) exists between adjustment to:

(i) academic matters and administrative conditions of the school.

(ii) social life and teachers.

Independence of these various aspects is, therefore out of question. They are, more or less, mutually affected.

Many significant differences between the sub groups of pupils studying in different types of schools indicated that the school environmental elements appear to play a considerable part in influencing the level of pupils' school-adjustment. Wherever school conditions are sound and better in particular aspect, the adjustment of pupils in that aspect is better. On the other hand, adjustment level is lower wherever the school-conditions are comparatively poor. The school-environment as a contributing factor to pupils' school-adjustment ascertains the urge for improving the school-environment, curriculum, teachers, activities, and
facilities etc. in order to raise the level of pupils' school-adjustment in general. This, however, does not mean that the personality of the pupils or the out-of-school environment may not be important. The differences in school-adjustment may be due to various other multiple external as well as internal factors that determine their different responses and reactions to school environment.

In view of all these above conclusions, the Inventory can be found useful for many purposes and the three types of norms viz. Percentile, T-Score and letter grade norms can be applied for the population with confidence. The possible uses of the Inventory are discussed in the following section.

**USE OF THE INVENTORY**

The Inventory elicits information about the characteristic behaviour of pupils in the school-situation and about their feelings toward academic matters, teachers, other pupils, administrative conditions and about the self in the school.
How to administer the Inventory

The administration of the Inventory is very simple. It is practically self-administering. The instructions given on the front page clearly explain why, what and how to respond. The following directions for administering the same would be helpful to an examiner.

1. After distributing the copies of the Inventory, the examiner should call their attention to the instructions appearing on the front page of the Inventory and ask them to read them carefully. He/She may read these loudly before them emphasising the following points:

(a) Their truthful answers would help to improve conditions of the school. Hence they would also be benefited.

(b) Their answers will be treated as strictly confidential. No body, except the investigator who is their well-wisher, would be able to see them.

2. All the doubts, if raised by any of the pupils, should be removed and every effort should be made to convince them that his/her responses will be used only for the improvement of school-conditions. In short, the Inventory should not be administered until a feeling of co-operation among the students has been developed and their confidence is gained.
3. The students are expected to understand and interpret the questions for themselves. In case, however, if any explanation is sought concerning the meaning of certain words, they should be made clear to them.

4. Students should not be seated very close to one another. They should not be allowed to converse with one another while responding to the Inventory.

5. There is no time-limit. It has been found that usually 40-45 minutes is ample time for every student to complete the Inventory.

Scoring

Scoring of the Inventory is possible within 3 minutes with the help of the scoring stencil. The stencil consists of different columns corresponding to different pages. To obtain the score, the column of the scoring stencil for each page of the Inventory should be laid over the responses of that page. Then the number of code marks on the stencil falling immediately over the circles made by a pencil on the Inventory, should be counted. The number of such code marks should be noted down separately for each category at the bottom of each page of the Inventory. The total of each code for all the pages would give score for each category which should be noted down on the front page of the Inventory.
The combined score of all the categories would represent the total school-adjustment score of an individual pupil. Interpretation of scores.

The Inventory-score of an individual pupil gives an estimate of what a pupil feels about or seeks in the school-environment and what he is most likely to do in school-situation. Higher scores on it indicates the higher level of school-adjustment in terms of the presence of more +ive characteristics and positive feelings and absence of more -ive characteristics and problems about various aspects of school. Lower scores, on the other hand, indicate lower or poor school-adjustment i.e. presence of more negative characteristics and adverse feelings or problems and absence of more +ive characteristics and feelings about various aspects of the school. In other words, students who get high scores on it tend to be well-adjusted to the school environment i.e. they are more satisfied and happy at school and their behaviour in the school is more satisfactory; while students who get low scores tend to be poorly adjusted i.e. they are dissatisfied and unhappy at school and their behaviour in the school is not satisfactory. The scores on five categories provide an estimate of the following aspects:
(i) Score on category 'A' indicates how far a pupil is satisfied with his studies, subjects and classwork; feels confident, serious and successful in school work; and is free from the fear of the tests and examinations.

(ii) Score on category 'S' indicates how far a pupil likes his mates; feels happy in their company and enjoys relationships; experiences approval and popularity among mates; and gets into the social interaction by forming friendship and being co-operative.

(iii) Score on category 'G' indicates how far a pupil is satisfied with school-administration and general environment facilities and conforms at school; likes miscellaneous administrative conditions; feels interested and participates in co-curricular activities; and experiences attachment with the school.

(iv) Score on category 'T' indicates how far a pupil likes the teachers of his school - their teaching, treatment and personality; experiences their approval and acceptance, and feels close and respectful to them.

(v) Score on category 'P' indicates how far a pupil is satisfied from his 'self' at school - feels free from disturbed state of mind, worries, sadness, inadequacies, personal handicaps, immoralities, undue aggressions and non-conformity; and possesses personal
qualities like regularity, punctuality, resourcefulness to take responsibility.

Its possible uses

Some of its possible uses for the teachers, counsellors, administrators and the parents etc. are suggested in the following paragraphs:

1. For a teacher:

Being objective and simple in nature, it requires less specialised background and training for administration and interpretation of the results than various other psychological measures. Hence, a teacher may find it useful for many purposes. He may use it for surveying the extent of adjustment of individual pupils in the classroom. Norms can be used for understanding the normal pupils, the pupils who deviate from the normal and the extent of their deviation.

Further, the Inventory also gives separate measures of adjustment in the five important aspects of school-life. He can find out the extent of pupil's adjustment in each of the five aspects. An estimate of deviation from the normal can be readily known from the norms of different categories. Thus, it can be useful to him as a means of knowing the relative strength of one's adjustment to the five aspects.
The data collected in this way may become part of the cumulative record card of each pupil. The changes in school-adjustment can be measured by administering the Inventory terminally or annually. When the results are preserved in the record, they will give a progressive and continuous picture of a pupil's school-adjustment. The Inventory can also be useful to a teacher in locating specific aspects of maladjustment of an individual pupil. While scoring the Inventory for each category, the items can be brought together to form a running story of a pupil's reaction to a particular aspect. Thus, all responses on category 'A' can be read in sequence to yield a picture of a pupil's adjustment to academic aspect of the school. It enables the teacher to spot for each of the five aspects, the specific difficulties and reactions of the pupils. Thus, he will be able to identify the needs of his pupils, their problems and peculiarities of behaviour. This kind of information is likely to be of great help to every teacher in understanding his pupils better.

In short, the Inventory may be useful to a teacher for classroom surveys as well as diagnosis and remediation of the pupils' problems.
2. For a counsellor:

The Inventory can be used by a counsellor for screening purpose and for preparing a background for subsequent interviews. It can serve as a large scale screening device to detect the actual or the potentially maladjusted pupils who may be helped by a timely assistance. The importance of early recognition of the maladjusted at an early stage for future life-adjustment was discussed in the beginning. It can, therefore, help in detecting pre-delinquent behaviour at the early stages so as to remedy it to a certain extent before it is too late.

As said above, it may also be useful to a counsellor in furnishing information about students to be used subsequently in providing counselling to them. Cues to maladjustment to be pursued more intensely in the counselling interview can be located with its help. Counselling situations may move faster when the counsellor is aware of the pinpointed problems and reactions of the counsellee. This would help in the discussions of personal problems and pave the way for intimate relationship. Some of the symptoms may serve as an avenue for exploration of deeper disturbances.

3. For an administrator:

An administrator may find the Inventory useful for evaluating the school conditions, practices and
programme in view of pupils' adjustment to them. The school-adjustment of pupils revealed by the Inventory might reflect the conditions in the school itself. The higher or lower level of adjustment achieved by majority of the pupils may be used as part of the evidence of degree of school's effectiveness and success. This is probably as useful for evaluating the school-programme as the achievement testing programme to know how well the pupils have learnt. The academic performance of the pupils cannot be accepted as a single criterion for evaluating the school in view of changed philosophy of education, as discussed in the first chapter.

The periodic convass of the reactions of pupils to the various aspects of school is a valuable means of self-analysis for the administrator in terms of the improvement of the school conditions. What the pupils think about the institution and how they behave therein is important in helping an administrator to make certain improvements in school-procedures. If, for instance, a number of pupils complain about studies, teachers and activities of the school, obviously there is something wrong with the curriculum, teaching methods etc. which need improvement.

It may be used by a school-administrator to locate the most prevalent problems expressed within a student body. In order to measure the intensity of each
characteristic and problem in a group of pupils, a count of the number of characteristics and problems marked by each student of the group, as revealed by their responses on the items of the Inventory, may be made. The problems marked by most of the pupils may be considered as the most prevalent problems in that group. These may serve as the basis for new developments, revisions and modification of the school-planning.

4. For School-inspector:

The Inventory may be used by the school-inspectors as one of the criteria for judging the efficiency of a school. Some of the school teachers, after going through the Inventory, remarked that the inspectors should appraise and evaluate the institution in the light of the pupils' scores on the Inventory. This would enable them to judge as to how far the school is able to get its pupils adjusted to it progressively.

5. For the parents:

The parents are naturally interested in knowing how far their wards are satisfied, happy and successful in adjusting to the school-situation. The parents can themselves use the Inventory in order to know the school-adjustment of their children. Since, this may not be possible for all the parents, the school may take the
responsibility to communicate the information to the parents or guardians of pupils.

6. For the pupils:

The Inventory, when used by any of the above persons, is ultimately useful to the pupils. After all, the pupils are to be benefited and helped in their school-adjustment with the help of its findings. However, its immediate use for the pupils is none the less. It is immediately useful for the pupils since they get an opportunity to express their feelings about the school. It was observed that by answering the Inventory, they feel highly interested. This was personally experienced by the investigator. Some of the remarks of pupils, noted down earlier, amply illustrate the promotion of their healthy feelings on taking up the Inventory. Besides, they may realise that the school is willing to get concerned with their problems and intends to make their school life better. This realization is likely to promote understanding between the two and create healthy feelings.

All the above uses of the Inventory amply illustrate that the Inventory can be of immense utility to all those who are interested in students and their school-adjustment. It should, however, be made clear that it is not the be-all and end-all for understanding their adjustment.
These results should be considered as a beginning step. Follow up of the problems and characteristics revealed by the items of the Inventory is needed in terms of more intensive study for knowing the intensity or acuteness of a particular problem or symptom and for identifying their causative factors. This is important for understanding the adjustment pattern of pupils fully well and for finding out appropriate ways and means to help them for better adjustment.

SUGGESTIONS FOR FURTHER RESEARCH

The findings in the present study may serve as anchor points for further explorations. Further explorations may take several forms. The following suggestions are offered.

1. The Inventory needs to be tried with other samples and the norms compared with the ones given in this study. These trials with new samples will establish the value of this inventory. Local norms may also be established.

2. It is possible that the students from other parts of the country may give different norms. It will be of interest to try this Inventory with students in other parts of the country and compare the norms with the present study. The Inventory can also be
adopted in other regional languages for its use in different states.

3. There is a need for normative data for the pupils studying in lower grades. Although, no significant differences were found in IX to XI classes, there may be differences between the norms of students studying in lower grades. A suggestion is, therefore, offered to try the Inventory with the groups of pupils at lower grades and the scores may be compared with those of this study. It would not be out of place to mention that the investigator has started working on the pupils of VII and VIII class under U.G.C. scheme of grants for research.

4. Further research is needed to refine the five categories composing the Inventory. These aspects were decided on the basis of face validity of items. The high correlations of each of the categories with the total Inventory testified the validity of total scores. However, substantial correlations of inter-categories may suggest their overlapping. Hence the validity of items in relation to their respective categories needs to be confirmed. The items in each category should be retained only if they correlate highly with the total score of that category. In this way, the categories may be refined.
5. In the use of any self-report instrument, the question of distortion of responses i.e. faking etc. is a crucial one. The results of a study related to this matter, reported in chapter 8, yield some evidence of distortion. It was found that some of the pupils, not desiring to reply frankly, resorted to '?' response. This does not affect the results of the present Inventory in any way, as '?' are not counted for the score which is in direction of high adjustment and, therefore, get the same treatment as the truthful reply of those pupils. It is, however, suggested to investigate into the extent of conscious faking i.e. responding on exactly the false response by the pupils and the ways of checking the same.

6. It is worth while to study the relationship between school-adjustment and the adjustment to other spheres of life—such as family, health etc. One may seek relationship of school-adjustment with many personality variables. For example, the Inventory-scores may be correlated with school-achievement of pupils as measured by some standardized achievement tests, with intelligence, socio-economic conditions and many other factors.

7. It may be recalled that many significant differences were found between the sub-groups of pupils, studying in a variety of schools differentiated by location
management and sex. By analysing scores for different individual schools, one might still find that students differ markedly from school to school in their school-adjustment. Some apparent causes of the differences were discussed in Chapter II. These causes need to be established on the basis of empirical evidence. Further research is also necessary to find out the additional causes for the differences between the groups in their school-adjustment. Furthermore, the responses of the various subgroups e.g. boys and girls on individual items may be analysed separately. The significant differences, if any, might give certain interesting results.

8. It may lead a research worker further to know what makes the pupils well-adjusted to school and what makes them poorly-adjusted to school. The internal as well as external factors influencing the level of pupils' school-adjustment may also be explored by picking up different types of pupils on the basis of Inventory scores and studying them in details. One may prepare a long list of such conditions which describe the possible sources of maladjustment. Impact of such conditions on children's school-adjustment may be then assessed objectively and research be conducted into the various causes of maladjustment.
9. One may continue one's exploration by examining different types of pupils on school-adjustment such as those who are superior in academic-adjustment but inferior in social-adjustment and vice-versa, or those who are very well adjusted to their teachers but poorly adjusted to their mates or vice versa and so on. This may also bring out the complexities of students' school-adjustment in terms of individual and environmental factors that operate to influence it.

The above suggestions indicate that there is a vast scope for further research on the basis of the present study. Some of the studies, suggested above, will bring out certain general solutions for preventing and curing the maladjustment among school-pupils. They will tell with more certainty what schools, parents, and the community, as a whole, can do to prevent maladjustment among school-children.

It would be interesting to take up some experiments to help the children with lower level of school adjustment in adjusting better by employing various methods. By periodical check-up, the relative effectiveness of some of ways that might be tried for improving their adjustment, can be tested.